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Editorial

KMC Journal is a double-blind peer-reviewed, open-access multidisciplinary journal published by the Research Management Cell (RMC) of Kailali Multiple Campus, Dhangadhi, Far Western University, Nepal. Published twice a year, this journal provides a platform for the researchers, educators, academicians, teachers, trainers, practitioners and professionals across the world to share knowledge in the form of high quality empirical research papers from different disciplines including Education, English Language and Literature, Social Sciences, Humanities, Management, Forestry, Law, Science and ICT. The journal encourages national and international researchers and scholars to share their research experiences through publication to the global audience.

KMC Journal is a refereed journal which adopts a rigorous process of screening, reviewing, editing and proofreading. The editorial board makes the first decision regarding the submitted articles as the first step of the review process. The board can reject the articles if they do not meet the author guidelines. Accepted articles are sent to two anonymous reviewers for review. Papers are accepted for review on the understanding that they have not been published or accepted for publication elsewhere. If the reviewers recommend the article for publication with some feedback, the reviewed articles are sent back to the concerned authors to revise addressing the comments and feedback of the reviewers. Finally, the editorial board makes the decision whether to publish the revised article or reject. The journal does not take any charge for publication. The Research Management Cell of Kailali Multiple Campus bears all the expenses.

KMC Journal, Volume 7, Issue 1 includes 23 research-based articles from English education, English literature, Education, Management, Science and Population. All these empirical papers have been published after undergoing the rigorous processes of reviewing, editing and proofreading. We believe that all these articles will be fruitful for the practitioners in the concerned disciplines around the globe. We request to all the valued readers, academicians and scholars to contribute by being published in the coming issues of this journal.

We express our sincere gratitude to all the authors for their appreciable contribution. We are thankful to our valued reviewers for their scholarly work and support to the Editorial Team throughout the process. We are grateful to the Research Management Cell of Kailali Multiple Campus for the publication of the journal.

Happy Reading!

Editor-in-Chief
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Safeguarding Participants: Using Pseudonyms for Ensuring Confidentiality and Anonymity in Qualitative Research

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Abstract

Using pseudonyms for research participants is not new. However, there is little discussion in the Nepali context concerning the practical strategies for assigning pseudonyms. This study unfolds the multiple aspects of using pseudonyms in qualitative research and provides practical guidelines for novice researchers. Using narrative interviews and document analysis methods, this study integrates these approaches with critical reflections on PhD fieldwork. I argue that using pseudonyms for research participants is not straightforward and linear; instead, it is situational and depends on the research context, data sensitivity and participants' desires. Hence, a researcher needs to be allowed to decide whether to use pseudonyms and which pseudonyms best safeguard their participants. The study's findings show that ensuring absolute confidentiality and anonymity is challenging. However, a researcher's careful and responsive approach helps protect participants' privacy. While it is the autonomy of the researcher to use a proper strategy in assigning pseudonyms, negotiating with participants based on discussion with them could be a flexible alternative. Nepali researchers use an alphabet, alphabet and number together, alphabet and word together, and word phrase in disguising participants based on age, gender, ethnicity, culture and contemporary society. This study suggests including the process of assigning participants' pseudonyms in research reports and publications.

Keywords: Pseudonyms, qualitative research, research ethics, research participants, anonymizing

Introduction

Protecting participants from possible harm using pseudonyms is a key ethical issue and the heart of qualitative research. Using pseudonyms is a conventional practice and a strategy to disguise the identification of participants, institutions and geographical places to ensure their privacy (Allen & Wiles, 2016; Lahman, 2024; Macleod & Mnyaka, 2018, Morse & Coulehan, 2015; Vorhölter, 2021). While assigning pseudonyms is a strategy for ensuring anonymity and confidentiality in qualitative research, some of the studies also consider it as challenging to ensure (Allen & Wiles, 2016; Morse & Coulehan, 2015; Reyes, 2018; Vorhölter, 2021) and influenced by the power relation between researcher and participants (Ellersgaard et al., 2021; Itzik & Walsh, 2023). Assigning pseudonyms for participants in qualitative research has been much discussed in the Western world that several studies (Ellersgaard et al., 2021; Engward et al., 2022; Gibson et al., 2012; Heaton, 2022; Lahman et al., 2023) are available. However, the global literature does not discuss the practical concerns of assigning pseudonyms. Moreover, it is little discussed whether assigning pseudonyms ensures anonymity and confidentiality.

The trend of doing qualitative research and using pseudonyms is rapidly growing in Nepal. Several studies (Basnet, 2022; Ghimire, 2021; Rana et al., 2019; Subedi, 2024a; Subedi & Gaulee, 2023) discuss the multiple aspects of doing qualitative fieldwork, but little discusses using pseudonyms in separate publications. Renaming participants is not merely a technicality of doing research; instead, it is a psychological process that concerns assigning pseudonyms respectfully (Allen & Wiles, 2016) and considering cultural sensitivity (Heaton, 2022; Wang et al., 2024). Despite researchers using pseudonyms in their research reports and publications, there is a paucity of broader discussions on the pros and cons of pseudonyms and strategies for naming participants. There is a lack of consensus among researchers concerning renaming participants to preserve their anonymity in qualitative research. Similarly, there is a paucity of knowledge to deal with the specific and contextual challenges of assigning pseudonyms to participants. In addressing this gap, this study seeks to contribute to the available literature by drawing on relevant, context-specific practical strategies derived from the author's doctoral research experience.

This study has two major purposes. First, it aims to continue the discussions in participants' naming practices to ensure their safeguards in the various stages of qualitative research. Second, it aims to contribute knowledge in the Nepali context so that it is easier for future researchers to choose pseudonyms and maintain robust research integrity, particularly when conducting in-depth interviews. More specifically, this study is based on my critical reflections on my PhD fieldwork and dissertation writing experiences that unfold the dynamics of maintaining confidentiality and anonymity in qualitative research by using pseudonyms by answering the following research questions:

1. Does using pseudonyms ensure the anonymity and confidentiality of participants in qualitative research?
2. How are participants' identities masked in existing qualitative research practices?
3. How do qualitative researchers choose pseudonyms to safeguard the participants and mask other local identifications?

Literature Review

Understanding Pseudonyms from Navigating Literature

A qualitative researcher's first and foremost task is to 'disguise the identity of research participants' (Morse & Coulehan, 2015; Vorhölter, 2021). It is a commonly practised ethical task of qualitative researchers to ensure anonymity and confidentiality. It is considered 'naming' participants who take part in research by the researcher. Generally, in in-depth interviews, including other qualitative methods, the real name of participants is replaced by a false name called 'pseudonym' (Heaton, 2022). The intent of assigning pseudonyms is to preserve privacy (Allen & Wiles, 2016; Vorhölter, 2021; Wang et al., 2024) and protect participants from possible harm due to their identifications (Morse & Coulehan, 2015; Reyes, 2018). Pseudonyms are indispensable for qualitative research on sensitive topics. Securing privacy is not only limited to the participants. In addition to the participants, researchers also assign pseudonyms for the geographical places and institutions to preserve them from possible harm when disclosing their identification. While assigning the pseudonyms, it is expected that the participants themselves should be able to recognize themselves, but readers should not be able to determine the participants' identity. Using pseudonyms began in anthropological and sociological qualitative research and later became popular in educational research. Disguising identity begins with qualitative fieldwork, particularly from in-depth interviews, to report writing and dissemination that requires the researcher's careful attention to protect participants' privacy (Morse & Coulehan, 2015). Further, they suggest not preparing a table containing "participants' demographic information—age, gender, occupation, employment, disease, and so forth— line by line" (Morse & Coulehan, 2015, p.151). As participants' demographic information could fail to ensure anonymity, it is better to remove such information. The discussion above suggests that a researcher needs to be careful of any possible participants' identifiers in the entire manuscript that can be changed without destroying the research's integrity.

Using pseudonyms in qualitative research aims to ensure confidentiality and anonymity to avoid harm to the participants. These are distinct concepts as confidentiality and anonymity come together (Wiles et al., 2006). They further suggest that confidentiality refers to protecting the information collected from the participants, while anonymity is related to protecting the identity of the participants. Saunders et al. (2014) define "'confidentiality' as a generic term that refers to all information hidden from everyone except the primary research team. Anonymity is one form of confidentiality – that of keeping participants' identities secret" (p.2). As protecting participants is an important ethical concern, preserving their interests and well-being in research is equally important. For instance, Macleod and Mnyaka (2018) state that "anonymity is closely related to confidentiality in that anonymizing data assists in confidentiality" (p.239). Therefore, confidentiality focuses on data, but anonymity ensures that participants' identities are unidentifiable, so they are not recognized.

Nevertheless, confidentiality and anonymity are treated together in qualitative research. However, it is equally important to be careful that in the name of protecting confidentiality and anonymity, the originality and integrity of the research should not be destroyed by overemphasizing pseudonyms (Heaton, 2022). Anonymity focuses on hiding or disguising participants to preserve their privacy from possible harm to them in the future. Similarly, confidentiality is related to the sharing of any identifiable information of participants to others, which is a key concern of qualitative research (Wang et al., 2024). Particularly, the researcher's serious care requires maintaining confidentiality and anonymity while conducting research or in-depth interviews with the participants. Besides, it is equally necessary to be careful in making the data confidential and anonymous by keeping the geographical places and the research context unidentifiable while collecting data from focus group discussions and participant observation. However, several studies (Ellersgaard et al., 2021; Macleod & Mnyaka, 2018; Reyes, 2018; Saunders et al., 2014; Tilley & Woodthorpe, 2011; Vorhölter, 2021) raised the question of ensuring confidentiality and anonymity that is not possible to keep confidential in this digital and the Internet age fully. Because the researcher and the research team were involved in conducting interviews or focus group or participant observation could allow people guess the data even when it was presented in pseudonyms. Moreover, using the Internet and social media (Vorhölter, 2021; Wiles et al., 2006) and a 'particular methodological challenge' (Macleod & Mnyaka, 2018, p. 235) has been challenging in ensuring anonymity and confidentiality in many stances.

Concerning the vulnerability of social media and using the Internet to ensure anonymity, Vorhölter (2021) argues that "anonymization, although nowadays taken for granted, poses an underestimated challenge for ethnographic writing, especially in the context of global mobility, the Internet, and social media" and "sometimes, the research context and the small number of possibly identifiable population could be a challenge in ensuring confidentiality" (p.16). So, the researcher cannot guarantee anonymity (Reyes, 2018). For example, despite the researcher's serious efforts, Saunders et al. (2014) faced a similar challenge in carrying out a study with the participants having a 'prolonged disorder of consciousness' in the UK due to identifiable research context and a small population. Concerning the challenges to ensure full confidentiality and anonymity, Macleod and Mnyaka (2018) argue that "guaranteeing complete anonymity to participants can be an unachievable goal, particularly in qualitative and ethnographic research" (pp. 229-230). They further argue that the research team, especially those responsible for conducting interviews or engaging with participants, will typically be aware of the participants' identities. Similarly, in some research like (auto)biographical research, life story, oral history, and narrative work, participants want to take ownership for recognizing them in future; hence ensuring confidentiality and confidentiality is impractical (Lahman, 2024). However, Saunders et al. (2014) suggest that if researchers are serious, confidentiality and anonymity could be maintained by anonymizing these six areas: people's names, places, religious and cultural background, occupation, family relationships, and other potentially identifying issues (i.e., case details). This discussion suggests that ensuring anonymizing and confidentiality is not straightforward and "'one size fits all' or 'find and replace' approach" (Saunders et al., 2014, p. 12); instead, it is a context-specific task which requires the researcher's carefulness and seriousness.

As the above discussion indicates, naming or assigning pseudonyms is a common way to ensure ethics in qualitative research, but it has been a challenging task for the researchers (Allen & Wiles, 2016; Lahman et al., 2015; Lahman et al., 2023; Reyes, 2018; Vorhölter, 2021). Despite a huge literature existing on the multiple aspects of assigning pseudonyms for participants (Ellersgaard et al., 2021; Engward et al., 2022; Gibson et al., 2012; Heaton, 2022; Itzik & Walsh, 2023; Lahman et al., 2015; Morse & Coulehan, 2015; Saunders et al., 2014; Vorhölter, 2021; Wang et al., 2024), there is little discussion concerning the naming practices how the Nepali researchers have been assigning pseudonyms in their qualitative studies. Finding even a single publication fully devoted to naming participants is difficult. So, how the Nepali scholars assigned pseudonyms is scattered in their reports and publications. However, the Western world has rich literature in this regard. Viewing pseudonyms from Western perspectives means that multiple perspectives and focuses exist. A recent study (Wang et al., 2024) concluded that researchers assign pseudonyms based on ethnolinguistic backgrounds, particularly assigning "Letter + Number" or "Title + Number" is also a popular pseudonyms practice. They also highlighted that naming participants is related to one's identity, and it needs to pay attention to the power differentials between the researcher and participants.

Similarly, several researchers (Allen & Wiles, 2016; Lahman et al., 2023; Wang et al., 2024) focus on the cultural background of the participants as a basis for using pseudonyms since they consider that culture reflects in their identity. For instance, Heaton (2022) identified varied naming practices such as changing forename and surname, using either forename or surname, using code (i.e., "ID12" for "Pamela Jadestone,"; "village 2" or "site 2" etc.). However, some scholars suggest a more flexible approach of assigning pseudonyms by providing authority to the researcher. The researcher negotiates with participants to assign a pseudonym, and they collaboratively choose it (Lahman, 2024). She further suggests the practical tips for assigning pseudonyms as "avoid changing ethnic and cultural background, use names but do not use numbers or letters for names, honour participants' requests to use their real name, but review with them the pros and cons of real-name use" (Lahman, 2024, p. 231).

Like, Itzik and Walsh (2023) offer a different perspective that transfers the choice of pseudonyms to participants. This approach highlights that participants' names are closely related to and illuminates their identities. Sometimes, it is difficult to make one's identity since they are at the very apex of society. For instance, in their interview with professional elites, Ellersgaard et al. (2021) faced a similar challenge to disguising identity in that elites do not mask their identity and want to appear with their names. In their study, Allen and Wiles (2016) found that gender, culture, and age are the basis for assigning pseudonyms to the participants. The following section discusses the strategies for assigning pseudonyms.

Strategies for Assigning Pseudonyms to Participants

This section discusses the following strategies for assigning research participants pseudonyms rather than the types of names to assign.

Assigning Names by a Researcher

Naming by a researcher is the most popular and practised strategy of assigning pseudonyms to the participants. Several literature (Delamont, 2016; Kara, 2018; Lahman, 2024; Tilley & Woodthorpe, 2011; Wang et al., 2024) discusses this strategy. It provides the sole authority to the researchers in deciding their participants' names based on their criteria and analysis of the research context. As there is no rule of thumb for assigning names to the participants, the researcher could consider gender, age, cultural background, occupation and other basis similar to the research context (Allen & Wiles, 2016; Ellersgaard et al., 2021; Gibson et al., 2012; Heaton, 2022; Itzik & Walsh, 2023).

Assigning Names with Negotiating Participants

Allowing participants to choose their pseudonyms or deciding upon the discussion between the researcher and participants is the recent approach proposed by several researchers (Allen & Wiles, 2016; Ellersgaard et al., 2021; Gibson et al., 2012; Heaton, 2022; Itzik & Walsh, 2023; Lahman, 2024; Vorhölter, 2021; Wang et al., 2024) where negotiation remains in the centre. As qualitative researchers remain close to their research participants for a long period, particularly in in-depth interviews, pseudonyms can be decided after interacting with them. As such, the prolonged engagement with the participants helps them understand their participants well, particularly when assigning pseudonyms. So, if the participants desire unchanging their names or choose a particular name of their interest while publishing and disseminating the research, it requires negotiating with the participants, and the researchers choose the names what their participants wish. However, as the studies suggest (Vorhölter, 2021; Wang et al., 2024), it is a pre-condition that the researcher needs to be respectful and responsive to their participants while assigning pseudonyms.

Assigning the Real Names

Assigning the real names of research participants without assigning them pseudonyms is a more flexible and democratic strategy in qualitative research. Several studies (Ellersgaard et al., 2021; Macleod & Mnyaka, 2018; Tilley & Woodthorpe, 2011; Reyes, 2018; Vorhölter, 2021) suggest this approach for naming participants. This strategy transfers authority to the participants whether they intend to appear in the research, reports and publication for their real names. For instance, Reyes (2018) makes it clear that in some cases, particularly in ethnographic research, it requires putting the real names of the participants (i.e., interviewees) to ensure credibility. In addition, it is equally important to make decisions about geographical places, cases or populations, and research context. The rationale behind this logic is that participants "see their names as inseparable; it did not make sense to use her stories of experience without their names" (Clandinin et al., 2016, p. 30). For instance, Vorhölter (2021) argues that "there are no straightforward solutions to deal with these. If and how research data can and should be anonymized is highly context-dependent and cannot be governed by an a priori one-size-fits-all recommendation" (p.30). It is equally important for the researcher to consider the consequences of putting the participants' real names in qualitative research despite not wanting to be anonymous.

Assigning No Names

Assigning no names to participants is considered a safe strategy for ensuring confidentiality and anonymity in qualitative research. Some researchers (Lahman, 2024; Morse & Coulehan, 2015; Wiles et al., 2006) suggest no names to make participants anonymous. They suggest using word phrases such as "one participant", "one male", and "one teacher". However, this strategy could sometimes destroy the research context as it is not congruent with the research context and local characteristics. Therefore, a researcher needs to be careful while choosing this strategy.

Methods and Procedures

This article follows the methodological approach used in this study.

Research Design

This article adopts the blended methodology of narrative inquiry and document analysis, integrating with the researcher's reflexivity and lived experience during his PhD fieldwork. As the literature (Clandinin, 2016; Ghanbar et al., 2024) suggests using participants' stories as data, I have carefully captured their lived experiences concerning naming participants to protect participants from harm. In addition, narrative inquiry methodology allows me to account for my reflexivity from my PhD research (Clandinin & Connelly, 1994; Jonsen et al., 2018)) alongside the participants' experiences. In particular, I am adopting the methodological reflexivity suggested by Whitaker and Atkinson (2021), which will help me to critically assess the methodological procedures I employed during my PhD and their appropriateness.

Participants and Data Collection

I have purposively selected two participants for this study. As narrative inquiry concerns the depth of explorations of participants' stories, it is rational to use a small number of participants (Barkhuizen, 2014; Subedi, 2021). A male participant (JyoH) recently defended his doctoral research and obtained a PhD. Similarly, another female participant (Bidushi) is close to preparing for the final PhD defence; however, I am masking their other details to ensure anonymity. As I offered to choose their pseudonyms, the male participant chose JyoH, but the female did not interested to select any pseudonym for her. Hence, I assigned her name as 'Bidushi.' I am aware that using pseudonyms and maintaining anonymity and confidentiality is not limited to data collection; instead, it requires careful attention during data analysis, interpretation, writing, reporting, and finally, disseminating the research findings (Delamont, 2016; Kara, 2018; Subedi, 2024a). As the narrative inquiry intends to explore participants' stories and experiences in depth concerning the all-methodological procedures, I chose the experienced ones to demystify the phenomenon. To capture their stories, I conducted a narrative interview with each of them as literature (Engward et al., 2022; Ham et al., 2022; Keen et al., 2022; Lobe et al., 2020; Rice, 2023), allowing data collection from a distance virtually. While the telephonic interview was performed with the female participant, another interview with the male participant was done via Facebook Messenger. The interview in Nepali lasted 30 to 45 minutes, followed by informal conversations. The interview was recorded using an audio recorder service. Before the interview, informed consent was obtained (Hammersley & Traianou, 2012), and voluntary participation was ensured after describing my study in detail. I collected participants' rich experiences using pseudonyms from the informal conversation and interviews with the participants online as the narrative inquiry allows (Rice, 2023). In addition, I have blended my fieldwork experience (Subedi, 2024a) and writing the PhD dissertation. Finally, as a document analysis, I chose three recent qualitative PhD dissertations (Ghimire, 2024; Sharma, 2023; Subedi, 2024b) from the Graduate School of Education, Faculty of Education (FOE), Tribhuvan University (TU). In addition, to analyze how confidentiality and anonymity were ensured, I selected three qualitative doctoral dissertations (Khanal, 2012; Phyak, 2016; Rana, 2018) by Nepali scholars from foreign universities who have completed rigorous qualitative research with substantial publications in high-ranked journals. The dissertations I reviewed represent a variety of qualitative research designs.

Data Analysis

I employed the reflexive thematic analysis suggested by Braun and Clarke (2022), which considers qualitative data analysis a flexible and recursive process. In addition, I blend thematic narrative analysis (Riessman, 2008) with reflexive thematic analysis. First, I listened to an audio recording of the interview many times and transcribed it. I read the transcriptions many times and highlighted the important portions of transcriptions. I translated the Nepali transcriptions into English. Then, I developed the initial themes based on the highlighted codes. With this process in mind, I started to write a report. In the next step, I refined the initial themes and turned them into final ones. I also blend my experience there with themes. Finally, the assigning pseudonyms in PhD dissertation was done to understand the use of pseudonyms by Nepali scholars.

Research Ethics and Trustworthiness

I am aware of maintaining methodological and ethical integrity. So, I considered the suggestion of Finaly (2024) that the data gathering and analyzing process needs to cohere and clear, contextual and evidence-based findings drawn.

Similarly, I am equally careful that "the value of narrative research is the stories told" (Finaly, 2024, p. 13). As both of my participants are well-known colleagues from the same graduate school, and I am familiar with the research context, it was not difficult for me to skim their experiences. I also know about online interviews and care about my participants' well-being (Rice, 2023). After several informal conversations about my project, we agreed to the virtual interview. As Engward et al. (2022) suggest, the researcher needs high sensitivity before, during, and after the interview. They further argue that "online environment researchers require a heightened sensitivity and awareness of their attitudes, knowledge, and skills before, during and after the interview to ensure that the process is safe, rigorous and meaningful for collecting comprehensive qualitative data"(Engward et al., 2022, p. 1). This suggestion also became helpful for short informal conversations with the participants.

Results and Discussion

The data analysis generates the following four themes.

Ensuring Confidentiality and Anonymity

Ensuring confidentiality and anonymity using pseudonyms is the most straightforward and practised strategy for safeguarding participants in qualitative research. Assigning pseudonyms begins from the fieldwork resumed and continues to future publications requiring protecting participants (Clandinin, 2016; Kara, 2018; Lahman, 2024; Lahman et al., 2023). For instance, from the beginning of my PhD fieldwork, I began data collection by assigning pseudonyms to participants, hoping to protect themselves from possible harm while disclosing their identity (Subedi, 2024b). Similarly, Bidushi has her perspectives on ensuring anonymity. She shared:

> I think using pseudonyms is a Western colonial repetition since we have our cultural traditions of ensuring anonymity. So, decolonial practice is needed, and we must rely on our traditions. Though using pseudonyms helps to maintain anonymity, it does not fully ensure. For example, researchers do not ask for participants' names at the beginning of the interview in the Western context; however, we cannot imagine beginning a conversation without asking for names. So, using pseudonyms is contextual and situational.

While engaging in the PhD fieldwork, I realised that only assigning pseudonyms cannot ensure anonymity and confidentiality. For example, the locals and colleagues who were informed about the data collection process may estimate who could have shared something related to a particular thing, event, person, or context. Several studies (Allen & Wiles, 2016; Morse & Coulehan, 2015; Vorhölter, 2021; Wiles et al., 2006) are also consistent with this notion. Concerning the use of pseudonyms in research, JyoH said:

> I always care about research ethics. I consider assigning pseudonyms the best way to maintain anonymity and confidentiality in which the researcher's assigned name replaces the real name. Hiding the participants' identity is essential. However, I do not think absolute anonymity is possible since the locality and research context provide clues to familiar ones. Similarly, hiding the total identity could give a sense of fake data.

The above quotes suggest that despite assigning pseudonyms widely used in qualitative research as a basis for research ethics, it is not possible to fully ensure the pseudonyms. For instance, Reyes (2018) stress that "assigning pseudonyms does not always equate to our participants' anonymity or include the protections that we intend, particularly when people in the community from where the study was located can identify individuals because of the details included in published work" (p. 210). The research context could provide clues for guessing and recognizing the participant's response. During my PhD fieldwork, I experienced participants becoming suspicious towards the confidentiality and use of data they provided (Subedi, 2024a). However, during my PhD, I conducted in-depth interviews smoothly after building a warm relationship and rapport with the participants. Such a warm relationship depends upon mutual trust building between the researcher and participant (Heaton, 2022) and ensuring the anonymity and confidentiality of the information collected. Similarly, the above remarks also indicate thinking from the decolonial perspective so that we can explore and use our cultural traditions to safeguard participants from possible harm. Bidushi stresses that researchers must be careful of future consequences and decide whether to use pseudonyms. In addition, it depends on the participant's desire to see if they could appear in the reports and publications with real names. The rapid growth of information technology using excessive Internet and social media has been challenging in ensuring confidence (Macleod & Mnyaka, 2018; Vorhölter, 2021; Wiles et al., 2006). It requires researcher sensitivity and care of how the participants' information will appear in the reports, publication, and dissemination. In some cases, such as in life history and other research, participants may want to appear with real names (Clandinin et al., 2016). Despite researcher care and sensitivity, people can guess the real identity of participants. Therefore, it is always challenging for qualitative researchers to "contextualize the places they study while also maintaining interviewees' anonymity" (Reyes, 2018, p. 206). It requires the researcher to make responsible decisions after assessing the research context and the future consequences of the research result. More importantly, the researcher needs multiple strategies in assigning pseudonyms, such as omitting names, using real names, self-assigned names, and identifying appropriate names to negotiate with participants.

Masking Participants' Identity

Disguising the real names of interviewees, places, and local context to protect the research participants is a way to mask their real identity by assigning pseudonyms. Qualitative research is carried out in a particular or a narrower geographical location to explore in-depth information from a small number of participants. So, masking participants' real identities is essential to de-identifying by replacing their real names since the information they provide could harm their recognition. Several studies (Allen & Wiles, 2016; Engward et al., 2022; Itzik & Walsh, 2023; Reyes, 2018); Wang et al., 2024) suggest the various ways of masking participants' identity (i.e., including place and local context) lacking uniformity and specific rule to assigning pseudonyms (Kara, 2018; Lahman et al., 2023; Tilley & Woodthorpe, 2011). Participants of this study have different perspectives on disguising identity. Alike, in my PhD research, I considered gender, cultural context, and geographical location in masking teachers' identity and school's name (Subedi, 2024b), which corroborates with several studies (Allen & Wiles, 2016; Heaton, 2022; Itzik & Walsh, 2023; Kara, 2018; Lahman, 2024). Concerning the naming participants, JyoH explained:

> I was careful in safeguarding my participants by masking their real identities. So, I decided to replace their real names. For instance, I used alphanumeric symbols to represent teachers as T1, T2, T3… with number of teaching years, and S1, S2, S3…..for schools. Further, I also used the pronouns 'he' or 'she' to distinguish the gender of my participants. In addition, regarding location, I just said urban school teachers. It must have ensured anonymity and confidentiality in my PhD research.

Bidushi responded differently to disguise participants. She said:

> Participants' identity is conditional in my PhD research. Participants sometimes wish to appear in their real names, so I never mask their identity. However, when the participants were sharing sensitive data and if they wished to hide their identities, I used pseudonyms. So, I use pseudonyms like 'Kishor1, 2, 3…….' for boys and 'Kishori 1, 2, 3….' for girls. Sometimes, I also use age with them, e.g., 'Kishor 12yr, 13yr etc.

Furthermore, Bidushi thinks using pseudonyms should not be considered a hard and fast rule; rather, it must be conditional and contextual. So, she considers pseudonyms to be a grey area that requires the researcher's sensitivity and estimation of future consequences.

The above verbatims suggest that a single and 'one size fits all' criteria are not applicable in assigning pseudonyms in qualitative research as the studies (Allen & Wiles, 2016; Ellersgaard et al., 2021; Gibson et al., 2012; Heaton, 2022; Itzik & Walsh, 2023; Saunders et al., 2014) suggests. As it lacks the consensus among scholars concerning criteria for assigning pseudonyms (Ellersgaard et al., 2021; Itzik & Walsh, 2023; Lahman, 2024; Wang et al., 2024), it is the researcher's right to devise their criteria for one. It is equally important that masking participants' identities are situational and contextual, where researchers can change their earlier strategies. Despite the individual differences in assigning pseudonyms to researcher participants, it needs to be careful not to destroy the particularities and characteristics that remain with participants, such as place and context.

Choosing the Pseudonyms

Researchers generally choose pseudonyms on their own. However, there are several strategies for replacing the real name. For instance, during my PhD research, I assigned participants' pseudonyms and let them know during the time of 'member checking', a widely used strategy as literature suggests (Delamont, 2016; Kara, 2018; Lahman, 2024; Reyes, 2018; Tilley & Woodthorpe, 2011; Wang et al., 2024). Similarly, participants in this study shared that they followed the same strategy. When I asked both participants if the researcher could request their informants choose pseudonyms, I found that JyoH did not agree with me and favoured choosing by a researcher. He thinks giving participants a choice may cause problems, such as variations in names. In addition, it lacks uniformity and coherence when reading the publications, and the reader could be distracted. As a result, a report or an article could lose readers' interest. However, Bidushi seems flexible and consider letting the participants choose their pseudonyms could be a good initiative. Moreover, she questions the rituals of using pseudonyms to research participants. If we are generating knowledge from participants and becoming heroes, why not write their real names and brief descriptions of the naming process in the methodology section? Inspired by Bidushi and also from the several literature (Allen & Wiles, 2016; Ellersgaard et al., 2021; Gibson et al., 2012; Heaton, 2022; Itzik & Walsh, 2023; Lahman, 2024; Vorhölter, 2021; Wang et al., 2024), I let the participants choose their pseudonyms as my first novel practice, which I never thought during my PhD research. Allowing participants to select pseudonyms is a negotiating and flexible approach that gives them a sense of belongingness toward research.

Pseudonyms Used by Nepali Scholars

I reviewed six qualitative PhD dissertations to analyze how confidentiality and anonymity were ensured, particularly using pseudonyms. Table 1 presents the details of the analysis.

Table 1

Pseudonyms of Research Participants and Study Sites

Researcher	PhD Award Date	PhD Dissertation Title	Pseudonyms		
			School	Teachers	Locals/ Others
Nani Babu Ghimire	2024	Unravelling the Dynamics of English Medium Instruction (EMI) Policy in Community Schools: A Critical Ethnographic Exploration of Teacher Ideology, Identity and Agency *[Critical Ethnography]*	Srikantha Mahabharat Dharmachakra	Ramkrishna Ranju Amar Sujita Nabaraj Jamuna	
Khim Raj Subedi	2024	Professional Identity of Primary Teachers in Community Schools: A Narrative Inquiry *[Narrative Inquiry]*	Annapurna Machhapuchhre Nilgiri Kanchanjangha Dhaulagiri	Sumit Madan Kanchan Prakash Pramod Ananda	
Umanath Sharma	2023	Home Language Use in Nepalese EFL Classes: Lived Experiences of Teachers and Students *[Phenomenology]*	Sc1, Sc2, Sc3	T1, T2, T3	Grade 9 Students Grade 10 Students
Karna Bahadur Maski Rana	2018	ICT in Rural Primary Schools in Nepal: Context and Teachers' Experiences *[Case Study]*	Annapurna Buddha Chadani Ekata	Anju Ananda Anita Asha Binod Bijen Bhupal Bikash Chandra Chiran Chitra Deepa Dinesh Ekendra Elis	Anju Ananda Anita

Prem Bahadur Phyak	2016	'For Our Cho: Tlung': Decolonizing Language Ideologies And (Re) Imagining Multilingual Education Policies and Practices in Nepal *[Engaged Ethnography]*	Sewaro Laaje	Kumar Aita	Villagers: Angla Saila Mukul Nabina Amar Muskan
Peshal Khanal	2012	Policy as a Practice of Power: An analysis of the Policy to Decentralize School Education in Nepal *[Qualitative Research]*	School A School B School C	Permanent (A, G, C) Temporary (A, G, C) Rahat (A, G, C) PCF (A, G, C) Local (A, G, C) Head Teacher, School A, B, C (A, G, C)	MOE Official (A, G, C) DEO, A, B, C (A, G, C) Teacher Union (A, G, C)

Note: A = Age, G = Gender, C = Caste, T1 = Teacher, Sc1 = School, MOE = Ministry of Education, DEO = District Education Officer

Table 1 shows that researchers use multiple perspectives and criteria in assigning pseudonyms. However, there are also similarities in naming participants and institutions. For example, none of the researchers use both forename and surname. The reason behind using only a forename (i.e., an individual's name) could be prevented from possible matching with somebody. Using both the forename and surname (i.e., family name) is to secure participants from their possible matching with someone. I did the same when naming participants for my PhD research. Similarly, the above table denotes that the researchers also use cultural heritage (e. g., Mahabharat school) (Ghimire, 2024), ethnicity (e.g., limbu) (Phyak, 2016), name of the lord (i.e., Buddha) (Rana, 2018), geography (e.g., popular mountains) (Subedi, 2024b), alphabets (e.g., A, B, C and School A…) (Khanal, 2012), alphanumeric (e.g., Sc1, Sc2, T1, T2) (Sharma, 2023). However, Khanal (2012) used pseudonyms differently; he added age, gender, and caste to every mention of the participants. As I went through all the dissertations mentioned in Table 1, I found that none of the researchers allowed participants to choose their names and mentioned assigning pseudonyms and mentioned the process of assigning pseudonyms.

Conclusion

Assigning pseudonyms to the research participants in qualitative research is considered a popular ethical approach to ensure confidentiality and anonymity. As replacing real names with pseudonyms is widely discussed in Western literature, there is little discussion in Nepal's context. So, there is a lack of consensus among the researchers on using pseudonyms. In addition, it is not easy to find a comprehensive resource that guides novice researchers in adopting the appropriate practical strategies for using pseudonyms for participants. First, I discussed the multiple aspects associated with safeguarding participants using pseudonyms. Next, I explored how the naming took place in the empirical studies.

Based on the data analysis, it is concluded that using pseudonyms to protect participants is a mandatory task for a qualitative researcher. I argue that the ritual practice of using pseudonyms for research participants is not straightforward; instead, it is situational and depends on the research context, data sensitivity, and participants' desires. So, a researcher needs to be allowed to decide whether and how to assign pseudonyms to safeguard their participants. More specifically, this study has three major findings. First, while using pseudonyms in qualitative research is a popular trend, it is debatable whether it fully ensures confidentiality and anonymity. This study concludes that assigning pseudonyms to participants may not always guarantee confidentiality and anonymity since the research context could provide clues to guess participants' identity (Reyes, 2018). As the challenges of disclosing participants' identities exist, the researcher's care and sensitivity in assigning pseudonyms are required. The rapid growth of information technology and massive use of the Internet and social media add more challenges, so safeguarding participants is vulnerable. Second, there are variations in assigning pseudonyms to the participants, so the scholars lack consensus. However, age, gender, cultural and social background, and occupation are some bases that mostly exist in the literature for choosing pseudonyms. Usually, assigning pseudonyms by a researcher is the most dominant practice. However, some alternative strategies are assigning real names (case-specific), omitting names, and using collective names. More importantly, being more respectful and responsive to the research participants requires interacting and discussing with them to choose pseudonyms or keeping their real names, which could be an appropriate negotiated strategy. Naming participants depends on the context in which researchers can make a proper decision. However, they must always be sensitive to the future consequences and the relationships with the participants from assigning pseudonyms. Finally, there is a lack of uniformity and unanimous rules in assigning pseudonyms to the research participants. In a similar vein, Nepali researchers use the pseudonyms differently. For instance, they use an alphabet,

alphabet and number together, alphabet and word together, and word phrase to name participants based on age, gender, ethnicity, culture, and contemporary society. So, Nepali scholars seem careful not to destroy the research context. However, none describe the procedure and criteria for choosing pseudonyms for their study.

This study is implacable to novice researchers who choose alternatives of assigning pseudonyms for their research participants to ensure confidentiality and anonymity. Specifically, this study suggests flexibility in using pseudonyms and the researcher could choose the appropriate strategy based on analysis of the research context, sensitivity of the information collection, and desire of the participants. This study suggests briefly mentioning assigning participants' pseudonyms in research reports and publications. Finally, this study suggests conducting further studies with a large sample to obtain multiple perspectives.

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Bridging the Gap: Exploring Practices and Challenges for Including Children with Disabilities in Mainstream Classroom

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Abstract

This study aimed to explore the perception of students with disability towards the existing practice of inclusive education in mainstream schools. The qualitative research design along with interpretative phenomenological approach was employed in this study. Four students with disabilities including physical, deaf and children with visual impairment were purposively selected from integrated school located in Kathmandu Valley. In-depth interview was taken through semi-structured interview guidelines. The thematic analysis technique was applied to generate findings. The themes were discussed by linking with prospective and literature. The findings reported as setting disable friendly infrastructure, professional development opportunity for teachers, technology-based instruction and teacher's collaboration are essential strategies for inclusion. Meaningful inclusive education practices maintain a supportive and equitable learning environment for all types of children including those with disabilities. To implement inclusive practices in the classroom, administrative hurdles, infrastructure barriers, technological barriers, environmental barriers and legislative barriers are the major challenges in practising equity strategies in the classroom. The findings can contribute to set up effective practices for combating such challenges. By using the scope of the study, the policy maker, education planners and teachers can level up appropriate strategies for increasing the access of children with disability in education.

Keywords: Interpretative phenomenology, technology-based education, environmental support, inclusive education practices

Introduction

Disability is a social construct, which embraces the participation restriction in the social domain. Disability is not fundamentally the question of medicine and health but it is the concept of creating dehumanization (Baraily, 2024b). The person with disability has an inability to involve in social activity in comparison to person without disability. They perform tasks in small amounts due to functional limitations of specific parts of the body (right of a person with Disability, 2074). Right of a person with disability 2074 categories ten types of disability such as physical, intellectual, visual impairment, autism, deaf and hard of hearing, speech and communication disorder, psychosocial disorder, hemophilia and multiple disabilities. Based on severity, disabilities are classified as mild, moderate, severe and profound.

As promulgated in the constitution, education is a fundamental right of human beings. In the beginning, children with disabilities were educated in segregated approach in the mainstream school to fulfil the goal of a universal declaration with education for all but later on, it is realized that society is for all not for someone (Phuyal et al., 2006). Since the 1990s, children with disability have been provided education by keeping in regular classrooms with the integrated approach for creating a common platform for inclusive education (Anderson, 2006). As propounded by Lev Vygotsky, knowledge is constructed from the social setting and the child can develop his personality himself from the social system (Vygotsky & Cole, 2018). In looking back to world history, the education delivery system for children with disability was derived from two concepts. One is a segregated approach and the other is an integrated approach (Kobayashi & Kuboyama, 2003). After the World Conference on Special Education, Spain Salamanca held in 1994, inclusive education with general class placement was conceptualized as a milestone for the education of children with disability.

Inclusive education offers a democratic concept in education and children feel they are learning together collaboratively (Jaramillo, 1996). The school confidently delivers the service with the motto of no child left behind in the social transformation. Our country is diversified with verities of differences such as age, gender, sexual orientation, caste, ethnicity, culture, religion, disability and so forth. Our country has committed to providing education for all types of children regardless of their differences without any type of discrimination as per the legislative provision (Adhikari, 2016). To increase the access of children, the nation has initiated a variety of efforts and programs. The initiatives for inclusive education need to increase the access of children in education and develop a basement for managing diversity in the classroom (Thanem, 2008). The Centre for Education and Human Resource Development (CEHRD) has asserted that inclusive education is a multicultural strategy adopted against any type of discrimination to ensure the rights of people to be educated in their respective communities. Inclusive education assumes that every child can learn with appropriate support and a favorable environment (Gould et al., 2020). It emphasizes the equity-based environment to increase the access of children to education. It can promote child centered learning approach by identifying the learning needs of children who are deprived of the facilities provided by the government.

Legislative Provision

The Constitution of Nepal 2015 has promulgated that education is a fundamental right for every citizen (Articles 31.1 and 31.2). Moreover, every child has the right of free and compulsory education upto the basic level and free up to the secondary level. Likewise, free education is provided for children with disability and economically deprived children. Accordingly, children with visual impairment and deafness have the right to be educated with Braille and sign language (Secretariat & Durbar, 2015). According to NESP 1971 (Ninth Amendment), inclusive education is education for the blind, low vision, deaf, deaf-blind, autistic, intellectually disabled, and physically disabled by placing them in regular education. Moreover, the Rights of the Person with disability act 2074 was enacted to provide that higher education for children with disability should be free. Vocational and technical education should be provided to children with a disability under the Education Act. In the Inclusive Education Policy 2017, children with disability need to be educated with children without disability in suitable places. Children with disability should be provided essential materials like wheel chairs, white canes, slate, stylus, tactile material, and symbolic charts (Maudslay, 2014).

Several initiatives have been adopted for including children with disabilities general classroom as per the commitment in universal conference. However, more than 50% students with disabilities are still out of school as shown in the enrollment situation of school-aged children. The major concern of the study is what efforts and practices are in existence for including children with disabilities in general classroom. The significant challenges that the teachers and students face in adapting heterogeneous classroom undertakes the concern of the study. This study seeks answers of these research questions.

1. How do students with disabilities perceive about the existing practice of mainstream classroom?
2. What challenges do the students face while learning in the mainstream setting?

Methods and Procedures

Qualitative research design with phenomenological approach was employed for this study. This approach tried to dig out the shared meaning of the similar lived experiences of students for the same phenomena (Creswell, 2013). In this prospective study, the adopted design helps to study the students' lived experience in general classroom (Neubauer et al., 2019). The experiences and narratives are drawn from the social setting of the general course based on values and beliefs (Van Lankveld et al., 2017). The teachers who participated in this study were struggling to teach students with visual impairment in an integrated school (Baraily, 2024c). Altogether four teachers from the secondary level were purposively selected from the integrated school located in Kathmandu Valley.

Regarding ethical issues, we obtained informed consent from the participants about the research project on the first visit to the school. Confidentiality has been ensured by using pseudonyms. In-depth interviews via interview guidelines were taken to gather information. Data analysis revealed the themes of collaboration and interactions with students. Interviews with the participants were recorded by audio recorder. Recorded interview responses were transcribed verbatim and developed code. Likewise, global themes were extracted for the main findings of the study.

Results and Discussion

This section uncovers the major findings from the experience of participants in a thematic way. The key findings are discussed with relevant literature and theory that leads to essential practice for inclusion and explores coping strategies for significant challenges that appeared in the creation of inclusive classrooms. The key findings are discussed below for deriving a conclusion.

Disable Friendly Infrastructure

The inclusion of children with disability initiates from the favorable environment within school. The children possessing a variety of disabilities seek friendly infrastructure within the school including classrooms, furniture, washroom, canteen, administrative office and student welfare office (Thapaliya, 2018). In this context, participant P1said:

> When I started visiting this school, I was often afraid of walking on the footpath. The paths near the school are not appropriate for moving wheelchairs. In school, there is no ramp to move around the school. Hardly have I reached school with a wheelchair but there is inadequate place within the classroom.

In this concern, the existing physical environment seems to be inappropriate for children with physical disability. For active participation in the classroom, the classroom should be wider so that the wheelchair can move freely around. In adequate passage, the teacher can reach to last bench and monitor the activity of each individual(Hewett et al., 2020). The easy access of students with disability in the classroom enhances the magnitude of involvement in the classroom. So school administration should focus on developing disabled-friendly infrastructure following the nature of disability. Another participant said:

> I have a visual problem; I cannot see letters on the whiteboard. due to the far distance from school, I arrive later, and the front seats are already occupied by the early comers. I have difficulty seeing the writing on the board without a magnifying glass.

In the above narration, the students with low vision are unable to see the writings on the board. Making notes from the classroom instruction is impossible due to the visual deficit. Therefore, the children with low vision need to be facilitated with a magnifying glass and the letter in the board should be large as far as possible (Hewett et al., 2020). If possible, the seating arrangement for the low-vision student needs to be fixed at the front to make it easier to copy notes from the whiteboard. The teacher needs to design a lesson plan by focusing on the diverse needs of learners (Campbell et al., 2003). The individualized education plan is imperative to meet the unique needs of each child with a disability. Children with disability need to be included in educational and recreational settings for their development and well-being (Ball et al., 2005).

Training for Staff

Updating knowledge and skills for enhancing professional efficacy in the relevant areas undergoes staff training (Triviño-Amigo et al., 2022). The teaching and non-teaching staff increase their competency to deliver client-focused service. The professional development activities of staff maintain a welcoming environment for children with disability in the school (Tristani & Bassett-Gunter, 2020). In this context participant said:

> In this, schoolteachers do not have training in inclusive education since they enter this school. Regular training is required to communicate effectively with children who have speech, and language impairment. Sign language training also needs to be provided for teaching students with deaf and hard of hearing.

In this concern, the school staff who work with children with disability need to know about diversity management. Each person should communicate freely to create an inclusive environment. A welcoming environment for all types of learners needs to be created by providing adequate staff training (Baraily, 2024c). The pre-service, in-service and refreshment training for teaching and non-teaching staff makes an accepted environment for children with disability in ensuring the rights of children to be educated (Avramidis et al., 2000). By adequate training in inclusive education, the non-teaching staff also develops sympathy and affection for the child who has cognitive impairment.

Educational Support

The support provided for the students by teachers and administration in school refers to educational support. The student modifies their behavior as expected with adequate support from the school (Aron & Loprest, 2012). The proper educational support improves students with better learning outcomes for mainstream curricula. In this context, participant said:

> Children with disability are limited to the standard curricula due to their functional limitations. The diverse needs of learners require resiliency in the mainstream curriculum so that they can get life support after the acquisition of knowledge. Individualized education plans and specialized instruction are sharply used for teaching students with disabilities.

In this concern, children with disability are unable to accommodate in mainstream curriculum with their functional impairment. The mainstream curriculum cannot address the individual needs of learners with disability. The major vignette of inclusive education is to assist students in a dignified life in society (Tamayo et al., 2017). Inclusive education does not mean placing children with disability in regular classrooms. The fundamental principle of inclusive education embraces equitable access, effective participation in classroom discourse and respect for diversity (Maudslay, 2014). To include all the children in education, a child-friendly environment is a minimum requirement and the physical and educational environment needs to be reframed as disabled-friendly at any cost (Boitumelo et al., 2020). Moreover, children with disability should be educated as social beings by creating a disabled-friendly environment. Children with disability need to be educated by developing individualized education plans with proper updates fora certain duration. The teachers and staff should be trained regularly to foster an inclusive environment within the school.

Social Support

The variety of support provided for children with disability in social adjustment in their daily activity undergoes with social support (Tétreault et al., 2014). In the absence of social support, children with disability are deprived of accessing their rights to be social beings (Hebbeler & Spiker, 2016). The participation restriction cultivates continuously without community support. In this context, participant said:

> Frankly speaking, policy made in this country has not explicitly supported the inclusion of children with disability and remains segregation and exclusion in society. The negative attitude and misconception towards disability are creating an unwelcoming environment within the school as well as society. Such type of stenotypes affects self-esteem and willingness to participate.

In this concern, the policy and law for disability rights are adequately formulated in the context of Nepal as committed in the universal declaration for increasing access to education. Nevertheless, some of the community people still keep negative and stereotypical thoughts towards disability. It is considered that disability is a result of the sin of past life. Disabled persons are undervalued and burdened by the society. They think that disabled persons are consumers but not producers. To remove such kind of thought from mindset, disability awareness and dissemination of law need to be sharply organized in the community. They should be aware that the legal punishment is against the law. The stakeholders for ensuring the rights of children need to be accountable for creating a welcoming environment through public awareness in the school and society.

Technology-Based Technical Education

The delivery of content with the use of appropriate technology for effective learning refers to technology-based education(Lombardi et al., 2018). Technical education is today's demand in society. Education requires technical education in verities of sectors of society. Technological education includes the use of assistive devices and software for simplifying content in the respective areas (Harvey et al., 2020). In this context, participant said:

> This is the era of the 21st century and the skills and knowledge need to become critical thinkers and knowledge producers rather than consumers. Technical education does help to fight life problems. The technology-based education supports students to solve problems in new ways. The children with a disability may feel participatory in the knowledge construction process with full potential.

In the above statement, the present education systems require educators should adapt to 21st-century skills that lead the society to face global challenges. The students must stand as knowledge creators rather than consumers. The traditional content and pedagogy cannot address contemporary societal needs and individual aspirations (Baraily, 2024b). By the use of assistive technology, the teacher fully accommodates students in his classroom activity with full attention. The teacher needs to use full of technology-driven pedagogy to deliver content and make students actively involved in the learning process (Baraily, 2024a).

In the same context, as above, another participant said:

> Technological-based education is a milestone for tackling contemporary educational issues for today. Technology finds the solution quickly and constantly. In the use of technology in learning, the complexity of matters gets simplified and meaningful. Children with disability can reduce their cognitive deficiency by using assistive technology.

In the above concern, the use of technology in education has transformed the traditional classroom setting and provided new opportunities for learning and teaching. Technology such as digital classrooms and learning management systems, interactive learning tools, educational apps and ramification artificial intelligence and machine learning are the key ways technology is being used in education (Regmi, 2017). These tools can facilitate communication between teachers and students, organize coursework, track student progress, and provide a platform for online assignments and assessments. Another participant said:

> At present, the technology-based education has no alternatives. The teaching and learning styles have been converging to the needs and interests of learners. Software like screen reader, and optical speech synthesizer have made the most effective means of knowledge acquisition for children with visual impairment particularly.

In the above concern, the paradigm shift in pedagogy has transformed the traditional mode of teaching into a new way of learning through technological advancement. With the use of technology, teachers can enhance the engagement of students through interactive lessons, support diverse learning styles, and make learning more dynamic (Lakshmi, 2018). The proper uses of technology strengthen communication and collaboration among students and teachers supporting remote learning, group projects and discussions (Šiška et al., 2020). The government needs to manage adequate funds for managing resources in community schools with technological support to increase the access of marginalized and disadvantaged children.

Environmental Barriers

The surrounding condition that impedes the learning of children with a disability refers to the environmental barrier. The physical and emotional situations that can affect the transmission of knowledge are termed environmental hurdles (Banik et al., 2015; Graham, 2020; Priyanka & Samia, 2018). The narrow space in the classroom, lack of disabled-friendly furniture, unfriendly washrooms, and pathways inside the school are major barriers to accessing smooth learning outcomes (Banik et al., 2015). In this context, participant said:

> In the classroom, the situation is noisy and crowded. The strong lighting can be overwhelming for us for sensory processing. We find it difficult to focus and participate in classroom discourse. The student with a disability needs to take breaks needed for sensory processing. In the absence of a quiet and calm space, it is difficult to accommodate mainstream instruction.

In the above concern, the existing classroom consists of a mass of students. In this situation, each student is deprived of intensive support. The need-based contents, pedagogy and instructional strategies are difficult to employ in the classroom due to the large number of students (Hemmingson & Borell, 2002). As proposed by the constitution, basic education is a fundamental right to be educated. The teacher himself realizes that mass teaching is one of the

major barriers for children with disability. In such conditions, the school must manage the appropriate size of the classroom for the convenience of teaching. In small groups of teaching, the teacher can employ individualized instruction.

Physical Barriers

The obstruction created by unsuitable physical environments like inaccessible buildings, inadequate washroom facilities, and lack of playground equipment and transportation problems refers to the physical barriers (Hemmingson & Borell, 2002). In the Nepalese context, many schools lack ramps, elevators, and wide doors ways. The unsuited physical condition makes it difficult to mobility for accessing the classroom, playground and other areas. In this context participant said:

> In this school, restrooms are not equipped with appropriate facilities like grab bars, accessible sinks and enough space to move wheelchairs inside the classroom. The playgrounds have no equipment accessible for children with physical disability such as swings, slides and climbing structures that need significant physical disability to use. The problem of accessible transportation options and from school is a significant barrier for us.

In this concern, the existing physical condition of the school is not disable-friendly and impedes the mobility of children with physical disability. The classroom space is not enough for moving wheelchairs. Children with a physical disability face problems in the playground due to inappropriate equipment (Wang, 2019). The transportation problem also impedes the accessibility to education. So the school should emphasize building disabled infrastructure within the school regarding curricular and extracurricular activity. The government needs to minimize the transportation problem by managing adequate funding for infrastructure development. The right of children with disability to be educated in their local communities should be ensured under the legislative provision and policy implementation. The educational access of children should be strengthened by providing residential scholarships, transportation support, and caregiver services for children who are at risk (Graham, 2020). By recognizing and addressing the physical barriers, we can create more inclusive environment for increasing the participation of children with disabilities in every academic activity. Another participant said:

> In over-viewing the funding structure, the allocated budget for the education sector is low. In the education budget, the allocated amount in professional development for teachers and quality enhancement in inclusive education seems to be countless. Limited funding for disability-inclusive infrastructure and services can prevent necessary accommodations from being made.

In the above concern, the budget allocation for the education sector is very low. The inclusive education sector is severely affected by the limited budget in the side infrastructure and entire management (Chimhenga, 2016; Priyanka & Samia, 2018). The professional development for teachers in the area of inclusive education is falling into the shadow, and consequently, inclusive education is becoming a buzzing word in the education domain (Wall, 2002). The national commitments for the global society are ejaculated with financial restrictions. Therefore, the government needs to disburse an adequate budget for inclusive education by initiating a global partnership with donor agencies to promote quality education (Chimhenga, 2016; Priyanka & Samia, 2018). Three-tiered governments (federal, province, local) need to coordinate for enriching funds for inclusive education by mobilizing internal resources. The building playground and resources with accessibility in mind should flourish from the beginning academic session.

Technological Barrier

The inadequacy of necessary assistive devices for effective teaching in the classroom to fulfil the diverse needs of learners refers to the technological barrier (Mohamed, 2018). The technology-assisted pedagogy imparts knowledge in quick and understandable patterns according to the needs and interests of learners. In this context, participant said:

> In this school, the teacher adopts the traditional approach to teaching. Lecture methods are often used in every class. The school lacks assistive devices such as screen readers, hearing aids, and communication boards that can help students with disabilities engage in learning and social activities

As the paradigm has shifted in the instructional techniques along the lines of technological advancement, the teacher has been practicing modern techniques in teaching. In these techniques, students are less engaged in classroom discourse. Modern assistive devices are poorly introduced in the school; traditional teaching techniques are overwhelmed throughout the class (Chambers, 2020). The feedback session is completely discouraged and some of the teachers are afraid of modern technology because of the less updated in this area. The school should manage the resources whatever is needed by mobilizing internal resources. In a similar argument, another participant said:

> Technology makes our learning easier and more meaningful for expected outcomes. The teacher may feel at ease with the use of technology-driven pedagogy. However, this school lacks setting online platform and educational software to accommodate children with visual, auditory and cognitive disabilities.

In the above quotation, the technology-driven pedagogy makes teachers use appropriate strategies for teaching. The student is engaged effectively in the teaching-learning activity of the classroom. Technology assists students in learning 21st-century skills to solve individual and societal problems authentically (Hersh & Mouroutsou, 2019). The students are actively involved in classroom activities by using appropriate assistive technology (Mohamed, 2018). In the present situation of the school, a techno-friendly environment is not smooth in practice. Due to financial limitations, most schools are unable to maintain techno techno-friendly environment for the accommodation of all types of students. To overcome this situation, the nation needs to invest an adequate amount to provide access to appropriate assistive technology.

Legislative Hurdles

Several policies and laws have been initiated concerning disability inclusion. In policy, it is provisioned that existing schools will be transformed into inclusive schools by equipping them with adequate resources like funds and materials (Gulzar & Bhat, 2019). But schools have not translated according till now in the new changed context of the country. Another participant said:

In our country, the enacted policy is less functional and inadequately implemented. The laws that exist to protect disability rights are not satisfactorily ensured due to several legislative barriers and poor vision. Weak enforcement can lead to insufficient access and support.

In this context, the present policy and act are better in the way of legislative support but ineffective implementation is still creating problems for ensuring the educational rights of children. The International Convention on the Rights of a Person with a Disability has strongly raised the issue of basic education as a fundamental right for children with disability (Kurowski et al., 2022). The legislative hurdles need to be addressed by effective collaboration within the community. The advocacy and policy implementation provide adequate funding for smooth accommodation (Genova, 2015). By recognizing and addressing these infrastructure barriers, we can create inclusive environments that support the full participation and development of children with disabilities.

Conclusion

The purpose of the study was to explore the perception of teachers about existing practice and emerging challenges they face while teaching students with disabilities in the mainstream classroom. Most of the participants highlighted that there are several challenges that the teacher face to create inclusive environment in the classroom. The physical and attitudinal barriers are major challenges that need to be mitigated from the institution. Creating welcoming environment for the children with disability by restructuring existing physical features is one of the essential prerequisite for ensuring inclusion. For successful implementation of legislative provisions, the initiated efforts and programs need monitoring by the local government and building up networks with the disability working organization. Additional efforts are necessary to expand global partnerships in the enhancement of inclusive education to address learning needs. Besides the governmental initiatives to implement the global commitment to inclusive education, the stakeholders (home, family, school, and disability-related organizations) need to perform an imperative role. It requires a profound commitment to implement inclusive education policy from the government level. The stakeholders are responsible for mutual collaboration for implementing strong commitment. The professional ethics and accountability of teachers are extremely important for ensuring right of children with disability to be educated. The consistent efforts and initiatives in policy development, teacher training and resource allocation are imperative to overcome the challenges and realize the full benefit of inclusive education.

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Teachers' Beliefs on Executing English Medium Instruction Policy in Community Schools

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Abstract

Community schools introduce English medium instruction (EMI) policy due to the growing influence of the English language in Nepal. This study aimed to explore teachers' beliefs in employing EMI policy in community schools. Using a qualitative ethnographic research design, the experiences of three Grade VI-VIII teachers from three EMI community schools in Sindhuli district were explored. Data were collected through in-depth interviews, observation and writing field notes. Interviews were audio-recorded, recorded data was transcribed assigning codes, codes were developed into categories and main themes were derived in terms of the categories. In order to analyze the data, we followed the six phases of thematic analysis suggested by Braun and Clarke (2006). The findings reveal that the adoption of EMI policy in community schools is influenced by the ideology of English as a global language. The study also highlights that EMI is implemented as a strategy to retain student enrollment in community schools and curb the migration of students to private schools. Furthermore, it uncovers that teachers have developed multilingual beliefs and advocate for multilingual pedagogy as a more suitable approach for multicultural classroom contexts. The study recommends fostering multilingual awareness among teachers to support the development of a multilingual medium of instruction policy rather than relying solely on EMI in community schools.

Keywords: EMI policy, global language, students' enrollment, multilingual beliefs

Introduction

English Medium Instruction (EMI) policy remains a subject of global debate (Phyak & Sharma, 2020). Some scholars support EMI policy, while others argue that it is not suitable for multilingual societies. Despite this ongoing debate, an increasing number of schools worldwide are adopting EMI. Following this trend, Nepali community schools have also adopted EMI policy to teach academic subjects in English. Dearden (2014) defines EMI as “the use of the English language to teach academic subjects in countries or jurisdiction where the first language (L1) of the majority of the population is not English” (p. 4). Likewise, according to Richards and Pun (2022), “the use of English to teach academic subjects such as Maths, Science, or Economics in English rather than in the students’ mother tongue or dominant language is known as English Medium Instruction or EMI” (p. 9). Justifying the reasons of introducing EMI policy in community schools of Nepal, Neupane (2023) argues that the mushrooming of private schools, increased globalization, and migration from villages to towns for better education raised concerns about the survival of community schools, making the shift in the medium of instruction a pressing necessity. However, Brown (2018) claims, “in-keeping with the false assumption of ‘English is good, so more English is better’, parents are demanding EMI in their local schools, even at primary level” (p. 21) in developing countries. In response to public demand, many community schools in Nepal introduce EMI policy with the belief that it can improve students’ English proficiency (Ghimire, 2021b; Saud, 2020). However, teachers face many challenges in teaching academic subjects in English due to their limited English language proficiency and the socio-cultural context of the schools (Khatri, 2019; Mahara, 2023). Although some researchers have studied the EMI policy, teachers’ beliefs about it remain insufficiently explored. In this context, understanding teachers’ beliefs about EMI policy is essential before its implementation in community schools.

Teachers’ beliefs, shaped by personal values, experiences, educational backgrounds, and career trajectories, significantly influence their agentive roles in implementing language education policy within institutions (Mifsud & Vella, 2018; Stritikus, 2003; Tao & Gao, 2017). In other words, teachers’ beliefs play a crucial role in shaping teacher agency. Teacher agency refers to the actions taken by teachers in their workplace, driven by their underlying beliefs (Ghimire, 2024). Moreover, Tao and Gao (2017) opine that teacher agency is a vibrant procedure which is shaped by the phenomena such as teachers’ beliefs, personal goals, curriculum and pedagogy knowledge. Biesta et al. (2015) reveal that beliefs and values play an important role in teachers’ work that create a wider institutional discourses which become helpful to achieve agency within the particular educational ecologies in which they work.

Furthermore, Varghese (2008) explains that bilingual teachers' beliefs about teaching and language are formed by their individual and professional understanding, and the institutions within which they work.

Teachers' action is developed and strengthened based on teachers' beliefs about their professional activities. Teachers' beliefs about EMI policy influence their approach, motivating them either to teach academic subjects effectively in English or to adapt the policy to align with the socio-cultural context of the schools. Without personal beliefs and values aligned with EMI policy, teachers may find it challenging to engage actively and creatively, limiting their ability to exercise agency effectively during the implementation of the policy. Teacher agency is shaped by the actions teachers take to negotiate and resist EMI policy in the classrooms (Phyak et al., 2022). While many scholars have studied various dimensions of EMI policy globally, including in Nepal, there has been limited focus on studying teachers' perspective on executing EMI policy in community schools. Specifically, teachers' opinion and ideas on developing EMI policy in community schools in Nepal remain underexplored in existing research. Therefore, this study aims to address this gap by examining teachers' beliefs on executing EMI policy in community schools, specifically in the context of teaching academic subjects in English within Nepal's multilingual classrooms.

Methods and Procedures

The paradigmatic position of this study is interpretivism, as it focuses on understanding the subjective meanings and experiences of individuals in a social context. It is a qualitative research because it is "subjective" and "inductive" in nature (Muijs, 2004, p. 4). The research design of this study is ethnography. For Creswell (2012), "ethnographic designs are qualitative research procedures for describing, analyzing, and interpreting a culture-sharing group's shared patterns of behavior, beliefs, and language that develop over time" (p. 462). This study was conducted in Sindhuli district located in the mid-eastern part of Nepal. We selected three EMI community schools from three different locations – one municipality and two rural municipalities – as our research sites using a judgmental sampling procedure, ensuring that all selected schools had been implementing EMI for at least five years. We have assigned pseudonyms to these three schools as Kamalamata School, Bhimsen School, and Marin Thakur School. Three EMI teachers, each with over five years of experience teaching academic subjects in English at the Grade VI–VIII level, were purposively selected as participants to facilitate an in-depth exploration of the phenomenon. To protect their identities, pseudonyms were used as Lalita, Prakash, and Binaya. We conducted in-depth interviews based on open-ended semi-structured guideline questions, participant classroom observation, and writing field notes for collecting data to capture a comprehensive understanding of teachers' beliefs, practices, and interactions within their natural classroom contexts, ensuring triangulation and depth in the qualitative analysis. We interviewed the teachers repeatedly until data saturation was achieved. Additionally, we conducted the interviews in the Nepali language to ensure clarity and comfort for the participants. We followed the thematic analysis approach outlined by Braun and Clarke (2006), who describe it as "a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex, account of data" (p. 78). According to Clarke and Braun (2017), "thematic analysis is a method for identifying, analyzing, and interpreting patterns of meaning ('themes') within qualitative data" (p.297). Using this method, all audio-recorded data were fully transcribed and then systematically coded for analysis. The generated codes were systematically grouped into specific categories, and overarching themes were developed. These themes were analyzed and discussed in detail, drawing on participants' claims and supported by relevant literature. We analyzed and interpreted the verbatim and dialogic data obtained from engaged ethnographic study (Phyak et al., 2023). We adhered to key ethical principles of qualitative ethnographic research, such as maintaining honesty, reciprocity, and neutrality. Additionally, we ensured ethical interview practices and upheld confidentiality throughout the study (Ghimire, 2021a).

Findings and Discussion

Teachers' beliefs are important in the effective application of EMI policy, as their perceptions significantly influence classroom practices and student outcomes in multilingual environment. The findings and discussion in this study are organized under the themes: 'the influence of English as a global language', 'EMI policy for retaining student enrollment', and 'teachers' multilingual beliefs and practices in response to EMI policy'.

Influence of English as a Global Language

Teachers believe that the public, including themselves, is motivated toward EMI policy in community schools due to the influence of globalization and English as a global language. Globalization generally refers to the increasing interconnectedness of global networks, the organization of social life on a worldwide level, and the rise of global awareness, ultimately leading to the integration of a global society (Ibrahim, 2013). Moreover, all the participants in our study agreed that parents in community schools want to teach their children in EMI schools because of the impact of the English as a global language. For example, Lalita from Kamalamata School said, "English is a global language which is essential in many areas of our daily life. There is a growing demand for EMI policy, as the public believes that their children can learn English through it." She further added, "EMI is essential for competing in today's globalized world and meeting the demands of the 21st century skills". Describing global influence of English language, Rao (2019) utters that English language is spread all over the world into different fields such as science, engineering and technology, medicine, trade and commerce, scientific research, education, tourism, internet, banking, business, advertising, film industry, transportation, and pharmacy. Furthermore, Kadel (2024) states, "the main reason behind the use of English as a medium of instruction for non-English subjects in school education is that English has become the global language and global lingua franca in the world in the 21st century" (p. 112) . Kamalamata School is located in a village that is becoming more market-oriented, indicating modern development. Influenced by this development and the growing prominence of the English language, parents at community schools are increasingly aware of English's role as a global language and its rapid spread worldwide. It reflects that English has an impact on every sector such as development, education, culture, trade etc. in Nepal. As a result, they have introduced EMI policy in their schools. As the English language is used nationally and internationally, teachers have a belief that students can survive everywhere in the era of globalization if they study in an English medium schools because the continued dominance of English as a language of privilege and global capital, idealized as a symbol of modernity and internationalization through EMI (Sah, 2022, 2024). For example, Prakash from Bhimsen School has a believe that "students can be easily sellable in the global market if they study in EMI schools". For him, English medium is a tool as a global phenomenon that support students to learn English in community schools. Analyzing the motivation behind the development of EMI policy at the institutional level in Nepal, Rana and Sah (2023) conclude that graduates competent enough in English would be able to survive in the global competitive market, get jobs and contribute to the national economy. It demonstrates that the primary motive behind implementing EMI policy in community schools is to align with the demands of globalization (Ng, 2016). In Ohuabunwa's (1999, December 14) words, globalization can be viewed as a process that is gradually transforming interactions between nations by removing barriers in areas such as culture, trade, communication, and various other fields. Binaya from Marin Thakur School stated, "we need EMI policy in our schools due to the rise of modern technology in this globalized world, which our students need to be familiar with." For Binaya, EMI is a way of learning modern technology and it makes students' life easy and comfortable in future. Rai (2024) maintains that they aim to implement EMI policy in schools, recognizing its essential role in the context of ongoing globalization and technological progress. Likewise, Prakash added:

> Children can learn effectively in English, and English-medium education can support their future studies. For example, students aspiring to pursue engineering or medical science need EMI education. Similarly, those planning to go abroad for work or further studies also benefit from EMI education.

Binaya's belief on EMI policy suggests that it enhances students' abilities, enabling them to pursue technical education both at home and abroad, and securing jobs more easily in either context. EMI equips students to stay well-informed of rapid advancements in science and technology, meet the demands of the global market, and participate in an increasingly globalized world (Shrestha, 2023). In Rana and Sah's (2023) words, it is thought that students with degrees in English may receive offers to study at foreign universities. The assumption of teachers and the public that English is a global language, and therefore EMI is necessary in community schools, is influenced by neoliberal discourse and an English-dominated ideology in Nepali society (Phyak, 2013). English is an international and the most dominant language in the world which Crystal (1999) utter that "English is now a global language" (p.1). Dang et al. (2013) demonstrate that how globalization has spread the use of EMI policy in nations that do not speak English language natively. Furthermore, Sah and Karki (2020) found that EMI as a means of assisting students to acquire social and material capital to survive in the global economy through the learning of English and receiving a best education. However, according to Sharma (2016, May 16),"English is everywhere in the world as a global language is a myth" (p.1). He keeps his argument against teachers and public's beliefs and claim that giving emphasis on English medium education through EMI policy in community school is a kind of false belief or idea. Nonetheless, teachers hold positive beliefs about implementing EMI policy in community schools, as they view the introduction of EMI as a strategy to retain student enrollment in these schools.

EMI Policy for Retaining Student Enrollment

The teachers believe that community schools have shifted from Nepali Medium Instruction (NMI) to EMI to retain student numbers. Phyak and Sharma (2020) state, "public schools are introducing EMI policy to increase student enrollment" (p. 330). When private schools opened in villages, students were drawn to these schools, perceiving them as providers of quality education. To stop this shift, community schools adopted EMI policy. Kamalamata School is located in a semi-urban area. Recently, a private school was established in the locality, drawing the attention of parents towards English medium education. For instance, Lalita said, "parents sent their children to private schools, so SMCs implemented EMI policy in our schools to compete with them". Binaya agreed, stating, "we introduced EMI policy in community schools to compete with private schools." However, he also cautioned, “we need proper infrastructure and teacher preparedness for this change. Currently, EMI is more of a desire than an effective method”. Binaya’s school is located in hilly area and school buildings are well constructed with the support of donor agency through Nepal Government after earthquake 2015. However, the teaching learning materials and orientations, workshops or trainings are not provided to teachers for teaching academic subjects properly in English. For him, it is a fashion in rural village to implement EMI policy to compete with private schools without proper preparation. Our ethnographic field engagement demonstrate that SMCs and head teachers implement EMI policy to retain students number in their schools under the guise of offering English medium education. They do not focus on pedagogical matter rather than given emphasis as EMI as a socio-political issue. In other words, we observe that they want to gather students in their schools through the name of EMI policy because they believe that “EMI standardizes the academics and improves competitive capacity” (Rauteda, 2024, p. 33) . Phyak and Sah (2022) also maintain that EMI policy has been developed and put into practice in the community schools to draw more students. Saud’s (2024) study also found that students have the tendency of shifting from private to EMI public schools in Nepal for government recognition of the certificates thereby reducing the financial burden of the parents.

Prakash, who teaches at Bhimsen School, shared a similar experience. Although the school is located in a rural area, it is becoming more urbanized due to road connectivity with two major highways in Nepal. This development has improved the lifestyle and economic standards of the local community. As a result, parents began seeking English-medium education for their children to provide quality education, leading to the establishment of new private schools. This caused a decline in the number of students at Bhimsen School. In response, the SMC introduced EMI policy to compete with private schools and prevent student loss. According to Prakash, “the school administration implemented EMI policy because students were being drawn to private boarding schools, and the number of students was decreasing. Schools are at risk of merging due to low enrollment”. In his words, there are two main reasons for this shift to EMI: to prevent school closures due to low student numbers and to improve students’ future by providing quality education through EMI. In Prakash’s belief, EMI is implemented in the community schools for acquiring quality education to develop students’ modern personality. Our ethnographic field observation shows that teachers have a belief that EMI policy can increase the number of students in the community schools by stopping the students going to private school. In their opinion, shifting community schools into EMI has been considered a fashion for quality education by copying the style of the private schools. However, Parajuli (2023) asserts that the right to an education in learners' mother tongues up to the basic level in schools, as stated in the Nepalese Constitution, has been violated by the decision made by schools to switch from NMI to EMI. As claimed by participants, the increment students in their school is belonged to the ideology of 'learning-English-as-receiving quality-education' (Phyak, 2013) . Moreover, according to Phyak and Sharma (2020), reproduction of neoliberal ideologies put an increased pressure on community schools to compete with private schools which Phyak (2016) terms it as "boarding fashion" (p.221). EMI policy in community schools has been regarded as symbolic, cultural, and economic capital (Bourdieu, 1991; Phyak, 2013; Sah & Karki, 2020; Sah & Li, 2018) leading to a shift from NMI to EMI. This transition often overlooks the cultural and linguistic values as well as the significance of a multilingual society.

Teachers' Multilingual Beliefs and Practices in Response to EMI Policy

During our research site visits, we observed that teachers were loyal supporters of EMI policy, despite having classrooms filled with students from diverse linguistic backgrounds. Our engagement with them involved extensive dialogues and collaborative workshops. As we explored their teaching practices in multicultural and multilingual environments, their awareness grew regarding the necessity of using multiple languages in their classrooms, acknowledging the multilingual and multicultural context of their society. Lalita expressed skepticism about the effectiveness of EMI policy, noting, "I do not think it is effective because the SMCs impose English medium even on students and teachers who struggle with English. How can we expect effective classroom interaction under these conditions?" Lalita's critique highlights how the imposition of EMI disregards the needs and interests of teachers and students alike. She further argued, "whether we learn in English or Nepali, the knowledge remains the same. Teaching in learners' mother tongue enhances interaction and meaning-making in classes". Lalita advocates for using students' mother tongues, believing it to be more effective and comfortable for meaningful classroom interactions. Parajuli (2023) emphasizes that schools need to prioritize language policy that align with students' needs and rights, ensuring their learning is maximized by incorporating their native languages and cultural backgrounds. During one field observation, the Principal Investigator (PI) engaged Binaya in a dialogue:

> Principal Investigator: Do you need EMI policy in community schools?
> Binaya: I think it is not essential because very few students understand what we teach in English. They feel difficulty with exam questions and writing answers unless they have memorized them.
> Principal Investigator: Why do you think this happens?
> Binaya: We have adopted a boarding school-style English education that

does not fit our multilingual context. So I teach academic subjects in learners' mother tongues focusing on our students' diverse backgrounds.

This dialogue illustrates how teachers and students view EMI as burdensome due to their limited English proficiency, opting instead to use mother tongues to accommodate their multilingual classrooms. Many teachers in EMI community schools, who themselves attended Nepali-medium schools and lack proficiency in English, find teaching academic subjects in English challenging. Moreover, the communities where these schools are located are predominantly multilingual, with students preferring to use their mother tongues in class. Reflecting on observations during a lunch break in the staffroom, the PI noted, "teachers conversed in Nepali, discussing personal matters and politics. Despite being an English medium school, English was not used informally among teachers or students" (Field notes, March 10, 2024). This observation underscores the disconnect between formal policy (EMI) and actual practice (use of mother tongues). Initially, head teachers enforced a strict English-only policy; however, Binaya recalled, "The head teacher initially forbade students from using their mother tongues, including Nepali, within the school premises and classrooms. Later, he allowed it, stating, 'Teach in the languages students understand best'". Over time, head teachers shifted from a monolingual to a more flexible approach, recognizing the inadequacy of a monolingual medium of instruction in multilingual societies. This shift allowed teachers to incorporate learners' mother tongues into classroom instructions. During classroom observations at Marin Thakur School, PI found that Binaya occasionally used the Tamang language. For example:

Principal Investigator: Do students use Tamang in class?
Binaya: They use Tamang language with their friends. They use Nepali with me. They also speak Tamang with the teachers who can speak this language.
Principal Investigator: Do students find it easier when taught in Tamang?
Binaya: Yes, they feel comfortable with it. I am from a Maithili background but occasionally use Tamang words. However, there is a shortage of Tamang-speaking teachers.

This exchange illustrates the use of multilingual practices in classrooms, reflecting teachers' belief in the necessity of multilingualism over strict EMI policy. Through dialogic engagement, teachers developed multilingual ideologies, emphasizing the importance of using multiple languages in classroom contexts (Xiong et al., 2023). The teachers develop multilingual beliefs because they struggle to teach academic subjects effectively in English, prompting them to employ multilingual pedagogy in their classrooms. Teachers recognize that leveraging students' mother tongues not only enhances comprehension but also fosters a more inclusive learning environment that respects the linguistic diversity of their students (Duarte, 2020; Rai et al., 2011).

Conclusion

We explored teachers' beliefs, opinions, and ideas on how they navigate the challenges and complexities of EMI policy implementation in multilingual classrooms in community schools of Nepal, using an ethnographic research design. By taking teachers' lived experiences in their natural contexts, through interviews, classroom observations, and field notes, this study offers a detailed account of how the EMI policy is enacted in practice in community school.

In this study, teachers hold varied beliefs on developing and executing EMI policy in community schools of Nepal. First, the teachers acknowledge the influence of English as a global language ideology and the force to adopt EMI policy to ensure that their students are competitive in an increasingly globalized world. This indicates that the globalization of the English language significantly impacts teachers' decisions to implement EMI policy in community schools. Second, Teachers believe that the increasing number of private schools is contributing to the declining enrollment in community schools. To counter this trend, they support the introduction of EMI policy in community schools. In other words, teachers view EMI policy as a strategy to retain students, as parents and communities associate English proficiency with better career prospects for their children. This insight is particularly significant in the context of Nepal's community schools, where English is often viewed as a marker of social mobility and progress. Third, although teachers initially hold positive beliefs toward EMI policy due to the influence of English as a global language and neoliberal ideologies, they become more critical after engaging in prolonged dialogue. Over time, they develop multilingual beliefs, recognizing that a multilingual approach is more suitable for a multicultural society. In practice, they adopt multilingual classroom pedagogy as a response to the monolingual EMI policy. In other words, teachers' multilingual beliefs and practices emerge as a critical stance against EMI policy. Teachers hold strong beliefs in the value of students' mother tongues for learning, despite the formal policy pushing for exclusive English medium. Teachers share that while they understand the broader aims of EMI policy, they find it difficult to ignore the multilingual realities of their classrooms. As a result, teachers use their students' mother tongues as a resource to facilitate students for better understanding, indicating that their beliefs about language use in education are more complex than the policy allows for.

The findings from this study show how teachers deal with EMI policy in complicated ways. On one hand, teachers recognize the importance of English in the global context and understand the rationale behind EMI policy. On the other hand, they are confronted with the practical challenges of teaching in a language that both they and their students are not fully proficient in. This tension between policy and practice is a recurring them throughout the study, pointing to the need for a more nuanced approach to EMI that takes into account the local linguistic and socio-cultural realities of community schools. This study highlights the need to raise multilingual awareness among teachers, parents, SMCs, and students in order to create a multilingual medium of instruction policy instead of relying solely on EMI policy in community schools. This shift can reflect the linguistically diverse and socio-cultural contexts of our society. Policymakers and educators need to collaborate in adopting inclusive language policy and practices that recognize students' linguistic diversity and ensure equitable learning environments within EMI programs (Sah, 2024). Moreover, stakeholders need to consider integrating a multilingual ideology into language planning activities, ensuring that multilingual learners can effectively utilize EMI to access social and economic opportunities. To this grounds, community schools can organize language awareness activities to foster multilingual consciousness among stakeholders, helping them make informed decisions about MOI based on their ecological needs.

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Appendix I: Guideline Questions for Interview

1. Please provide your name, age, gender, address, and educational qualifications.
2. Are you a permanent, temporary, or *rahat* teacher?
3. Describe your teaching experiences.
4. Which grade and level do you teach?
5. What subjects are you responsible for teaching?
6. Can you provide information about the educational background of your school?
7. Does your school introduce an English medium instruction policy?
8. Do you teach in English medium?
9. What prompted the adoption of EMI policy at your school?
10. Who directed the implementation of EMI policy at your school?
11. Can you share your perspectives and convictions regarding the necessity of EMI policy in community schools?
12. What are the reasons behind the demand for EMI in community schools?
13. Is EMI policy deemed relevant and appropriate for your school setting?

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Teaching Multiplication Using Vedic Mathematics Approach

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Abstract

The Vedas are the most ancient knowledge reservoir of Hindu philosophy. Bharati Krishna Tirtha Ji developed Vedic mathematics after eight years of intensive study of the Vedas. He extracted mathematical concepts from the Vedas and developed Vedic mathematics, which consists of sixteen sutras and thirteen sub-sutras. Vedic mathematics is an innovative approach with applications in a wide range of fields such as science, engineering and so on. Though Vedic mathematics has much usefulness in mathematics, the present teaching-learning practices of mathematics are not valuing its importance. The purpose of this research was to investigate the utility of Vedic mathematics techniques in the mathematics classroom. Action research was carried out in one of the government schools in the Kanchanpur District to conduct this study. This study focused on teaching multiplication to fourth-grade children by utilizing the *Nikhilam* and *Ekadhikena Purvena* sutras. It was found that incorporating the Vedic approach improved pupils' mathematical performance, enabling them to solve problems faster. The implementation of Vedic techniques empowered and motivated students towards learning mathematics. In addition to that, Vedic mathematics' simple and straightforward approaches helped students in solving problems quickly. This study concluded that pedagogical strategies of Vedic mathematics can be a useful and beneficial strategy for teaching mathematics at the school level.

Keywords*:* Vedic mathematics, student engagement, action cycle, sutras and sub-sutras, mathematical anxiety

Introduction

The Veda is one of the most ancient texts of Eastern philosophy. The word "Veda" refers to the warehouse of all knowledge (Itawadiya et al., 2013). In Eastern philosophy, it is believed that Vedas consist of all types of knowledge required for human livelihood (Priya & Kumar, 2021). The Rigveda, Samaveda, Yajurveda and Atharvaveda are the four main volumes of the Vedas. The Veda is regarded as the most ancient scripture of Eastern philosophy, encompassing religious and ritual poetry as well as ritual formulae (Witzel, 2003). Along with different forms of knowledge, the Vedas also contain mathematical ideas and principles. Mathematics extracted from Vedas is termed as Vedic Mathematics. Bharati Krishna Tirtha Ji was the first person who popularized Vedic mathematics. From 1911 to 1918 A.D., he studied the Vedas and invented Vedic mathematics, which consists of 16 sutras and 13 sub-sutras. Later in 1965, a book titled "Vedic Mathematics" was published (Tirthaji, 1965). "Vedic Mathematics" is now recognized as a distinct and important branch of mathematics. Vedic mathematics is an ancient system of mathematics based on sixteen sutras and thirteen sub-sutras (Kumar & Charishma, 2012). Fast calculation is a key feature of Vedic mathematics (Itawadiya et al., 2013). The sutras and sub-sutras work like shortcuts, and with their assistance, any form of mathematical computation can be performed in a relatively short period of time without the use of a calculator. Each sutra has some sort of connection to the others, demonstrating that the sutras and sub-sutras are interrelated (Shylashree et al., 2012).

The researcher (first author), as a mathematics teacher, observed that most of the mathematics laws and principles taught in schools and colleges are influenced by Western culture. There is a lack of cultural contextualization in Nepalese mathematics classrooms (Luitel & Taylor, 2007). In mathematics courses, problems tend to have lengthy solutions with a lot of steps. School mathematics highly emphasizes procedural knowledge rather than conceptual knowledge. In Nepalese mathematics classrooms, the pedagogy places greater emphasis on memorizing formulae and following steps and procedures, rather than motivating students to be creative, ask questions and think critically (Manandhar et al., 2022). Hiebert et al. (2005) also argued that if students memorize procedures only, this may lead to less motivation for students to learn mathematics.

The researcher's experience indicates that students used to spend their maximum time on calculations while solving problems. As students focus more on calculations rather than trying to understand the concepts, it leads to preventing meaningful learning of mathematics. Mathematics learning can be more effective if calculations can be simplified, requiring fewer steps, and allowing students to allocate time for conceptual understanding. Apart from that, mathematics anxiety is another serious issue among Nepalese students. Mathematical anxiety is a state of tension and fear related to solving mathematical problems (Wang et al., 2014). As per the teaching experience of researchers, one of the reasons behind students' fear in mathematics is due to lengthy steps and calculations. Farooq and Shah (2008) also discussed that a positive attitude toward mathematics leads to better performance by students in the subject. Vandecandelaere et al. (2012) mentioned that students who used to enjoy doing mathematics tend to be more motivated in their learning.

Parajuli (2020) suggested that the incorporation of Vedic mathematics can make mathematics a favorite subject among students at the primary level. The integration of Vedic mathematics leads to the enhancement of both procedural and conceptual knowledge among students. Vedic mathematics has features of accuracy, exactness, and preciseness, and is less time-consuming; it holds the potential for meaningful teaching and learning of mathematics.

Vedic Mathematics

Vedic Mathematics assumes that Vedic sutras are based on the natural principles governing the human mind (Fernandes & Borkar, 2013). Bharati Tirtha Krishna Ji pioneered Vedic Mathematics by writing a book entitled "Vedic Mathematics." This book comprises thirteen sutras and sixteen sub-sutras developed by Tirtha Ji through intensive study of the Vedas. Shastri et al. (2017) noted that Vedic Mathematics simplifies many mathematical calculations. Essentially, the sutras of Vedic mathematics function as rapid techniques that facilitate calculations in a very short time, with some calculations even possible to be performed mentally. The sutras and sub-sutras provided in the book "Vedic Mathematics" are the major highlights of Vedic mathematics.

Vedic mathematics can serve as an alternative tool for conducting calculations (Kandasamy & Smarandache, 2006). Fernandes and Borkar (2013) explained that Vedic mathematics reduces calculations to their simplest form because Vedic sutras were designed in a manner that aligns with the way the human mind operates. Beyond teaching mathematics, Vedic mathematics finds applications in various branches of engineering, such as computing and digital processing. A comparative study conducted by Vyas (2019) demonstrated that a student's performance in mathematics can be enhanced through the use of Vedic mathematics in comparison to conventional teaching techniques. The Vedic mathematics sutras and sub-sutras are listed below:

Table 1

Name and Meaning of Sutras of Vedic Mathematics

S.N.	Name of Sutras	Meaning
Sutra 1	Ekadhikina Purvena	By one more than the previous one
Sutra 2	Nikhilam Navatashcaramam Dashatah	All from 9 and the last from 10
Sutra 3	Urdhva-Tiryagbyham	Vertically and crosswise
Sutra 4	Paraavartya Yogayet	Transpose and adjust
Sutra 5	Shunyam Saamyasamuccaye	When the sum is the same that sum is zero
Sutra 6	Anurupyena-Sunyamanyat	If one is in the ratio, the other is zero
Sutra 7	Sopaantyaadvayamantyam	The ultimate and twice the penultimate
Sutra 8	Ekanyunena Purvena	By one less than previous one
Sutra 9	Sankalana-Vyavakalanabhyam	By addition and by subtraction
Sutra 10	Puranapuranabyham	By the completion or non-completion
Sutra 11	Chalana-Kalanabyham	Difference and similarities
Sutra 12	Yaavadunam	Whatever the extent of its deficiency
Sutra 13	Gunitasamuchyah	The product of the sum is equal to the sum of the product
Sutra 14	Vyashtisamanstih	Part and whole
Sutra 15	Shesanyankena Charamena	The remainder by the last digit
Sutra 16	Gunakasamuchyah	The factors of the sum are equal to the sum of the factors

Source: (Tirthaji, 1965)

Table 2

Name and Meaning of Sub-sutras of Vedic Mathematics

S.N.	Name of Sub-sutras	Meaning
Sub-sutra 1	Anurupyena	Proportionately
Sub-sutra 2	Adyamdyenantya-mantyena	First by first and last by last
Sub-sutra 3	Sisyate Sesasamjnah	Remainder remains constant

Sub-sutra 4	Vestanam	By Osculation
Sub-sutra 5	Kevalaih Saptakam Gunyat	For 7 the multiplicand is 143
Sub-sutra 6	Samuccayagunitah	The sum of the coefficients in the product
Sub-sutra 7	Lopanasthapanabhyam	By alternate elimination and retention
Sub-sutra 8	Yavadunam Tavadunam	Lessen by deficiency
Sub-sutra 9	Yavadunam Tavadunam Varganca Yojayet	Whatever the deficiency, lessen by that amount and set up the square of the deficiency
Sub-sutra 10	Antyayordasake	Last totaling 10
Sub-sutra 11	Antyayoreva	Only the last term
Sub-sutra 12	Vilokanam	By observation
Sub-sutra 13	Gunitasmuccayah Samuccayagunitah	The product of the sum is the sum of the products

Source: (Tirthaji, 1965)

The magical formulas of Vedic mathematics may help students solve real-world problems. This action research aimed to explore how Vedic mathematics could be useful and helpful in teaching mathematics at the primary level.

The following research questions were used to achieve the objective of this study:

1. How does the Vedic mathematics approach help in teaching multiplication to grade four students?
2. How does the integration of Vedic mathematics lead to motivating students in mathematics learning?

Methods and Procedures

The research used is action research, a method undertaken to improve our current practices. Action research has four key stages: planning, acting, observing, and reflecting (Altrichter et al., 2002). It involves the process of knowledge creation that arises within the context of practice, and researchers work with practitioners. In contrast to social science research, the purpose of action research is to explore the effect of change in generating knowledge (Huang, 2010). The first author conducted the fieldwork, whereas other authors supported the first author in planning, reflecting the manuscript development phase. During this research, we followed the stages outlined below:

Planning: To conduct this action research, much effort was devoted to the planning stage. The researcher has reviewed relevant literature related to Vedic mathematics, like books, journal articles, blogs, and videos for in-depth study. The researcher made an exploratory lesson plan to teach multiplication to grade four students using the Vedic mathematics technique. As the Vedic mathematics was a new concept for students, activities were designed in such a way that students could learn basic concepts of Vedic mathematics first. Basically, two sutras, viz. *Nikhilam* and *Ekadhikena Purvena,* were planned to be used for this study. Classroom activities like group work, problem solving, and class test sheets were designed beforehand. Intended learning outcomes designed for this study were improved accuracy, speed of doing problems, and understanding of the concepts.

Acting: In this stage the researcher performs various activities in the class. In the beginning classes, students were asked to recall the multiplication tables up to 5. Afterward, researcher gave an introduction to Vedic mathematics along with its history and importance. Researcher taught multiplication by both conventional and Vedic methods. After demonstrating a few problems, the researcher used to give practice questions to students. Group activities were also conducted in which each group was provided with a set of questions. Class tests were conducted on a regular basis to assess the students' performance.

Observing: In this stage, the student's engagement, their ability to grasp the technique, and their performance were assessed. Students' excitement level and their participation in question answering were also observed. Researchers also pointed out the rate of error while doing the problems. Students were also given the opportunity to share their experience and feedback regarding the Vedic mathematics technique.

Reflecting: In this stage, students' performances were compared before and after the use of Vedic mathematics. Researchers maintained reflection notes of each class to note down positive points as well as challenges of each class. Researchers used a plan for the next day's class on the basis of reflection.

In this action research Vedic mathematics approach was used as an intervention. Lesson plans were designed by incorporating Vedic mathematics techniques, and researchers taught different types of multiplication problems to grade four students using these techniques. Throughout the class, student performance, interest, and engagement were precisely analyzed and recorded in field notes on a regular basis.

Research Site and Participants

The research site for this action research was one of the Secondary level government schools of Kanchanpur District, Nepal. The participants for this action research were students of grade IV. There were thirty students in that class.

Data Collection and Analysis

Data is very significant in any research study, so data collection needs to be well-organized and collected properly. In this action research, most of the data is qualitative in nature. Classroom observation was the primary tool for data collection. During classroom observation, we emphasized recording students' performance, their engagement in learning, and their interest in the subject. To manage the data properly, field notes were maintained after each class. After the completion of each class, the researchers used to write reflection notes to reflect on the respective class. After completing two weeks of action research, the field notes and reflection notes of each day were carefully analyzed. Then, themes were generated based on the field notes and reflection notes. The purpose was to develop themes that would help answer the research question or the purpose of the research. We also compared the findings of prior research with our current research findings for the discussion.

Results and Discussion

In this section, the main themes that emerged from the analysis of data were Vedic mathematics for students' engagement, Vedic mathematics for enhancing multiplication skill, Vedic mathematics for enhancing interest in mathematics, and Vedic mathematics for overcoming mathematics anxiety. These themes evolved on the basis of classroom teaching and observation of students' activities. Each theme is discussed and interpreted in the following subsections.

Vedic Mathematics for Students' Engagement

In the first class, the researcher as a teacher started the class by asking students to recall a multiplication table. Almost all students were able to recall multiplication tables up to five; a few were able to recall multiplication tables up to ten, but nobody was able to recall multiplication tables for numbers beyond ten. This indicates that students had difficulty in memorizing the multiplication tables. We all know that multiplication is tedious without memorizing the multiplication table properly. There are high chances of errors in the multiplication of numbers, and errors become more frequent with large numbers in comparison to smaller ones (Domahs et al., 2006). Especially, there are various challenges faced by elementary-level teachers in teaching multiplication (Lo et al., 2008).

While teaching multiplication by the Vedic approach, students were so much more active in the class. When students were asked to solve the questions by the Vedic approach, most of them quickly solved and showed to researcher for checking answers as fast as possible. Interestingly, students were helping their peers in doing the problems. Some of the students were shown confidence to solve the problem on the whiteboard in front of the class. While teaching, students were attentive and took notes with enthusiasm. After the implementation of Vedic mathematics, student participation as well as engagement was enhanced. This ultimately motivates students towards their learning (Jang et al., 2010). One reason behind the engagement of students after the intervention of Vedic mathematics can be because of its short and easy method of calculations. In some cases, the calculations seemed like magic using the Vedic method.

For example, the square of a number whose last digit is 5 can be found in just a second using the sutra "*Ekadhikena Purvena*" as follows:

$$25^2 = (2 \times 3) | 25 = 625.$$

In such a case, we first write the square of 5 on the right, and the left part is obtained by multiplying the given number by one more than that number.

Figure 1

Student's Multiplying Numbers Whose Last Digit is 5

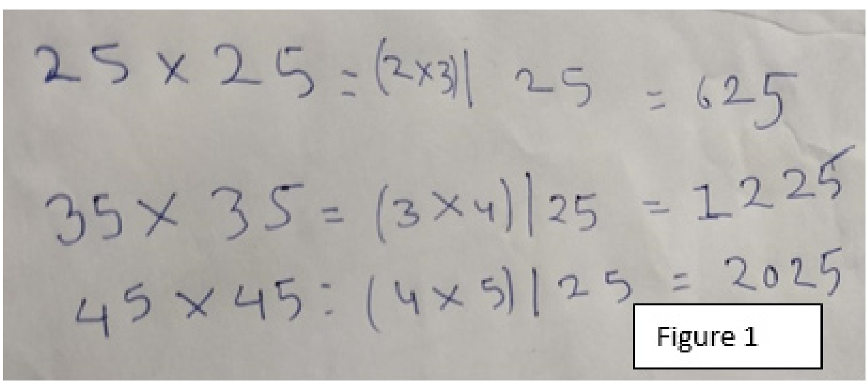


Figure 1 illustrates the work by one of the students, and he has done it correctly. Like him, many others were able to find the squares of numbers whose last digit is 5. After incorporating the Vedic method, students expressed that they loved and enjoyed it. They found this like magic and requested more similar types of problems for practice. They were able to multiply such numbers within a second. In the process of doing multiplication of such numbers, students were found to be engaged. Active engagement leads to enhancing students' motivation and confidence toward learning (Cavanagh, 2011). The researcher's role in the classroom is like a facilitator, in which he offers more opportunities to the students. Students were engaged in problem solving, group work, asking them to solve on a whiteboard, etc. Because of group work, collaboration among students is also enhanced, leading to meaningful learning. Learning will be effective only when students are actively engaged in the classroom (Wood, 2003).

Rittle-Johnson (2015) mentioned that students generally follow procedures and algorithms, which leads to developing procedural knowledge among the students. As a mathematics teacher, the researcher observed lengthy algorithms and steps in mathematics lead to demotivating students towards learning. In contrast to conventional mathematics, Vedic mathematics provides one-line calculations, and some calculations can be done even mentally. Some of the students replied within a few seconds. When students were asked to multiply 98 and 96, or 105 and 98, and so on, they responded quickly. Once students enjoy practicing Vedic mathematics, they feel comfortable, and their engagement in learning is also enhanced (Shriki & Lavy, 2018).

Vedic Mathematics for Enhancing Multiplication Skill

Mathematical calculations are essential components in mathematics. Basic arithmetic operations—addition, subtraction, multiplication, and division—are fundamental concepts in elementary mathematics. In this action research, we focused on multiplication operations. In the conventional way of performing the multiplication of numbers, it consists of many steps, making it difficult for students. Parajuli (2020) demonstrated basic mathematical operations like addition, subtraction, multiplication, and division can be executed quickly through the Vedic method. During this action research, the researcher observed that students completed the multiplication tasks very quickly when Vedic mathematics techniques were incorporated. The Vedic method is more effective in comparison to conventional methods for doing the multiplication task (Chauhan & Ali, 2021). During this study, students were able to do multiplication tasks very quickly, which is in line with Joshi (2017), who argued that Vedic mathematics aids in achieving accurate and faster mathematical calculations.

Classroom observation showed that students were highly motivated and encouraged in doing the problems by Vedic mathematics techniques. This also signifies that the Vedic approach is more effective than the conventional one in terms of students' achievement in mathematics (Shukla et al., 2017). Chauhan (2021) also supports that sutras of Vedic mathematics are useful for performing mathematical calculations with high accuracy in a short time.

For example, by using the *Ekadhikena Purvena* sutra anyone can find the square of the numbers whose last digit is 5. Like the square of 75 as $75^2 = (7 \times 8)|\,25 = 5625$. This can be done in just a second. But it can take a long time by conventional method.

Similarly, the sutra *Nikhilam Navatascaramam Dastah* (‘’All from 9 and last from 10’’) can be useful to multiply the numbers which are near the base (base 10, 100, 1000, etc).

When the two numbers are near base 10 or powers of 10, their multiplication can be found easily by using this sutra. Figure 2 illustrates one of the examples.

Figure 2

Vedic Method to multiply 92 and 95 using Nikhilam Sutra

$$\begin{array}{rcr} 92 & & -8 \\ \times\ 95 & & -5 \\ \hline 87 & | & 40 \end{array}$$

Figure 3

Pupil Applying the Nikhilam Sutra to Multiply the Numbers which are Near the Base 100.

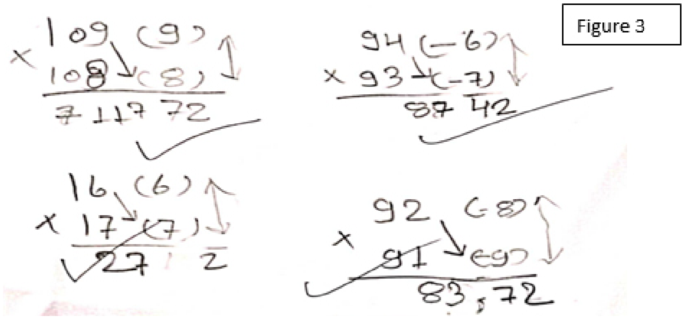
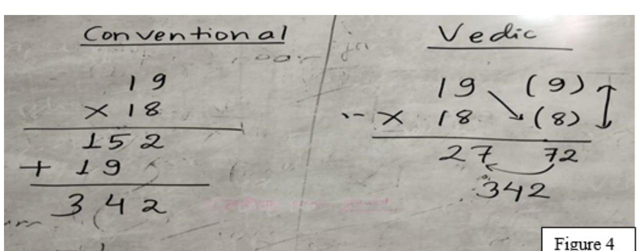


Figure 3 shows one of the students’ works in which he incorporated the *Nikhilam* sutra to do the multiplication. He has done the problems correctly and was done so quickly. Most of the other students have also done the above questions correctly in a very short time. This clearly indicates Vedic mathematics has the potential of speedy calculations, as Prasad (2016) mentioned Vedic mathematics enhanced the speed of basic mathematical calculations.

Figure 4

Teachers Demonstration of Multiplication of Two Numbers both by Conventional and Vedic Methods



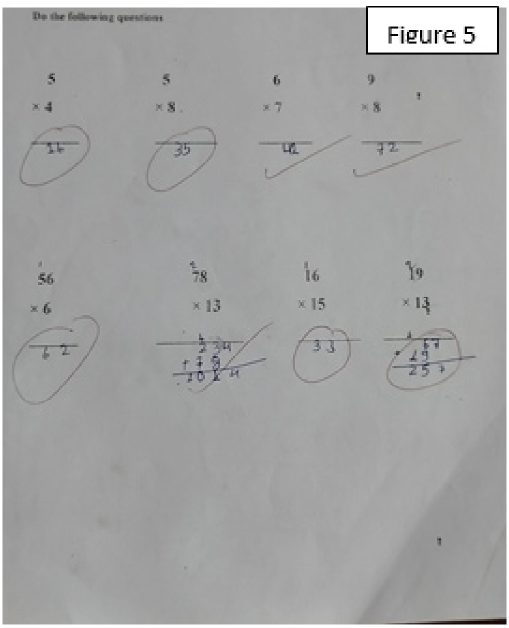
The example in Figure 4, shows the multiplication of 19 and 18 by both Vedic and conventional methods. When the teacher demonstrated the comparison of two methods, students responded they liked the Vedic technique as it consists of fewer steps and can be done quickly. Students responded that the Vedic method is an easy method to do the multiplication.

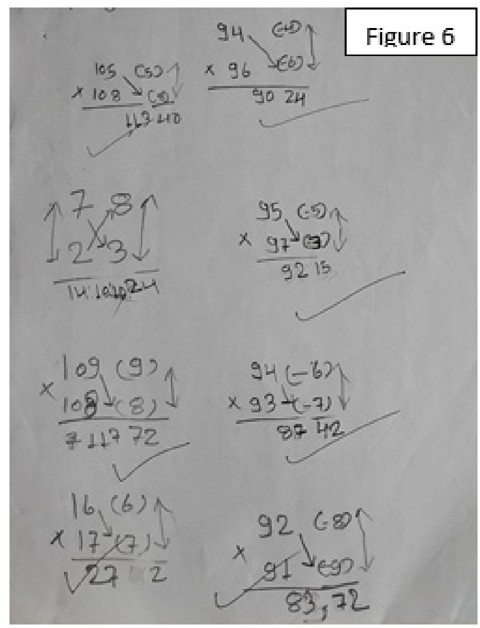
Figure 5

Answer sheet of one of the student (P) before using the Vedic mathematics approach

Figure 6

Answer sheet of the same student (P) after being taught by the Vedic approach





Figures 5 and 6 shows the work of one of the students before and after using the Vedic mathematics approach. Figure 5 shows the student's performance without having the knowledge of Vedic mathematics. Actually, Figure 5 reflects the preliminary knowledge of the students, in which we can see several minor mistakes in multiplication. Figure 6, on the other hand, displays the performance of the same student after acquiring the knowledge of Vedic mathematics, showcasing an improvement in the student's multiplication skills. The comparative study of Figures 5 and 6 indicates that the student's performance was enhanced after the incorporation of Vedic mathematics.

Vedic Mathematics for Enhancing Students' Interest in Mathematics

Student's interest is very necessary in teaching learning process for the better performance. Vedic mathematics includes more enjoyment of math, which leads to increased creativity and confidence among students (William, 2005). One student (A) said that, "*Please assign more questions for homework; I loved practicing Vedic mathematics*." Many others agreed with him; this shows that students loved doing mathematics by the Vedic method. This also reflects they did not feel bored. In the classroom also, students were found to be in a happy mood and becoming confident after using the Vedic approach.

In the context of Nepal, it is a common belief that mathematics is a very difficult subject and not suitable for average students. A National Assessment of Student Achievement, NASA (2018) report also stated that more than half of the students do not have a sense of mathematics. To overcome this issue in teaching mathematics, it is necessary to find a way to enhance students' interest in mathematics. Overcoming students' fear of mathematics needs to be addressed so that students can enjoy mathematics. When multiplication was taught using the Vedic method, students started to love this technique, and their interest towards mathematics gradually found increasing.

Another student (B) asked the teacher, "Sir, can we use the Vedic method for multiplication problems in the examination? I found this method easier than the conventional one." This shows that students prioritize the Vedic method over the conventional method. They found this method easy.

Vedic mathematics is not just a set of tricks; rather, it offers a tool for effective teaching and learning (Shastri et al., 2017). Vedic mathematics enables students to visualize how and why certain methods work. This leads to an increase in students' confidence, and their interest in learning is also enhanced. In general, students used to be familiar with conventional methods, so in the beginning stage, Vedic mathematics also requires some sort of practice. Later on, after understanding the basics of sutras, calculations can be done easily. In this regard, Vedic mathematics is systematic, simplified, unified, and faster in comparison to conventional methods, making the mathematics classroom interesting and enjoyable (Raikhola et al., 2017). This action research just explored teaching multiplication. In teaching other topics of mathematics, this technique can be equally useful.

Another student (C) asked the researcher, "Sir, please give us more and more questions like this for classwork." Other students said the same, which also showed they are happy with the Vedic approach. Throughout the process of teaching, we observed enhancement of students' motivation level, upliftment of their confidence, and an increase in the concentration of students. These findings were also in good agreement with Ismail and Sivasubramniam (2010); they mentioned the enhancement of students' performance due to the implementation of the Vedic mathematics approach.

Vedic Mathematics for Overcoming Mathematical Anxiety

Mathematics anxiety represents learners' negative feelings or reactions to situations involving numbers, mathematical calculations, and other math-related problems. It is the tension in the learners' minds because of math problems. Learners can experience math anxiety in formal classrooms, standardized tests, or real-world math problems (Ashcraft and Moore, 2009). During the process of this action research, in the beginning phase when Vedic mathematics was not introduced, students were found to be very nervous in doing multiplication problems. They used to commit many errors in simple problems like 15×5, 12×6 and so on. When students were not able to solve problems correctly, they lacked confidence. Low confidence in mathematics leads to math anxiety and decreased cognitive skills among students. Math anxiety starts in elementary schools, ultimately leading to poor performance in mathematics (Shastri et al., 2017).

As a mathematics teacher, we witnessed that, while teaching multiplication by conventional method, students need to go through many steps, and there is the chance of committing mistakes. Due to fear of mistakes, the student's interest towards mathematics diminished. Mathematics anxiety deteriorates both the performance and participation of the students (Newstead, 1998). In Nepalese schools, most students avoid mathematics as an elective course. For example, while choosing elective subjects in grade nine, the majority of students used to choose subjects other than mathematics. Similarly, in grades 11 and 12, few students go with the mathematics major. This is due to math anxiety among Nepalese students. Mathematics is considered a difficult subject from the elementary level of school education.

In the initial class of the action research, most students showed fear towards mathematics. Students were passive and unable to enjoy themselves in the classroom at the beginning of the class. The teacher asked a question to the class: "How many of you feel mathematics is a difficult subject?" Out of thirty students, more than twenty students raised their hands. This indicates that the majority of students had difficulty with mathematics. Progressively, after a few days of teaching using the Vedic technique, students started to enjoy mathematics. A few days later, when the students' views were taken, the majority of them responded that they found mathematics a little easier after Vedic mathematics was incorporated.

In the classroom, "Students were doing the task in a happy mood with smiley faces showing passion and enthusiasm." This shows that students did not feel bored when taught by incorporating the Vedic mathematics technique. One student said, "Sir, can we use Vedic mathematics to do other types of calculations like addition and subtraction? Please teach us the technique for addition and subtraction using Vedic mathematics." This reflects that Vedic mathematics has helped them overcome their fear of mathematics, which motivates them to learn.

In this regard, Shastri et al. (2017) suggested using Vedic mathematics as a tool to improve cognitive skills as well as to reduce mathematics anxiety among students. By the use of Vedic mathematics, it was observed that students can openly ask their doubts to the teachers. When any problem is assigned to them, they quickly get ready to respond. So it is expected that integrating Vedic mathematics in teaching mathematics subjects at the school level can help in overcoming mathematical anxiety among the students.

Conclusion

Vedic mathematics is a revitalizing approach to teaching mathematics, popular for its fast calculation techniques, fewer algorithms, and mental calculations. This action research demonstrates that students' performance in doing multiplication has been enhanced by incorporating the Vedic mathematics approach. Students were able to do multiplication easily and quickly. In addition to that, students' interest in mathematics also found enriched after incorporating Vedic mathematics. Students' responses suggest that Vedic mathematics techniques are an easier method for multiplication as compared to conventional calculation methods. It was found that Vedic mathematics helped engage students in learning and to overcome mathematics anxiety, leading to the active participation of students in the classroom. Apart from teaching multiplication, the Vedic approach can be equally useful in teaching other topics of mathematics. Taking Vedic mathematics as a tool can ultimately help in meaningful teaching and learning of mathematics at all levels of school mathematics.

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Understanding Procrastination: Role of Time Management and Task Aversiveness in Shaping Mathematics Achievement

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Abstract

Academic procrastination is the deliberate delay of academic tasks, which is frequently caused by various reasons such as poor time management, disinterest in task or lack of motivation, sincerity, perfectionism or external socio-demographic variables. These behaviors can adversely affect students' academic performance. The present study aims to examine the status of students' time management and task aversiveness in academic procrastination. This study further investigates their role in shaping mathematics achievement. A quantitative research approach with a cross-sectional survey research design was used among 474 secondary level students of Bardiya district. The data were analyzed by using t-tests, ANOVA and multiple linear regressions. The finding reveals that time management and task aversiveness are significant contributors to procrastination. Additionally, regression analysis shows that study hour, aversiveness of task, ethnicity, father education and mother education are major significant factors to determine mathematics achievement score. These results underscore the critical need for collaborative efforts among parents, teachers and policymakers to address the root causes of procrastination and enhance students' academic performance. Developing targeted interventions and support systems can foster better time management and reduce task aversiveness, ultimately leading to improved learning outcomes in mathematics and beyond.

Keywords: Academic procrastination, cross-sectional survey design, secondary level, academic performance

Introduction

Time management is an essential self-regulation strategy that allows students to take control of when and how long they devote to activities required to meet their academic objectives (Wolters & Brady, 2021) whereas task aversiveness is the unwillingness or avoidance of engaging in academic tasks viewed as difficult or uninteresting (Zawodniak et al., 2023). Time management is a multidimensional process that involves setting and prioritizing goals, short-and long-term planning, estimating time demands, monitoring spending and structuring time allocation (Aeon & Aguinis, 2017). Effective time management requires students to dedicate appropriate study, practice and revision time to improve their understanding of mathematical ideas. However, poor time management might result in last-minute cramming and superficial learning (Siagian, 2022). Task aversiveness might be caused by worry about mathematics activities, unfavorable experiences in the past, or a lack of confidence in one's mathematical abilities (Ugwuanyi et al., 2020). This inability to engage with mathematics may lead to procrastination producing a vicious cycle that affects academic success.

Academic procrastination is a widespread issue affecting a substantial number of secondary school students (Bojuwoye, 2019), leading to adverse educational outcomes and personal stress (Maymon & Hall, 2021). Academic procrastination is an intentional delay in the initiation or completion of academic tasks on time (Eisenbeck et al., 2019). This leads to a tendency to engage in other activities and avoid tasks that need to be performed at the assigned time (Svartdal et al., 2020). Additionally, more than 80% of students reported anxiety due to procrastination (He, 2017). These findings highlight the widespread nature of procrastination and its psychological impact on students.

Common forms of procrastination among students include postponing academic work such as writing reports or studying for exams (Hayat et al., 2020), displaying laziness in studying (Hasmayni, 2020), and failing to complete assignments (Fentaw et al., 2022). Setiyowati et al. (2020) found that mathematics has the highest rate of procrastination and claimed that high rates of procrastination are linked to poor academic performance. Frequent procrastination hinders students' ability to achieve learning outcomes (Adam & Hasbullah, 2019; Sæle et al., 2017) leading to poor academic performance in mathematics (Asri et al., 2017). Additionally, a significant relationship exists between academic procrastination and mathematics anxiety among secondary school students (Sunitha, 2013). Research indicates that academic procrastination in mathematics is prevalent among secondary school students, with varying levels (Warniasih et al., 2024). Numerous factors contribute to this behavior, including lack of interest, task difficulty, poor time management, insufficient knowledge (Asri et al., 2017; Warniasih et al., 2024). Learning styles, particularly visual and kinesthetic, significantly influence academic procrastination in mathematics (Wan Hussin & Mohd Matore, 2023).

Academic procrastination is common among students, leading to missed deadlines, delayed study, and lower grades. It also has negative psychological effects such as depression, low self-esteem, anxiety, guilt, and stress. Insufficient preparation for testing and examination further exacerbates these consequences. Effective interventions are required to mitigate procrastination. To address this issue, schools should expose students to suitable learning styles, potentially reducing procrastination and improving mathematics performance (Wan Hussin & Mohd Matore, 2023). Gumban and Roble (2023) found that providing students with flexible time through non-routine, real-world problems in formative assessments could reduce procrastination. Bhatt (2023) emphasized the need for holistic interventions, suggesting evidence-based strategies to enhance academic engagement and reduce procrastinatory behaviors.

Researchers have investigated the causes and consequences of academic procrastination in recent decades, revealing various internal and external psychological elements that contribute to its development. The internal ones are: (1) personality characteristics such as poor self-image, avoidance, and perfectionism (Patrzek et al., 2012; Pychyl et al., 2002; Wang et al., 2017) (2) competence-related elements such as insufficient knowledge, regulation of low self-esteem, and poor study skills (Asri et al., 2017; Zacks & Hen, 2018), (3) affective factors includes to anxiety, frustration, boredom, fear, shame, guilt, regret, revenge and anger (Deniz et al., 2009; Feyzi Behnagh & Ferrari, 2022; Haghbin et al., 2012; Haycock et al., 1998) (4) cognitive aspect such as fear, lack of internal motivation, and failure of self-regulation (Zarrin et al., 2020), (5) learning history includes behavioral learning and negative learning experience, (6) physical and mental health concerns, (7) perceptions of academic tasks, such as viewing them as adversarial, difficult, or important (Simon et al., 2020), (8) lack of the scale of priorities, (9) inadequate time management skills (Nayak, 2019; Ocak & Boyraz, 2016) and (10) the selection of coping strategies (Asikhia, 2010). External factors includes school-related matters such as the quality of teachers, peer influences, and external conditions of the school (Patrzek et al., 2012) and the style of parenting (Pychyl et al., 2002; Zakeri et al., 2013). Recent research (Sharma & Kulshreshtha, 2023; Tao et al., 2021) also demonstrates that articles on academic procrastination have increased substantially since 1993, indicating a growing interest and improving understanding in this area. Notable contributions from institutions such as The Arctic University of Norway and leading publications in journals like Frontiers in Psychology, particularly from the

USA, underscore the significance of this study. However in the Nepalese context, there are lacks of literature on the contents about academic procrastination.

Research indicates that extended physical distancing, decreased social interaction, and shifts in learning methods have led to reduced student engagement and heightened procrastination behaviors (Jia et al., 2020) as well as increased psychological distress (Maia & Dias, 2020). In response to the pandemic, Nepal adhered to WHO guidelines and maintained physical distance by implementing virtual education which may be contributed to procrastination however it is still under research in Nepal. Post-COVID, student performance in Nepal has declined, particularly from school to university levels, although the cause is still unknown and further research requires.

To address the gap and fulfill the scarcity of literature in Nepalese context, it is necessary to understand the academic procrastination. Hence, this study aims to identify the perceived causes related to time management and task aversiveness in academic procrastination and examine how they affect mathematics achievement. To fulfill the objectives, following research questions are devised.

1. What is the level of time management and task aversiveness related causes in academic procrastination?
2. What is the role of ethnicity, study hour and parents' education in shaping time management and task aversiveness?
3. What is the role of time management and task aversiveness related cause of academic procrastination in shaping mathematics achievement?

Literature Review

Academic procrastination, a prevalent behavior among students, involves delaying academic tasks, often leading to negative consequences on academic performance and psychological well-being. This literature review explores the causes of academic procrastination and its impact on secondary school students' mathematics achievement, drawing insights from various studies.

Factors Contributing to Academic Procrastination

Several studies have identified various factors contributing to academic procrastination. Esmaeili and Monadi (2016) identified five major themes from analyzing interview manuscripts regarding the causes of procrastination among middle school students. These themes include the amount of time spent attending school; the influence of parents, including their use of positive and negative reinforcements; the impact of competition and peer influence; the fear of failure linked to perfectionism; and a preference for immediate rewards over delayed ones. Asri et al. (2017) highlighted multiple causes, including perceptions of task importance, task difficulty, insufficient knowledge, perfectionism, poor learning management, lack of self-regulation, stress, fatigue, inadequate social support, indiscipline among teachers, and unconducive school culture. These factors collectively contribute to low learning achievement, emphasizing the multifaceted nature of procrastination. Bojuwoye (2019) further elaborated on the causes of procrastination, listing indecision, poor time management, and lack of motivation, fear of failure, poor organizational skills, high stress, inadequate coping strategies, and peer influence. The study ranked these factors in descending order of importance, providing a detailed understanding of the primary drivers of procrastinatory behavior. Bhatt (2023) provided a comprehensive review of the factors influencing academic procrastination. The review categorized these factors into internal and external dimensions, including individual traits, motivational aspects, environmental influences, and situational factors. On the similar manner, He (2017) conducted a study at the University of Bristol, and showed that 97% of students experienced effects of procrastination, with 48% frequently engaging in procrastinatory behaviors. The study identified key reasons for procrastination, including laziness, lack of motivation, stress, excessive internet use, and task difficulty. Li et al. (2024) explored how self-control influences academic procrastination in primary school students; using the temporal decision model and found poor self-control (impulse system) increased procrastination, while stronger self-control (control system) reduced it. The study suggests that helping students focus on positive outcomes and reducing task aversion could effectively minimize procrastination.

Academic Procrastination and Mathematics Achievement

Academic procrastination is a common issue among students, and numerous researches have been conducted to investigate its relationship with various psychological and academic aspects, especially in the context of mathematics. This review synthesizes findings from several key works, highlighting the complexities and dynamics of academic procrastination and its impact on mathematics achievement. Bigno et al. (2024) showed a positive correlation but a non-significant relationship between mathematical attitudes and academic procrastination among college students. However, Gareau et al. (2019) found the academic procrastination of university students is significantly detrimental to their subsequent academic achievement. According to Bashir (2019) there is a considerable negative association between academic procrastination and academic achievement in universities. Furthermore, academic procrastination elements such as time management and task aversiveness were negatively associated with students' academic achievement. Njuguna and Ireri (2022) results provided evidence that there was a negative correlation between academic procrastination and academic achievement. Similarly, Bakhshayesh et al.(2016) found a significant negative relation between academic procrastination and math performance ($p<0.05$). Fulano et al.(2020) discovered that self-efficacy in mathematics was positively connected to self-regulated learning and negatively related to mathematics procrastination. They also discovered that self-regulated learning and mathematical self-efficacy mediated the effect of past mathematical knowledge on mathematical procrastination.

Previous research has consistently identified low self-efficacy, high task aversion, and lack of motivation as key factors contributing to academic procrastination (Steel & König, 2006; Deci & Ryan, 1985). However, the influence of these factors on mathematics achievement, especially in specific contexts such as Nepal, remains underexplored. Given the absence of studies on the status and reasons for academic procrastination in Nepalese secondary school mathematics, there is a clear need for further investigation. This study seeks to fill this gap by utilizing the Temporal Motivation Theory (TMT) (Steel & König, 2006) which is influenced by four key components: expectancy, value, delay sensitivity, and impulsiveness. Expectancy refers to the likelihood of success, while value is the perceived importance or reward of completing a task. In mathematics, students prioritize tasks with high expectancy or intrinsic enjoyment, while those with low value are more prone to procrastination. Delay sensitivity is the impact of delay on task utility, with tasks with immediate rewards being more motivating. Impulsiveness is the preference for immediate rewards over long-term benefits. By examining these components, TMT helps identify areas for interventions to reduce procrastination and improve mathematics achievement.

Methods and Procedures

This study employed a cross sectional survey design within quantitative research, framed by a post-positivist paradigm. The target population consisted of 8,080 students from public secondary schools in Bardiya district, from which a sample of 480 ninth-grade students was selected using multi-stage cluster sampling which is same sampling as the study of Chapai et al. (2024). Following data cleaning, six cases were removed due to missing data and outliers, resulting in a final sample size of 474. Solvin's formula (Costa et al., 2022) ensured sample representativeness. Informed consent was obtained; participant anonymity was preserved through coded identifiers and a password-protected database.

Variables Information

The sample had a balanced proportion of boys (50.2%) and girls (49.8%). In terms of ethnic groups, Janajati (40.7%) and Brahmin/Chhetri (40.1%) were equally represented, whereas Madhesi (13.3%) and Dalit (5.9%) were underrepresented.

Time Management

Time management represents how students assign and use their time for academic tasks. This domain comprises the items related to time management such as waiting for peer feedback (TMP1), feeling overloaded with non-academic activities (TMP2), and the perception of project work as time-consuming (TMP3), enjoyment of deadline pressure (TMP4), conscious to complete tasks (TMP5).

Task Aversiveness

Task aversiveness comprises the negative feelings of students towards certain academic tasks. This contains concerns about teacher approval (TAP1), difficulty in deciding task content (TAP2), and anxiety about poor academic performance (TAP3), do not like to carry out other people's instructions (TAP4), do not like to complete class assignments (TAP5), assignment task taken as overburdened (TAP6) , couldn't choose among all the topics (TAP7).

Description of Instrument

Procrastination Assessment Scale-Students (PASS)

The data was collected using a survey questionnaire that included the Procrastination Assessment Scale-Students (PASS) and a self-constructed Mathematics Achievement Test. The PASS was separated into two sections: demographic profile and cause for procrastination. 26 items covering four areas in cause for procrastination: time management, task aversiveness, sincerity, and personal Initiatives. However, in this study researcher only took 12 questions related to time management and task aversiveness. These items, based on a scale constructed by Solomon and Rothblum (1984), were revised to meet the study's aims and rated on a five-point Likert scale from never to always procrastinate. The PASS scale was designed for general subjects; hence the items were changed to measure academic procrastination when learning mathematics. The instrument completed reliability and validity testing, including expert evaluations and a pilot test, obtaining a respectable Cronbach alpha of 0.83 (Cohen et al., 2017; Creswell, 2014).

Mathematics Achievement Test

The researchers constructed a Mathematics Achievement Test with 50 multiple-choice questions from the ninth-grade compulsory mathematics curriculum, including arithmetic, algebra, geometry, and statistics. The questions were developed to measure various cognitive levels using Bloom's revised taxonomy (Airasian & Miranda, 2002; Krathwohl, 2002). Expert evaluations were conducted to ensure the test's content validity, following the criteria outlined by Yaghmalef (2003) and Lawshe (1975). The test was highly reliable, with a KR-20 reliability coefficient of

0.91(Mohajan, 2017), supporting its usefulness for assessing ninth-grade students' achievement.

Data Analysis Technique

Data were analyzed using descriptive and inferential statistics. Descriptive statistics, such as mean and standard deviation (SD), were used to describe procrastination and mathematical achievement levels. The level of reason of procrastination was assessed using a one-sample t-test, with a population mean of 3 (Joshi et al., 2022; Joshi et al., 2024). Independent sample t-tests and analysis of variance (ANOVA) were used to identify significant findings based on student demographics such as ethnicity, study hours, parents' educational levels. Furthermore, multiple linear regressions were used to assess the item-specific influence of academic procrastination on mathematical achievement. The data was analyzed using the Statistical Package for the Social Sciences (SPSS-23). Before starting the data analysis, prerequisites for using t-tests, ANOVA, and regression were met, including eliminating outliers and missing cases and verifying normality, linearity, multicollinearity, and homogeneity of variance (Kao & Green, 2008; Khanal et al., 2022).

Results

Status of Reason of Procrastination Related to Time Management and Task Aversiveness

Table 1 shows that level of "reason of procrastination related to Time Management" was significantly high (Mean=3.19, SD=0.67) except two items. In item wise analysis, mean score was highest in the statement TMP5 (Mean=3.49, SD=1.49). In contrast, the score found to be lowest in TMP2 (Mean = 2.98, SD=1.32) and TMP4 (Mean =2.98, SD=1.35).

Table 1

Status of Reason of Procrastination Related to Time Management and Task Aversiveness (n=474)

Statement	Mean	SD	t-value	p-value
Time Management	3.19	0.67	6.25	0.00*
I waited for a classmate to finish tasks to get feedback from my friends (TMP1)	3.35	1.19	6.39	0.00*

I am overloaded with non-academic activities (TMP2)	2.98	1.32	-0.38	0.70
I believed that writing a project work simply takes too much time (TMP3)	3.17	1.16	3.13	0.00*
I enjoyed the difficulty of awaiting the deadline (TMP4)	2.98	1.35	-0.38	0.71
I am conscious to complete my tasks before my friends (TMP5).	3.49	1.07	9.97	0.00*
Task aversiveness	3.17	0.61	5.98	0.00*
I concerned with my teacher if I wouldn't like my work (TAP1)	3.58	1.27	9.93	0.00*
It was difficult for me to decide what to include and what to leave out of my work (TAP2)	3.49	1.11	9.68	0.00*
I always worried on getting a poor mark in mathematics (TAP3)	3.34	1.32	5.55	0.00*
I do not like to carry out other people's instructions (TAP4)	2.95	1.26	-0.84	0.40
I do not like to complete my class assignments (TAP5)	2.70	1.27	-5.04	0.00*
The assignment task made me feel overburdened (TAP6)	2.98	1.35	-0.27	0.79
I couldn't choose among all the topics (TAP7)	3.13	1.22	2.26	0.02*

*P<0.05

Table 1 further shows that reasons for procrastination related to the aversiveness of tasks is significantly high (Mean =3.17, SD =0.61) except two items. In item wise analysis the statement TAP1 is significant item with highest mean value (Mean =3.58, SD =1.27) than other items. Hence, it suggests that concern about teacher disapproval significantly contributes to procrastination. Whereas statement TAP5 has lowest value (Mean=2.70, SD=1.27) indicates disagreement with the statement. However, the significant negative value (t= -5.04, p= 0.00) that a dislike for class assignments is inversely related to procrastination, suggesting it is not a significant reason in this sample.

Mathematics achievement score of the student found to be significantly (Mean=25.59, SD= 4.59, t=38.37, p<0.01) higher than national average mathematics achievement score 35% in secondary level (ERO, 2022).

Table 2 shows that status of causes of procrastination based on sample characteristics. On the basis of students' study hour, time management related cause is found highest in students' whose study hour less than two hours (Mean=3.24, SD=0.68) is higher than two to four hours (Mean=3.21, SD=0.66) and greater or equal to four hours (Mean=2.9, SD=0.57) at home. Furthermore, a one-way ANOVA result shows students' study hour at home is significant having p-value=0.01 with F(2,473) =4.49 affects the cause time management to produce procrastination. Additionally, the results of post-hoc statistics show that the study hour is less than two hours and greater than two to four hour is significant with the study hour greater than four hours.

Similarly, On the basis of ethnicity, time management related cause is found highest in Madheshi ethnical group (Mean=3.25, SD=0.7) as compared to Dalit, Janajati and Brahmin/Chhetri students. Similarly, on the basis of parents' education, time management related cause is found highest in students whose father's education and mothers' education was illiterate (Mean=3.25, SD=0.74) and (Mean=3.24, SD=0.71) than university and school education counterparts. Furthermore, a one-way ANOVA result shows that students' ethnicity, father education, and mother education are all insignificant to the time management related cause. Similarly, On the basis of ethnicity, task aversiveness related cause is found highest in Madheshi ethnical group (Mean=3.25, SD=0.59) as compared to Dalit, Janajati and Brahmin/Chhetri students. On the basis of students' study hour, task aversiveness related cause found higher whose study hour between two to four hours (Mean=3.19, SD=0.6) than less than two hours (Mean=3.18, SD=0.63) and greater or equal to four hours (Mean=2.98, SD=0.54) at home. Similarly, on the basis of parents' education, task aversiveness related cause is found highest in students whose father's education and mothers' education was university (Mean=3.23, SD=0.58) and (Mean=3.34, SD=0.51) respectively than illiterate and school education counterparts. Furthermore, a one-way ANOVA result shows that mothers' education is significant having p-value=0.04 with F(2,473) =3.20 affects to the task aversiveness related cause however students' ethnicity, study hour, father education, are all insignificant. Additionally, the results of post-hoc statistics show that the result is significant (p=0.03<0.05) within the school education and university education.

Table 2

Results of Causes of Procrastination (Time Management and Task Aversiveness) based on Sample Characteristics (n= 474)

Variables with categories	Frequencies (%)	Time Management			Task Aversiveness		
		Mean	SD	P-value	Mean	SD	P-value
Ethnicity							
Janajati	40.7	3.17	0.67	0.71	3.18	0.60	0.40
Dalit	5.9	3.11	0.52		3.03	0.50	
Madhesi	13.3	3.25	0.7		3.25	0.59	
Brahmin/ Chhetri	40.1	3.21	.68		3.15	0.64	
Study hour							
<2hrs	41.8	3.24	0.68	0.01*	3.18	0.63	0.13
2-4 hrs	49.8	3.2	0.66		3.19	0.60	
≥ 4 hrs	8.4	2.9	0.57		2.98	0.54	
Father education							
Illiterate	23	3.25	0.74	0.51	3.19	0.63	0.57
School education	61.6	3.16	0.65		3.15	0.61	
University education	15.4	3.22	0.63		3.23	0.58	
Mother Education							
Illiterate	31.9	3.24	0.71	0.48	3.18	0.59	0.04*
School education	55.9	3.16	0.67		3.12	0.64	
University education	12.2	3.22	0.56		3.34	0.51	

$^*p<0.05$

Table 3 shows the effect of causes of procrastination on mathematics achievement. Moreover, sample characteristics were used as mediating variables. The regression model is 15.2 % variance with significant ANOVA F (6,473) =13.97

whereas the adjusted R square value is 0.14, indicating that the model is a modest fit (Cohen et al., 2007). In the analysis, aversiveness of task (Beta=0.08), ethnicity (Beta=0.15), study hour (Beta= 0.21), father's education (Beta=0.16), and mother's education (Beta=0.12) are significant predictors of mathematics achievement whereas study hour is main predictor because of having beta value.

Table 3

Effect of Causes of Procrastination on Mathematics Achievement

Model	B	Std. Error	Beta	t-value	p-value
(Constant)	15.54	1.57		9.86	.00*
Ethnical group of participants	.51	.14	.15	3.54	.00*
Study Hour	1.52	.32	.21	4.77	.00*
Father's education	1.19	.35	.16	3.34	.00*
Mother's education	.89	.35	.12	2.58	.01*
Time management	.11	.30	.02	.36	.72
Aversiveness of task	.63	.33	.08	1.91	.05*

*P≤ 0.05

The provided figure illustrates the relationship between time management (TM), task aversiveness (TA), and motivation (MA) across four variables: gender, ethnicity, study hours, and father's education. In Figure 1, the trends indicate gender differences in how time management interacts with task aversiveness to influence motivation, with females showing less variability compared to males. Figure 2 highlights that ethnicity impacts the interplay of these factors, with distinctive patterns of motivation across ethnic groups. Figure 3 examines study hours, showing significant fluctuations in motivation levels, particularly for those with varying time management skills and aversion to tasks. Lastly, Figure 4 explores the effect of father's education, revealing that students with fathers holding higher education demonstrate relatively consistent motivation despite differences in time management or task aversiveness. Overall, these graphs emphasize how demographic and contextual factors moderate the relationship between time management, task aversiveness, and motivation. The Figure 5 examines the effect of time management (TM) and task aversiveness (TA) on motivation (MA) based on maternal education levels. Motivation fluctuates across TM levels, with distinct patterns for illiterate, school-educated, and university-educated mothers. Students with university-educated mothers show sharp declines at higher TM levels, especially under low task aversiveness.

Figure 1

Effect of Time Management and Task Aversiveness based on Gender

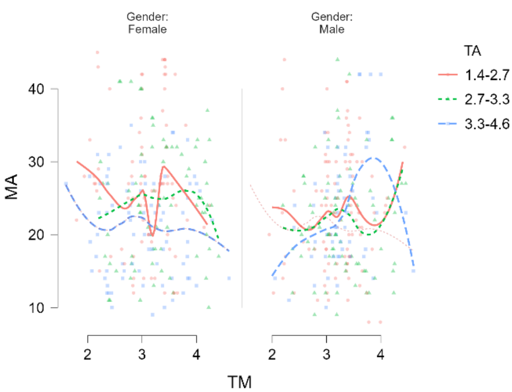


Figure 2

Effect of Time Management and Task Aversiveness based on Ethnicity

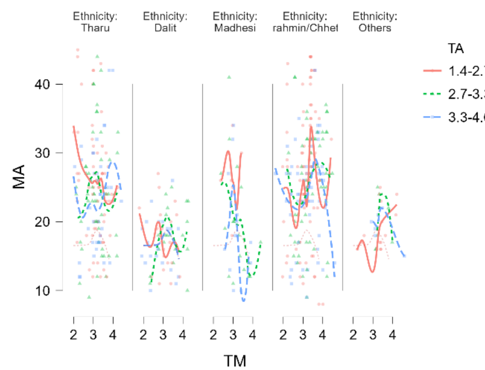


Figure 3

Effect of Time Management and Task Aversiveness based on Study Hours

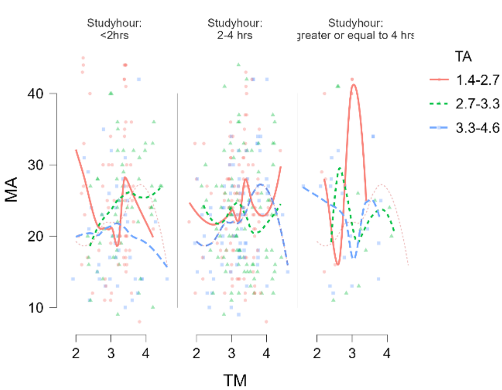


Figure 4

Effect of Time Management and Task Aversiveness based on Father Education

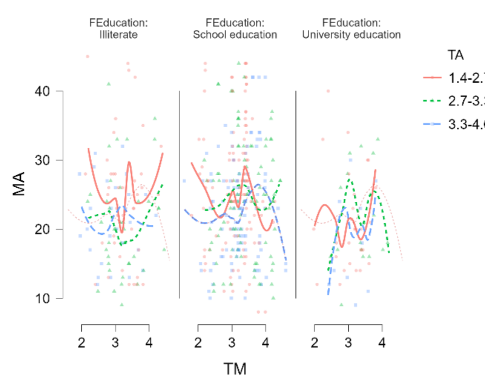
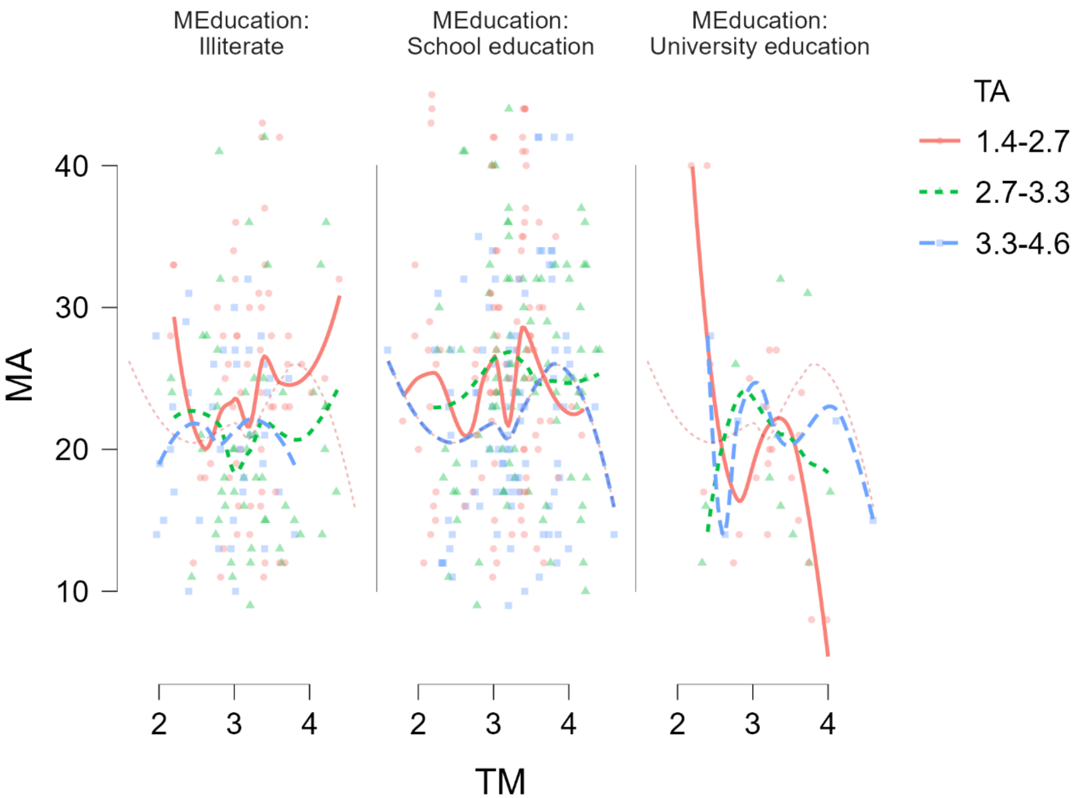


Figure 5

Effect of Time Management and Task Aversiveness based on Mother Education



Discussion

The aim of the study was to analyze the role of cause of procrastination (time management and task aversiveness) in shaping mathematics achievement score. Results showing that time management-related factors are significant contributors to procrastination. Findings also indicated that waiting for classmates to provide feedback, perceiving project work as too much time, and conscious to complete tasks before peers significantly influenced students' cause of academic procrastination. These findings suggest that students' confidence on external validation and competitive pressure from peers can hinder timely task completion. Previous studies shows that social science students engage to receive peer feedback, who perceive time constraints as a barrier (Altstaedter & Doolittle, 2014). Interestingly, procrastination may be more common among capable individuals who have learned to perform well under time pressure (Ferrari et al., 1995). Understanding these factors can help educators and counselors address procrastination more effectively in academic settings. However, non-academic overload and enjoying the challenge of awaiting deadlines did not significantly contribute to procrastination in Nepalese context, indicating that students may not view these factors as critical obstacles.

The study found that task aversiveness plays a significant role in procrastination. This finding aligns with the research by Li et al. (2024) which demonstrated that task aversiveness and outcome value mediate the relationship between self-control and academic procrastination in students. The study suggests that helping students focus more on positive outcomes and less on the negative aspects of tasks could be an effective approach to reducing academic procrastination. The result of this study further show item-wisely concerns about teacher approval, difficulty in deciding task content, and anxiety about poor academic performance are significant. These components highlight the emotional and cognitive challenges students' face, which can lead to delayed task initiation. These findings resonate with the conclusions of (Hooshyar et al., 2020), who demonstrated that anxiety and fear of failure are noticeable in causing academic procrastination. Similarly, Peixoto et al. (2021) which showed that greater academic procrastination predicted greater psychological distress (e.g., stress, depression, anxiety) and lower life satisfaction among students. Interestingly, results showed that feelings of bitterness towards deadlines and unwillingness to complete assignments were not significant procrastination factors, suggesting that while students may not enjoy these tasks, they do not necessarily delay them because of these feelings.

The study also examined the influence of sociodemographic factors on procrastination. Study hours at home were significantly associated with time management procrastination, while ethnicity, father's education, and mother's education were not. This finding aligns with research by Fostervold et al. (2022) which shows students' perceived stress and physical working conditions increased both procrastination and independent study time. The study further found that, mother's education significantly affected task aversiveness, and both mother and fathers' education significantly influenced sincerity-related procrastination, echoing the findings of (Moed et al., 2017) their findings suggested that when mothers react negatively to challenging child behavior, it can influence how children interact and adapt. This may increase the chances of children developing adjustment problems.

Finding of this study also reveals that study hour is the main predictor of mathematics achievement. This finding echoes research by Quilez-Robres et al. (2021) which demonstrated that consistent study habits are significantly related to academic achievement in mathematics. In the reason of procrastination, task aversiveness is significant with mathematics achievement in Nepalese context. Hence, further researches are necessary with large sample and geographically.

Various research conducted in different samples showed that procrastination behaviors were negatively correlated with academic achievement (Balkis & Duru, 2017; Goroshit, 2018; Joubert, 2015; Nwosu, 2018). As a result, it appears that procrastinating on purpose to complete a task could be viewed as a corollary of underachievement or poor grades, and this might have specific implications for success.

Conclusion

This study underscores the multifaceted nature of academic procrastination, particularly in the context of mathematics achievement among students in Nepal. Key findings reveal that time management and task aversiveness significantly contribute to procrastination, influencing academic outcomes. Students' reliance on external validation and competitive peer pressure were identified as critical factors delaying task completion. Furthermore, emotional and cognitive challenges, such as anxiety and fear of failure, exacerbate procrastination, while consistent study habits emerge as strong predictors of academic success. Interestingly, non-academic overload and negative attitudes toward deadlines did not significantly influence procrastination, suggesting a unique cultural or contextual nuance. However, this study has several limitations. The sample size and geographic focus limit the generalizability of the findings. Self-reported data may introduce bias, as students might underreport procrastination behaviors. The study did not explore the potential long-term effects of procrastination on academic performance or its interplay with other psychological factors like resilience or self-efficacy. Future research should include larger, more diverse samples and longitudinal studies to validate and extend these findings across different contexts.

The study highlights key educational implications for addressing academic procrastination, particularly in mathematics learning. Effective time management and reducing task aversiveness are crucial for enhancing students' academic performance. Educators should foster strategies to reduce reliance on peer validation and competitive pressure, promoting intrinsic motivation and time management skills. Interventions can focus on emphasizing positive task outcomes and alleviating anxiety about performance. Addressing emotional and cognitive barriers, such as fear of failure, can further reduce procrastination. Additionally, consistent study habits should be encouraged as they directly correlate with better academic achievement. Targeted support, particularly for students with limited parental educational backgrounds, can bridge performance gaps.

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Exploring the Human Mind in Golding's *Lord of the Flies*: A Freudian Perspective

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Abstract

This research article aims to provide a descriptive and analytical account of human nature from the Freudian perspective of human mind in Golding's *Lord of the Flies.* As Freud contends that human actions, attitudes and personality are consequences of the play of mind, the major characters in the novel are seen as influenced by their psychic forces. Jack, an embodiment of the id impulses, exposes the dark side of human nature and brings destruction and chaos on the utopic island. Ralph and Piggy, representing Freudian ego and superego foreground civilizing forces and try to establish harmony, morality and civility. Thus, this article tries to explore extensively how the overpowering id as an irrational psychic force leads an individual towards the lower level of savagery from the higher sense of civilization, and how bright side of human nature gets affected by the irrational instincts that govern us. Exploring the boys' descent into savagery, Golding elucidates how soon societal norms and values collapse due to humanity's darker impulses. Further, this article anticipates human beings' application of positive side of mind to bring harmony and order in the society.

***Keywords*:** Civilization, conflict, control, evil impulses, human psyche, savagery

Introduction

This article attempts to analyze human being's evil nature and dynamics of mind from the theoretical viewpoint propounded by Sigmund Freud. The portrayal of the leading characters in *Lord of the Flies* (1954) is a representation of Freud's concept of the id, the ego and the superego. Jack, the antagonist, possesses most of the id instincts and tries to seek boundless freedom, power and authority which the protagonist Ralph as a Freudian ego wishes to control. Piggy as a superego raises moral question regarding jack and his followers' savagery.

Golding's *Lord of the Flies* exposes the complication of the human psyche, its ongoing process of control and resistance, and a ceaseless struggle between rational and irrational forces. Like Freud, Golding insists on the value of control, restriction, and supervision because human beings can exceed the limit in their freedom, as Jack and his deadly tribe do in the novel. For Golding, evil is not an external force but a product of our irrational mind and the darkness of our heart that contaminate the society. Thus, society, according to Golding, is not defective in itself, but it is human beings who destroy the society. Golding once said, "Man produces evil as a bee produces honey" (Reiff, 2010, p.33). Golding further states that all human beings have a capacity for rationality and morality, but their animalistic instincts overwhelm the positive aspects of human nature and revert them to an animalistic level. In *Lord of the Flies,* Golding proves this truth by depicting the nature of preadolescent school boys who have been evacuated on the uninhabited island due to ongoing war in their home country. Jack offends Ralph and Piggy's conception of an ideal society based on adult modality and annihilates human integrity, civilization, and order. His lust for power, desire for superiority, and sense of dominance bring havoc on the pristine island.

Golding's use of the children on the island serves as a trope for the villainy of the adult world. Tiger (2003) explains that "There is no essential difference between the island world and the adult one . . . to make it clear that children's experiment on the island has its constant counterpart in the world outside" (p. 51). In this sense, the children's small island can be viewed as a version of the adults' wide society. Golding believes that although people tend to repress their savage and irrational instincts and their violent and malicious impulses hidden deep within the unconscious mind, it is their evil nature that can drive them to expose their destructive potential at any time, any place.

Literature Review

With the emergence of this novel, several critics and reviewers cast light on the novel's theme. Yet, critical opinions have not paid sufficient attention to the psychoanalytic aspect of the novel. Some critics observe the novel as an allegory, fable, or parable, while others see it as purely symbolical, ethical, and realistic. The novel does not dominate a single idea. Dickson (1990) states: "The fiction of William Golding is a unique blending of realism and fable. His novels possess the recognizable qualities of realistic fiction, yet at the same time, they incorporate a consistent system of symbolism that allows for an allegorical meaning (p. 1). The critic observes the novel's setting, characterization, and images that represent the nature of human being and their inner self.

Bloom (2010) claims that *Lord of the Flies* is a novel depicting ongoing war events. He states that the horror created by the devastating war, the inhuman horrors on the Jews and others, and the holocaust are the incidents that "made Golding compel to write about the human capacity for evil", and "he wanted to make it clear in his book that such behavior could occur anywhere, even in a seemingly advanced nation such as England" (p. 11). Golding's five years of experience as a naval officer helped him explore the violent and destructive nature of human beings, which he depicts in this novel. In this sense, the novel can be viewed as a depiction of postwar society, deteriorating humanity, and civilization. Drawing the similar idea, critic S. J. Boyd (2008) elucidates "Golding's concern is to present us with a vision of human nature and also of the nature of the world which we inhabit through the experiences of a group of children cast away on a desert island" (Bloom, 2008, p.28). He shows that cruelty and evil are character traits not only of adults but also of children. Thus, Golding does not attack society; rather the nature of human beings whose minds are preoccupied by evil and destruction. In a statement to the American publisher of his book, Golding describes the theme of *Lord of the Flies:*

> As an attempt to trace the defect of society back to the defects of human nature. The moral is that the shape of a society must depend on the ethical nature of the individual and not on any political system however apparently logical or respectable (Spitz 1970, p.22).

For Golding, human beings are responsible agents who pollute society by destroying social values as do Jack and his tribe in *Lord of the Flies.*

Critic Reilly (1992) finds out the implication of the ethical approach employed by Golding in the novel. He points out:

> Instead of looking at society for solutions to human ills, Golding examines basic human nature and helps his readers gain a renewed sense of the difficulty and complexity of the moral life and the opacity, perhaps even the evil, of people (p. 10).

He further states, "through the novel, Golding forces readers to recognize the truth of the human soul so that they can understand themselves, other people, and the world" (p.10). While analyzing the intricacy of themes and versatility of Golding's style, Oldsey, and Weintraub (1963) explain that Golding's *Lord of the Flies* "can be placed within various categories of meaning – political, sociological, religious, and psychological" (p. 96).

Although many critical comments have been presented on the themes of the novel, very little effort has been given to the psychoanalytical approach of the novel.

Dickson (1990) observes the Freudian principle of the human psyche the id, the ego, and the superego symbolically dramatized by Jack, Ralph, and Piggy respectively. He sees "the conflict between Ralph, the level-headed elected leader of the boys' council, and Jack, the self-appointed head of the hunters, corresponds to an ego-id polarity" (p. 24). Halbrook (2013) tells that "Golding's children, removed from civilization, revert to the id" (p 42). Keren (2003) observes the novel as "a fable, demonstrating the three Freudian- forces id, ego, and superego" (p.89). Telgen (1997) says, "Each of the characters personifies a different aspect of the human psyche, the id, the superego, and the ego" (p. 188).

The above mentioned critical opinions elucidate various themes in the novel *Lord of the Flies,* such as allegorical representation of post-war lives and society, human horror and pessimism, conflict between civilization and savagery, and good and evil of human beings. Golding's *Lord of Flies* has seamlessly become a fertile source for researchers investigating multiple themes and issues; however, the novel has remained unexplored through Freudian conception of human mind. Therefore, this study fulfills the research gap by examining how human mind functions and structures our personality, and this study utilizes Freud's psychoanalysis as a theoretical perspective for analyzing the novel.

Methods and Procedures

This article is based on secondary materials such as a library, e-library, and the internet. It explores the notion of the human psyche and applies the concept in Golding's *Lord of the Flies.* Using the qualitative technique, the article provides an analytical study of the human psyche. This article integrates the theoretical framework postulated by Sigmund Freud. Freud draws the concept of a structural model of mind comprising distinct but interactive entities – the id, the ego, and the superego which works together to form human behavior and personality. He claims that the id as an unconscious entity is almost irrational, primitive, and instinctual seeking pleasure and immediate satisfaction. The id is the "reservoir of biological and psychological energy which stimulates the organism, thereby creating an unpleasant tension that demands satisfaction" (Steinberg, 1964, p. 81). The ego as a conscious and rational part of the human psyche strives to balance the irrational desires of the id, and works as a safety valve for the individual and helps retain social integration and discipline through the reality principle. The ego enhances cultural and ethical ideas to balance the desires originating in the id. The superego gratifies social morality, discipline, and ethics by internalizing the moral teachings and norms of society. Golding dramatizes the play of human mind portraying the three leading characters Jack, Ralph, and Piggy. Thus, Freud's model of human psyche provides a useful framework for analyzing characters and their behavior in Golding's *Lord of the Flies.*

Results and Discussion

In Golding's *Lord of the Flies,* the existing three major characters dramatize the role of Freudian structural modality of the mind. The central characters Jack, Ralph, and Piggy represent their personality traits as influenced by their psychic forces during their stay on the deserted island. At the very outset of the novel, each character is seen to be applying his conscious faculty of the mind and becomes aware of his new settlement and existence on the uninhabited island. They first establish a semblance of a unified society out of the dispersed children through Ralph's blowing of a conch cell which Piggy sees in the lagoon, and tells Ralph to blow it. After being united, the boys decide for their subsistence in a manner of civilized beings, and they search for food and water resources, build shelters in a communal manner. Realizing the necessity of a leader to regulate and guide them, they unanimously elect Ralph their leader on account of his rationality and age. Ralph, who is much anxious about their rescue, devises a plan to produce fire on the mountaintop as a beacon light for passing ships and planes. All the children perform the assigned duty based on their ability with mutual understanding. However, the children's utopian society disintegrates into two rival groupings one leading by Ralph, and the other by Jack, which involve in constant conflict throughout the novel.

Jack gradually exposes his irrational and lower characteristic traits that contest the rational and moral approached of Ralph and Piggy, which creates tension in the novel. His violent and tyrannical nature initiates hindrance in the mechanism of the island society that ends in a nightmarish atmosphere such as murder, assault, and fear. Golding portrays Jack as acting on animal instincts and amoral forces, seeking pleasure even in destruction. Initially, Jack displays a semblance of civilization and moral value when he says, "We've got to have rules and obey them. After all, we're not savages. We're English, and English are best at everything. So, we got to do the right things" (Lord of the Flies, 1954, p. 47). Yet, his civil sense of personality fades forthwith when he first experiences extreme pleasure in hunting pigs. As the id does not entertain the ego's restriction, Jack begins to find Ralph's rules and priorities a burden, and seeks freedom from other's pressure and restriction. Additionally, he tries to recruit other fragile littluns in his group enticing them into the pleasure of killing pigs, the test of meat, and food and fun, the immediate gratification of the id.

Freud introduced two terms called 'Thanatos' and 'Eros' to signify two distinct biological instincts which are in constant conflict within human psyche.

According to him, death instinct (Thanatos) refers to a primary drive that represents a desire for aggression, repulsion, violence, and other destructive behavior. Eros, on the other hand, is a life instinct which leads individual toward survival, creativity, productivity, and life force. In the novel, Jack and his deadly tribe dominate death instinct by indulging in deadly activities such as killing pigs, hating Ralph and his group, murdering the Christ like figures Simon and scientific minded Piggy, setting fire on Ralph's camp and the island to hunt Ralph. Piggy and Ralph, on the other hand, foreground life instinct through the act of helping the littluns, listening to their feelings, searching for subsistence, and building relationship for integrity and harmony. Jack and his followers seem envious to Ralph's feeling of social unity, his reason, and his sense of civilization. Even the other boys, who were faithful to Ralph, feel his creative works of building shelter, safeguarding the signal fire, and his execution of rules tedious and burden.

In his work 'Beyond Pleasure Principle' (1960), Freud writes "Pleasure is characteristic of the cachectic processes in the id. It is found in erotic cathexes" (p. 43). He states that most of our mind is regulated by the pleasure principle that seeks to minimize tension and maximize pleasure. This notion of Freud is seamlessly applicable in the novel. Pleasure is the ultimate goal of Jack and his tribe. They find pleasure in roaming in the jungle, searching for pig droppings, face painting, mock hunting, producing pig-dying noises, ritual and frenzied dancing, and singing: "Kill the pig! Cut her throat! Bash her in" (Lord of the Flies, 1954, p. 52). Jack's boundless pleasure can be observed when he sits on log painted and garlanded like an idol surrounded by number of the boys with spears as guards.

In the novel, Golding's portrays Jack as a typical character who represents all human beings. Like Freud, Golding claims that human beings are inherently evil possessing most of the animalistic instincts that lead them toward destruction. He believes that human beings' war-like nature would bring havoc unless their pent-up desires and needs are repressed and controlled by society through the implication of the rules or moral teachings. Freud anticipated the importance of the ego and superego in human mind that restrict and regulate the id impulses to maintain balance in society. In the novel, Jack is driven by the fundamental instincts and desires such as power, control, and violence. His war-like nature can be viewed at the start of the novel when he appears as a choir boy who carries a knife and volunteers to his choir in an army fashion. We see his arrogance and narcissism when he introduces himself: "Why should I be Jack? I'm Merridew" (Lord of the Flies, 1954 p. 22). Similarly, his jealousy and unconscious desire for power and leadership are evident when he loses an election conducted unanimously by the boys for their chief. In his indignation, he tells," I ought to be chief because I'm chapter chorister and head boy. I can sing C sharp" (Lord of the Flies, 1954 p. 23). In his defeat, he becomes humiliated and feels great shock to his personality. He flouts Ralph's rules and chieftainship because of his jealousy and his excessive desire for power. As a result, the unified island society splinters into two factions as Jack proclaims: "I'm not going to be part of Ralph's lot" (Lord of the Flies, 1954, p. 140). He forms his society containing a large number of boys of his interests, and as a leader, he becomes more destructive and sadistic than before.

Jack intends to recruit the innocent boys of Ralph's group either by the temptation of meat or intimidation and physical force. He wins the boys' confidence criticizing Ralph as: "He's not a hunter. He'd never have got us meat. He isn't a perfect and we don't know anything about him. He just gives orders and expects people to obey for nothing" (Lord of the Flies, 1954, p. 140). The boys of Ralph's group soon degenerated into Jack's savage society where they assist Jack in theft, crime, and violence. In the meetings, they create problem interposing Ralph and ridiculing his agenda of rescue and survival, and the children's fear of beastie. They form a mob of clamor and laughter and partially engage in a row. They do not have the mechanism of the conch to regulate their discourse, and the assembly terminates ineffectual. The previous democratic values and the sense of morality and civilization transposed into mobocracy, and the tranquil island is contaminated with bloodshed. Jack and his group establish their subculture in which Simon, who was exploring the mystery of the 'beast' on mountain, is ruthlessly murdered in their tribal frenzy; Roger, Jack's vicious right hand kills Piggy with a boulder; and Jack sets fire on the island to smoke Ralph out, and chase him like the primitive hunters to kill him, though he is saved by a sudden arrival of a naval officer.

In *Lord of the Flies,* when Jack stands for the id's drive for unchecked gratification and chaos, the protagonist Ralph performs the role of Freudian ego who strives to uphold rules, order, and civilization setting up rules and organizing teaming activities with a sense of collective well-being. He is a representation of rational side of human mind committed to retain social and cultural norms on the island in the absence of grown-ups. His pragmatic approach such as building shelters for safety, investigation of the source of food and water, and maintenance of the fire for rescue echo the ego's role in planning and problem solving to the group's needs. As an embodiment of common sense and rationality, Ralph tries to balance the primal desires of the other boys with the need for structure and social order. As the ego is more diplomatic in channeling the id's drive making compromise, Ralph is more skillful while dealing with the boys. At the beginning, when he is being elected a leader, he knows Jack's intense desire for the leadership, and he immediately announces Jack a leader of the hunting group to satisfy his urges and immediate gratification.

In the same vein, Ralph uses his ego's defense mechanism, a psychological strategy to face stress, anxiety, uncomfortable emotions, and internal conflict, to minimize the fear of a littlun who reveals that he has seen a snake-like thing in the woods that lurks in the dark to eat him. Ralph tries to remove the fear out of the littlun's mind telling him that there is no existence of a beastie on the small island, and he reassures the littluns the possibility of being rescued soon through a signal fire. Ralph sometimes joins Jack's hunting of pig and food party to mediate conflict and grow proximity between him and Jack.

Unlike Jack, Ralph does not have superiority complex as he regards and follows the boys' advice, worried about the adverse situation, and deals with the boys with pleasing words, which the power-hungry Jack calls worthless sermons. Jack cannot endure Ralph's fair nature, his popularity, and reverence from the boys, and he considers Ralph his nearest enemy in the manner of the id. The polarity between Jack and Ralph is narrated as: "They walked along, two continents of experience and feeling, unable to communicate", and "They looked each other, baffled in love and hate" (Lord of the Flies, 1954, p. 60). Whenever Jack exposes physical force over Ralph, he remains silent even in indignation. Ralph envisions their deteriorating condition and becomes worried about Jack's liberation into savagery and impending danger on the island society. He contemplates the unfair behavior of jack, his tantalizing desires, and his inhuman propensity.

Freud in his work 'The Ego and The Id' (1960) draws a man-horse analogy to show the ego's control over the id. He writes: "In its relation to the id it is like a man on horseback, who wants to hold in check the superior strength of the horse; with this difference, the rider tries to do so with his strength while the ego uses borrowed force" (p. 19). In *Lord of the Flies* Ralph Jack equation is the same. Ralph tries to control Jack's desire for power and dominance, his aggressive nature, and his arrogance. However, Ralph's control over Jack is more conciliatory and corrective in the sense that Ralph wants Jack to be human, civilized, and sociable. Ralph, therefor, tries to involve Jack in creative activities such as keeping the fire burning on the mountain and making shelters in order to divert his mind, but Ralph cannot. It is due to Jack that they lost a rescue opportunity by a ship as he took the boys with him to hunting. Although Ralph becomes angry at Jack's carelessness, he overlooks Jack's grim mistake and simply says to light the fire, hoping that he might be improved. Ralph also plays a role of conflict mediation when Piggy is caught in verbal duel with Jack regarding Jack's indifference to the signal fire. Ralph controls Piggy's indignation at Jack pushing Piggy to one side when he cries out shrilly because Ralph knows Jack hates Piggy too much. Despite their conflict and dissonance, Ralph still applies a conciliatory approach to Jack. When Jack steals Piggy's glasses to produce fire in his camp, Ralph humbly demands Piggy's glasses back, and also comments on his theft. He says rationally, "You played a dirty trick – we'd have given you fire if you asked for it" (Lord of the Flies, 1954, p. 195). Here, Ralph expresses frustration and disillusionment with Jack's manipulation and betrayal. He is dissatisfied with Jack's deceit, aggression, and torture, rather he wants cooperation and open communication from Jack for peaceful collaboration.

In *Lord of the Flies,* Ralph is a typical example of an antihero, despite his merits. He is unable to control Jack and his blood-thirsty mob and cannot make use of his conscience independently. He recognizes the value and talent of the intellectually gifted Piggy. In his pensive mood, he contemplates on the quality and nature of a leader: "If you were a chief, you had to think, you had to be wise . . . thought was a valuable thing that got results", and he simultaneously realizes, "I can't think. Not like Piggy" (Lord of the Flies, 1954, p.85). He considers Piggy more brainy, rational, and intelligent than himself. In this sense, Ralph is represented as a frustrated ego, who is unable to execute his rules and control the frenzied mob of Jack and his tribe. In this juncture, Ralph decides to resign the post of the chieftainship, but Piggy motivates him psychologically and speaks the voice of grown-ups: "If Jack was a chief, he'd have all hunting and no fire. We'd be here till we die" (Lord of the Flies, 1954, p. 101). He advises Ralph to face the situation, and tells, "We just got to go on, that's all – that's what grown-ups would do" (Lord of the Flies, 1954, p. 154).

The novel displays a natural distinction and conflict between the id and the ego through the portrayal of Jack. Jack, who finds immense pleasure in blood and violence, cannot entertain Ralph's civilized vision. When Ralph relies on the basic civility and discipline, Jack supports his emotions, instincts, and immediate desires. Thus, Jack and Ralph belong to two opposite polarity: "There was the brilliant world of hunting, tactics, fierce exhilaration, skill; and was the world of longing and baffled common sense" (Lord of the Flies, 1954, p.77). When Jack has a strong desire for self -respect and honor, Ralph has the desire for the application of cultural norms alien to their current environment, and loyalty to his agenda of rescue and signal fire on the top of the mountain. Ralph tries to solve existing problems by opening up the floor for discussion, whereas Jack invades the floor and creates fear. Above all, Jack is the personification of the beast's lust for power, revenge, and animosity. He is a symbol of evil that lurks within us, whereas Ralph stands for 'good' which is very hard to find and practice within us.

Golding presents Piggy as a young boy who possesses logic, intellect, and reason. He supports morality, social rules, and ideas of right and wrong, serving as a counterbalance to the primal desires of Jack and the pragmatic concerns of Ralph. His attachment to the principles of civilization, order, and civility aligns with the superego's role in guiding behavior according to moral and ethical standards. As the id hates the superego, Jack hates Piggy's intellect and reason, which are antithetical to Jack's primal instincts and desire for power. Jack feels threatened by Piggy's logical thinking and his reliance on the conch, symbol of order and democracy. Piggy, who criticizes Jack's irrational impulses without being flexible like Ralph, is Jack's nearest enemy. As an embodiment of the Freudian morality principle, Piggy dominates the sense of good and bad, moral and immoral, and acceptable and unacceptable in any given situation. His moral approach is observed when he comments on the savagery of the boys' of Jack's tribe: "You're acting like a crowd of kids", "Which is better – to be a pack of painted niggers like you are, or to be sensible like Ralph is?", "Which is better – to have rules and agree, or to hunt and kill?", "Which is better, law and rescue, or hunting and breaking things up?" (Lord of the Flies, 1954, p. 199). Piggy strongly dislikes the animal-like nature of the boys, and he is much worried about the boys' descent from the higher level of civilization into the lower level of savagery.

Piggy has inherited most of the civilized norms and values throughout the novel. His continuous invocation to his aunt 'my auntie told me . . .' indicates the influence of adults in his life, and he wants to instill those adult values on the island. When he finds the boys' switching from civilization and morality, he speaks an adult voice as: "What are we? Humans? Or animals? Or savages? What's grown-ups going to think? Going off – hunting pigs – letting fires out – and now?" (Lord of the Flies, 1954, p. 99). But Piggy's main persecutor, Jack always keeps him silent, ridicules his name and makes fun of his physical body. Although Piggy is intelligent, logical, and scientific-minded, he is the only character who is ostracized and becomes the butt of laughter for all the boys except Ralph and Simon. Jack frequently pounces upon Piggy, breaks his eye glasses, and never shares him the meat. In a Jack's feast, when Simon gives his share to Piggy, Jack throws the meat to Piggy in an uncivilized manner. It is due to Jack's fear and extremity of hatred, Piggy does not participate with manual works in Jack's presence, and even in meetings he stays aloof from Jack and his boys.

Piggy is Ralph's faithful companion. Ralph is highly impressed by piggy's intelligence, wisdom, logic, and scientific mind, and shares most of Piggy's advice at a critical moment. Both of them make each other alert when Jack involves in debate and rows with them. Piggy and Ralph are the only two characters who maintain adult values and remain the voice of civilization on the deteriorating island. Both of them acknowledge the importance of parental restriction and supervision to guide them to a disciplined and civilized life. Realizing the majesty of grown-ups Piggy speaks: "Grown-ups know things", and "They ain't afraid of the dark. They'd meet and have tea and discuss. Then things'ud be all right" (Lord of the Flies, 1954, p. 103). Piggy is so shocked by Jack's anarchy that he is obliged to protest openly against Jack's cruelty and villainy. When Ralph alerts Piggy to Jack's cruelty, Piggy angrily replies: "What can he do more than he has? I'll tell him what is what . . . I'll show him the one thing he hasn't got" (Lord of the Flies, 1954, p. 189). Like Ralph, he is grieved for Simon's death by Jack and his savage tribe. When Ralph calls Simon's death a murder and regrets for his presence there, Piggy thinks it was an accident as Simon crawled in the dark. Piggy wants to repress the shock, and diverts Ralph's mind: "Look, Ralph. We got to forget this. We do no good thinking about it, see?" (Lord of the Flies, 1954, p. 173). He consoles Ralph's anxiety and says they can live on and build a signal fire there.

In *Lord of the Flies,* Golding creates some events to tell things about the human psyche. The vision of the beast is a central event that represents Freud's psychoanalysis. The beast, which the littluns Sam and Eric notice, can be represented as the id, the instinctual urges, fear, and desire of the unconscious mind. The littluns observe it as a monster rising from the sea that terrifies the boys. Freud states that some events and desires, which are so frightening and painful to acknowledge, are stored in our unconscious as a form of repression. His view holds that the inner forces we are unaware that direct our behavior. The vision of the beast illuminates this idea. The beast is an illusion and imagination that emerges from the unconscious mind of the boys and frightens them. The object, which the boys assume a terrifying beast, was the dead paratrooper appeared to be a live ape-like creature that seems to look at them when the breeze catches his parachute. But they mistake it for a beast because their unconscious minds are preoccupied by this idea.

The appearance of the beast and their ceaseless talking about it creates terror, and they are unable to consider things realistically. However, Piggy does not believe in the existence of the beast rather he assumes the beast is the boys' irrational fear. He thinks that the fear of the beast is a manifestation of their innate savagery and the darkness within themselves. So he warns they should have fear of man, not the tangible beast. In a similar manner, Simon views the beast as an inherent evil within themselves, and "the picture of a human at once heroic and sick" (Lord of the Flies, 1954, p. 113). He associates the beast with the boys' innate darkness and savagery, and the danger lies not in the physical beast, but in the boys' own propensity for evil. Jack, instead, creates fear in the mind of the innocent boys showing the possibility of the beast's existence and its danger. He assures the boys that the hunters are going to kill a pig and offer its head on a stick as an oblation to placate the beast and forget it.

Hence, it is 'Lord of the Flies'. Simon has a discourse with the 'Lord of the Flies' but the head is silent, all he converse only with his unconscious. Very soon, he interprets it as the evil side of man's self. He realizes that the beast is nothing that exists outside in the forest, but exists inside each boy's mind and soul – the capacity for savagery and evil. After internalizing the reality of the beast, he enters in the dark into a feast of Jack to disclose the truth, but the warlike Jack and his troop kill him in their frenzy before disclosing the reality.

Conclusion

Golding's *Lord of the Flies,* makes the complexity of human nature explicit through the portrayal of the preadolescent school boys on the island. The island is a limited space in which the boys expose dynamics of their nature. The novel deals with the ceaseless tension between Jack's primal instincts and Ralph and Piggy's civilizing impulses, showing that human beings' positive aspects such as morality, rationality, and civility are overwhelmed and destroyed by the overarching power of the irrational impulses. Jack as an embodiment of the Freudian id counters the moral and civilized forces reinforced by Ralph and Piggy, and he destroys human values in his authority. The novel suggests that our darker impulses lurking within us are always in contest with our bright aspects of nature which may come to surface any time any place. Thus, Golding believes that beneath the veneer of civilization lies an inherent savagery within humanity. The boys having the sense of English civilization at the start of the novel descend forthwith into chaos and violence that breaks down their intimacy, relationship, and societal norms. The novel seamlessly suggests that all human beings have potential for order and morality; it is our dark side of nature that leads us toward destruction as represented by Jack and his tribe. Thus, Golding's symbolic portrayal of Jack in the novel is a picture of our mind and heart in which Jack resides.

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A Deep Ecological Imagination in John Keats' Selected Poems

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Abstract

Ecocriticism studies the relationship between humans and nature. It emphasizes examining literary texts from the perspective of the environment. The extreme development of technology and modernization is inviting an unimaginable environmental crisis. Humans' relationship with nature is becoming fragile and humans' viewpoint towards nature needs to be relooked again. The purpose of this research is to examine, discuss and interpret the selected poems of John Keats from a deep ecological perspective to trace the deep ecological imaginations. In particular, this paper used the insights of deep ecologists Arne Naess, Bill Devall and George Sessions' interconnectedness, deep ecological principle, biocentric equity, ecological self and self-realization as the theoretical parameters and answered some of the research questions: Does the poet only celebrate nature by its mystic qualities or also unpack the human-nature relationship and try to discover the self? Does the poet sublime by nature's beauty or find the inherent values of nature? In these selected poems, the poet searches for liberation, compares human feelings with nature and raises the question of humans' deep relationship with nature. By analyzing, discussing and interpreting John Keats's selected poems from an ecocritical perspective, this paper fostered the human-nature relationship to restore our relationship with nature and help to advance humans' biocentric ecological consciousness towards nature for ecological balance.

Keywords: Ecocriticism, deep ecology, ecological consciousness, nature

Introduction

Ecocriticism is a multidisciplinary term for literary and cultural scholars to investigate the global environmental crisis by connecting literature, culture and the physical environment. Excessive human-centric technological advancement and modernism have invited so many environmental crises that lead to an unbalanced world. Moreover, the new spectrum of ecocriticism deep ecology unfolds the deep relationship between humans and nature from the biocentric perspective, which treats all the participants of nature equally and recognizes their intrinsic values. Unlike the anthropocentric perspective, deep ecology studies all the participants of the biosphere from their inherent values, distinctness and interconnectedness. Furthermore, it tries to explain the interconnected invisible dynamicity of nature. Its main originators are the Norwegian philosopher Arne Naess, the American sociologist Bill Devall, and the American philosopher George Sessions.

John Keats is a celebrated poet for his rich imagery, sensory experiences, and profound explorations of aesthetics and the moral aspect of nature. There has been limited scholarly attention focused on the ecocentric perspective which sees everything in nature as equal and interconnected. This research seeks to address this gap by examining how Keats's poems reflect a connection to nature that transcends anthropocentrism, emphasizing interconnectedness ecological awareness, and the intrinsic value of the natural world. This study uncovers how Keats's portrayal of nature offers insights into contemporary environmental crises and the need for a more sustainable relationship between humanity and the earth.

While reading the John Keats poems "I stood tip-toe upon a little hill", Ode to Autumn" and "Ode to Nightingale" some problems or research questions arise: Does the poet only celebrate nature by its mystic qualities or also unpack the human-nature relationship and try to discover the self? Does the poet sublime by nature's beauty or find the inherent values of nature? In these selected poems, the poet searches for liberation, compares human feelings with nature, and raises the question of humans' deep relationship with nature. Moreover, in these poems, the poet takes nature as the therapeutic. This study examined these selected poems from deep ecological perspectives. Particularly, deep ecological principle, biocentric equity, and ecological self. It rediscovered the deep relationship between nature and human beings to unfold the ecological imaginations from an ecocentric perspective.

Literature Review

John Keats's poems have been interpreted from the Romantic perspective. Romanticism is a cultural movement against rationalism. It emphasized emotion, individualism, nature, and the sublime, celebrating personal experience and imagination over logic and reason. These aspects of Romanticism are human-centric. This research paper tries to study poetry from a deep ecological perspective. In literature, poetry represents one of the oldest and highest means of expression of feelings and emotions. Comprehending poetry and evaluating it critically needs a higher consciousness. Fogle (2021) writes about Keats' poetry from a Romantic perspective in his journal Keats's Ode to a Nightingale:

> In the Nightingale ode is the imaginative experience of the ideal. Different elements come into the picture, but there is at bottom one emphasis only … very interesting assumptions about the nature of poetic unity, wholeness, and the reconciliation of opposites, which should be examined. (p. 214)

Imagination and contemplation are the attributes of Romanticism. Keats' poems have been critically analyzed from Romantic ideas. Here, Fogle emphasizes the imaginations of poets as an ideal. At the same time, the critic asks readers to examine further from reality. This makes clear Keats' poems though they have the quality of Romanticism. But, still, these poems contain deep ecological attributes these underlined meaning needs to be rediscovered. Therefore, reconciliation, interconnection, and deeper meanings are necessary to be elaborated from a deep ecological point of view. Deep ecology searches for the deeper relation among the biosphere; it is the phenomenological aspect of deep ecology.

On the other hand, describing Keats as a sensuous poet, in the research paper "Study of Concrete and Sensuousness in John Keats Poetry" Dixit (2022) argues, "One of the most well-known aspects of John Keats' work is his use of imagery that appealing to the human senses. As a result, he is often referred to as a sensual poet" (337). Dixit's analysis explores the human-centric attributes of John Keats's poems, although John Keats emphasizes the human senses these poems raise the question of why the poet becomes sensuous when he contemplates himself in nature. Therefore, these poems require to observe from an ecocentric point of view.

Furthermore, analyzing Keats' poems Havens (2021) evaluates in his journal "Of Beauty and Reality in Keats", "The poetry of Keats, from the earliest to the latest, is shot through as by bright and somber threads with two contrasting thoughts: delight in beauty and disappointment with reality" (p.206). This highlights Keats' attachment to nature and his disappointment with modern developments. His poetry praises nature and its beauty and evokes his frustration with modern society. But, it is also clear that this dilemma is starkly seeking some connection with nature and appeals to ethical questions to humanity. Therefore, his poems need to be rediscovered from an ecocritical perspective, which can bring new explanations and help to expand human ecological consciousness.

On the contrary, Aspitasari (2022) interprets John Keats's poem from the viewpoint of Psychological analysis in the research paper "Psychoanalysis Criticism on John Keats Poem: When I have Fears that I may Cease to be", "This poetry correlates with psychoanalytical theory because it represented the author's unintended message which focuses on the author's background of life. With his sad tone of poetry, John Keats invites readers to think more deeply about death" (p.228). Here, Aspitasari foregrounds his interpretation by evaluating the poet's real life and the suffering and pains the poet has gone through, he further argues that John Keats's poems are the reflections of his suffering and pains. However, this human-centered interpretation needs to be looked at from an ecocentric perspective, how he compares his life with nature and feels he is a part of nature. Yet, Janiswara (2007) writes in the article The Relation between Human and Nature in John Keats' Odes: an Expressive Study about the John Keats poem:

> His poems represent the social condition in which people forget those beauties from their senses. Many people forget the beauty of nature such as seasons, sunshine, wind, and joy of nature. Actually, John Keats describes the relationship and the interaction among human, nature, and animal which happened in the autumn and portrays the condition when nature met human. (8)

This also suggests humans' incompetence in understanding the importance of the roles of all the biosphere members. That is why, humans create a gap with nature. Here, Jainswara also emphasizes that Keats' poems richly find interconnectedness between humans and nature. He further argues that the poet's inner quest is to reconnect himself with all organisms in the environment. This research paper also discovers similar themes from a deeper perspective.

Similarly, Pyle (1994) adds Keats' poetic explanation from a materialistic point of view in the research paper "Keats's Materialism", "Keastian materialism is by no means the stated project of poetry. Rather, it is a materialism hinted at in some early poems in largely thematic expressions of uncertainty regarding the poetry's ethical and deeply humane vision . . . in the later poems through the confrontation of the troubled and troubling resistance of "things" to "thought" (p.58). Here, it explains the beauty from the human-centric point of view. This argument suggests that Keats' materialistic ideas in the poems which express the beauty of nature and life are purely human-centered, and need to be relooked from the biocentic idea.

These critics describe poetry from an external way or shallow ecological perspective. A shallow ecological point of view means an anthropocentric point of view. These descriptions are human-centered. There is a gap, these poems are not being evaluated from a biocentric point of view. Therefore, unlike those critics, this paper focuses on the study of the deep ecological imaginations of Keats's poems deploying deep ecology: deep ecological perspectives of ecocriticism. As Bill Devall in the article (1980) raises questions "The Deep Ecology Movement" contrasts the scope of deep ecology from the environmentalists, "deep ecology, unlike reform environmentalism, is not just a pragmatic, short-term social movement with a goal like stopping nuclear power or cleaning up the waterways. Deep ecology first attempts to question and present alternatives to conventional ways of thinking in the modern West" (p.303). Devall differs from the role of deep ecology with the "conventional ways of thinking in the modern West"; he makes the point that deep ecology searches for the "transformation" of values of nature and human relationship. Therefore, deep ecology radically asks deep questions to look at everything equally from the biocentric point of view.

Methods and Procedures

This study made a qualitative study through the perspective of deep ecologists Arne Naess, the American sociologist Bill Devall and the American philosopher George Session's theoretical parameter of deep ecology to examine, analyze, and interpret the poems "I stood tip-toe upon a little hill", Ode to Autumn" and "Ode to Nightingale." Ecocriticism has several major trends: Arcadian discourse, Ecosystem discourse, Environmental justice discourse, Ecological justice, Ecofeminism, Eco Marxism, Toxic discourse, Discourse on animal rights, Environmental apocalypse, and Deep ecology. But, this research paper will discuss, analyze, and interpret the selected poems of John Keats by applying deep ecology; an ecocritical perspective focusing on radical change in humans' relationship to nature on a deeper level: a biocentric holistic perspective, particularly, deep ecological principle, biocentric equity, self-realization, ecological self. Arne Naess coined the term "deep ecology" and gave it a theoretical foundation. The deep ecological perspective aims to value everything in the environment as its distinct uniqueness. And searches the new dimensions of relationships to become more conscious about ecology asking deeper questions. This perspective explains that all biospheric organisms have equal and reciprocal relationships.

Results and Discussion

John Keats' poetry is considered a focus on familiar and common themes, a deep gratitude for beauty, and deep sensory imagery. He often discards social and political issues, instead concentrating on personal experiences and emotions. His work is noted for its lyrical quality and exploration of transient beauty and the nature of desire. Many consider him one of the purest poets, creating art for its own sake rather than for moral or social commentary. This understanding unfolds his deep interconnectedness with nature, love, and concern for nature. In his poems, deep ecological attributes are richly found. He compares his life with nature, he communicates with nature in poems as humans and gives human-like qualities to natural things. This opens the discussion of the deep ecological imagination in his poems. He describes the human-nature relationship in the poem. "I stood tiptoe upon a little hill" This poem corresponds to the four elements, earth, fire, wind, and water. These are the basics that rule and control everything in the biosphere. As he describes:

I stood tip-toe upon a little hill,
The air was cooling, and so very still,
That the sweet buds which with a modest pride
Pull droopingly, in slanting curve aside,
Their scantly leaved, and finely tapering stems,
Had not yet lost those starry diadems
Caught from the early sobbing of the morn.
The clouds were pure and white as flocks new shorn,
And fresh from the clear brook; sweetly they slept
On the blue fields of heaven, and then there crept
A little noiseless noise among the leaves,
Born of the very sigh that silence heaves:
For not the faintest motion could be seen
Of all the shades that slanted o'er the green. (4)

The poet describes the aesthetic beauty of nature and its inner impact on his feelings. In this poem "I stood tip-toe upon a little hill." the imagery appeals to a sense of elevation and closeness to nature, akin to a child reaching for something just out of reach. He imagines the motionless "air" as a peaceful place. Further, he mentions "sweet buds" with adorable pride. Similarly, "clouds" and "fresh" water from "brook" he compares to pure beauty. "The clouds... sweetly they slept." This line gives the clouds a human-like quality of sleeping, evoking a calm and serene atmosphere in the sky. He emphasizes spiritual beauty in the metaphor "starry diadems." This metaphor suggests that the dew drops on the buds like a crown (diadem) adorned with stars, emphasizing their beauty and flimsiness. In the same way, he elaborates "very sigh that silence heaves" which he tries to give a human-like deep feeling to nature. "The clouds were pure and white as flocks new shorn" This simile compares the clouds to newly sheared sheep, describing their whiteness and softness. This abiotic thing "cloud" he compares with the biotic thing "sheep" These lines elaborate the John Keats's poem's hidden messages of the interconnectedness of nature and human beings. These lines reflect the beauty of the natural world and its profound effect on the poet's creativity. The imagery of the "little hill" and "sweet buds" highlights a sense of wonder and appreciation for the simplicity and beauty of nature, suggesting that it serves as a vital source of artistic inspiration. Deep ecologists also believe that humans and nature are equal all the things in nature are equally important for all. As Bill Devall and George Session both deep ecologists propose biocentric equality in the book *Deep Ecology* (1995) "The intuition of biocentric equality is that all things in the biosphere have an equal right to live and blossom and to reach their forms of unfolding and self-realization within the larger Self-realization" (p.67). They make the argument for the equal rights of all living things in the biosphere. Moreover, they prioritize cultivating the ecological self with nature, they summarize the essence of humans and the nonhuman world is interconnected. They focus the cultivating self-awareness with nature. Similarly, in the book *Deep Ecology* (1995) Session writes, “We believe that humans have a vital need to cultivate ecological consciousness and that this need is related to the needs of the planet” (p.8). They urge to develop the deep ecological consciousness of human beings to understand the nonhuman world. Thus, these lines of the poem unfold the human-nature relationship and open the biocentric discussion. Similarly, in “Can Poetry Save the Earth: A Study in Romantic Ecology” Carlisle Huntington argues that “the Deep Ecologist, each organism serves as an integral knot in the “biospherical net or field of intrinsic relations,” (p.3) and as a result, all ways and forms of life have an “equal right to live and blossom.” Rather than simply mitigating the degree to which we exploit nature, Deep Ecologists seek to challenge the very normative structures that perpetuate humanity’s anthropocentric worldview.

These selected poems of John Keats describe the human and nature interrelationship; these poems advocate the aesthetic attributes of nature as well as describe deep ecological awareness. Explaining the interconnectedness of humans and nature Jon Keats elaborates in the poem Ode to Nightingale:

> Away! away! for I will fly to thee,
> Not charioted by Bacchus and his pards,
> But on the viewless wings of Poesy,
> Though the dull brain perplexes and retards:
> Already with thee! tender is the night. (p. 15)

Here, the poet laments the nightingale flying away from him, and he will follow, through poetry, which he aspects will give him “viewless wings” he denotes to invisible power of poetry. His deep lamentation with Nightingale demonstrates his inner wish to dissolve into nature. Moreover, he asks even if the worldly human consciousness makes him puzzled, he wants to be with the nightingale, to get rid of the mundane he imagines submerging with the nightingale. This desperateness of the poet to mingle with nature highlights the deep ecological imagination.

On the other hand, everything in the biotic and abiotic world is interconnected. John Keats in his poems, does not only praise nature’s beauty. But he takes the help of nature to release his agonies and frustrations. Deep ecologists also believe that nature and humans are interconnected. His solicitude and tenderness with nature prove his inner attachment with nature and he feels that he is not separated being rather a part of nature. His inner desires seem softened in the embrace of nature. For example, deep ecologist Devall (1985) writes clearly in his book *Deep Ecology,* “This deeper approach resulted from a more sensitive openness to ourselves and nonhuman life around us. The essence of deep ecology is to keep asking more searching questions. About human life, society, and Nature" (p.65). This highlights the humans' unique enthusiasm for nature. In the same way, deep ecologists' main purpose is also to seek deeper connection with nature. Deep questioning can lead further our relation in higher understanding. This requires the human consciousness to ask metaphysical questions about nature. Keats writes about nature in his poetry Ode to Nightingale in the book complied by Moore (2012) *John Keaats Selected Poems:*

> 'Tis not through envy of thy happy lot,
> But being too happy in thine happiness,—
> That thou, light-winged Dryad of the trees,
> In some melodious plot
> Of beechen green, and shadows numberless,
> Singest of summer in full-throated ease. (p.14)

In these lines, Keats addresses the Nightingale that he is not jealous but he becomes overwhelmed by the song of Nightingale, and its freedom and its serenity. He feels the power in nature and its different manifestations. He personifies, **"**Singest of summer in full-throated ease." This line gives the Dryad (mythical tree) the human-like ability to sing, endowing it with artistry and emotional expression, painting a picture of nature that is dynamic and alive with song. **"**Being too happy in thine happiness**."** Here, happiness is described as something that can affect one's emotional state, as if it has an agency that resonates with human experience. He associates Nightingale with the mythical tree spirit Dryad, the tree of goddesses and keeps asking himself, how human and green it seems this makes feeling of himself as part of nature. This inner description also highlights the deep ecological wisdom in the nonhuman world. Therefore, it is necessary to explain his poems more deeply from a biocentric point of view. His poems express the intricate relationship with nature. His continuation of curiosity towards nature and its gamut of eternity makes humans conscious of the liveliness of nature and their dynamic relationship.

Similarly, Keats describes nature and humans' interconnectedness in the poem "Ode to Autumn", he also keeps asking deep questions and communicates with nature as the shadow of the divine. Keats explains purely the beauty of nature in his poem Ode to Autumn:

> Who hath not seen thee oft amid thy store?
> Sometimes whoever seeks abroad may find
> Thee sitting careless on a granary floor,
> Thy hair soft-lifted by the winnowing wind;
> Or on a half-reap'd furrow sound asleep,

Drows'd with the fume of poppies, while thy hook
Spares the next swath and all its twined flowers;
And sometimes like a gleaner thou dost keep. (p.19)

These lines briefly explain the beauty and the mysticism of nature. Here, the poet elaborates on Autumn and its spirituality and aesthetic. He relates the secretive rituals of nature removing grain of wheat in winnowing wind. He addresses autumn and its amazing richness compared to human life, looking at the invisible laws of nature exercised in fruits, trees, flowers, and crops. His imaginations contemplate autumn its beauty and delve into the questions of its metaphysical power. His deep curiosity in these lines leads him to deeper questions about nature's dramatic play and its dynamicity. The poet claims that autumn is drunk on the smell of the poppy flowers. He compares autumn to human life's struggles and death. This highlights the invisible relation of nature to all organisms and that all biospheres are interrelated to each other with the same rule for the same reasons. This deep contemplation takes the reader to the underlined mysterious beauty of nature which is important to unlock deep questions. Therefore, deep ecology interestingly investigates those inseparable relations between humans and nature. Luke (1999,) describes deep ecology in his book *Ecocritique: Contesting the Politics of Nature, Economy, and Culture,* "Deep ecology also presents substantive rules for enacting this nature consciousness as a mode of human good conscience" (p.10). To accelerate humans' consciousness, deep ecological questions and answers between humans' supports develop interconnectedness for ecological equilibrium. Therefore, this critical reading of poetry from a deep ecological perspective can play a significant role in addressing many ecological crises. As Naess (2003) argues in his paper The Deep Ecology Movement Some Philosophical Aspects, "we increasingly see ourselves in others, and others in ourselves. This self is extended and deepened as a natural process of the realization of its potentialities in others" (p.15). This proves that humans are extended beings by many others, the deep interdependence and the natural process scrutinize our values and responsibility as humans being either the supreme of everything or the part of this nature. Naess's deep ecology ideas strongly oppose the human-centered anthropocentric ideas, he sees humans as part of nature and it develops through the relationship with others. He sees everything in the universe as unique and interrelated.

On the other hand, Keats writes poems inspired by nature, his conversation with nature and love, attachment, and lessons are underlined in his poetry. Keats's poems are more nature sublimed but in essence, he searches his inner connection with nature which he believes nature as visible to God, in a nutshell, he is advocating the importance of nature in discovering the self. Self-realization with nature is another hidden attribute of his poems. Deep ecologist also advocates that the people realize their true self with the attachment of nature. As deep ecologist Session in the book *Deep Ecology* (1995) writes:

> It is also crucial to remember that his top norm or ultimate norm, Self-realization, is meant not in the sense of narrow ego realization nor in the sense often used by Abraham Maslow and other Western humanistic psychologists, but in the sense of universal self as described in the perennial philosophy; a self with a capital "S" that identifies not only with the ecosphere but even with the entire universe. (p. 227)

This makes clear that Self-realization means understanding the universal law and connecting with its dynamicity according to deep ecologists. This underscores that Keats's poems also discuss nature's invisible strengths, which inspire the human self. This understanding leads to the perspective of the biocentric idea that all the biospheric participants are manifestations of the same source. Therefore, our ultimate purpose in this creation is to harmonize with all organisms. In the same way, Keats describes in the book John Keats Selected Poems complied by Moore (2012) the harmony in nature in his poem Ode to Autumn:

> Or sinking as the light wind lives or dies;
> And full-grown lambs loud bleat from hilly bourn;
> Hedge-crickets sing; and now with treble soft
> The red-breast whistles from a garden-croft
> And gathering swallows twitter in the skies. (p.20)

These lines of the poem "Ode to Autumn" reflect the poet's inner feeling in the harmonious gamut of nature. In these lines, "full-grown lambs loud bleat from hilly bourn" and "hedge-crickets sing." Here, the lambs and crickets are described as "loud bleat" and "sing," attributing human-like actions to these animals, emphasizing their inner interconnection. Furthermore, he describes the animals, birds, insects, and the entire creation and how divinely together sing against the darkening sky. This symbolization is that creation is unbelievably moving in its law and mystery uniting each other, but humans need to comprehend this mysterious nature and dissolve into it to find themselves, therefore, humans can exhibit humans' full potential to expand their deep ecological consciousness about nature and self. Deep ecology's main purpose is to rediscover our inner connection to nature, from where humans can harmonize with all organisms from the biocentric point of view that all organisms have their unique character and distinct roles and right in the creation. Similarly, adhering the same notionTimothy W. Luke writes in his book *Ecocritique Contesting the Politics of Nature, Economic, Culture* (1997) about the deep ecology, "second, the norm of biocentrism maintains that “all things have an equal right to live and blossom and to reach their forms of unfolding and self-realization within the larger Self-realization” (p.6). This theoretical view on nature corroborates the importance of interconnectedness and human consciousness on self-realization. As Neass (2005,) describes in his article The Basic of Deep Ecology about an eight-point proposal in number one proposal, “1. The flourishing of human and non-human life on Earth has inherent value. The value of non-human life-forms is independent of the usefulness of the non-human world for human purposes”. (p.68). This suggestion or principle of deep ecology by Arne Neass alerts humans that nature as a whole is dynamic with everything they have their inherent values. His holistic view is that nature is not a human center as anthropocentric views, rather it is a system of systems. Everything is independent and interdependent; there is a mysterious reciprocal relationship among all. Therefore, the poet’s selected poems consist of the imagination of deep ecological consciousness.

The poem “I stood tiptoe upon a little hill” beautifully captures a moment of deep connection with nature and the complex beauty of an ecosystem in balance. The imagery describes and reflects on the natural world, aligning closely with deep ecological principles that advocate for a profound respect for nature and its interconnected systems. The poet does not take nature as the sublimed object or the medium of escape from his mental state rather he unfolds the deep interconnectedness of humans and nature. Similarly, in the poem “Ode to Autumn”: Keats personifies autumn as a nurturing figure, “close bosom-friend of the maturing sun,” highlighting the interdependence of seasons and life forms. This companionship emphasizes the idea that every element of nature plays a significant role in the ecological web. Deep ecology advocates for recognizing the intrinsic value of all living beings and their contributions to the ecosystem. Furthermore, in the poem “Ode to a Nightingale,” John Keats articulates a deep ecological essence through the meditative expression of nature’s beauty, transience, and the interconnectedness of life. The Nightingale serves as a powerful symbol of nature’s enduring beauty and the longing of the human spirit for something greater than itself. The poem ultimately advocates for a deeper connection to nature and suggests humans to embrace the complexity and richness of life within the ecological web. He further asks deep questions that humans and nature are not separate but have deep relations, from which humans need to be conscious about nature. His deep ecological imaginations in the selected poems open the discussion of the ecocentric perspective that respects the inherent values of everything in nature.

Conclusion

This paper critically analyzed and discussed nature poet John Keats’s selected three poems from the deep ecological perspective and found that these poems have deep-underlined suggestions, lamentations, and repentance of humans to nature. His poems raised deep questions about humans' roles in ecological balance that humans are not only the center of creation, but all the participants of creation have equal inherent values, and humans can find their true selves through deep relation with nature. This paper also vivified the deep concern of poets in his poems which unfolded the new theme of those poems. This analysis also suggested human beings to develop a dynamic relationship with nature because nature is not only a visible sublimed object but it is a part of our life. These ecocentric views of deep ecologists have been applied to look deeper meaning of poems. The extreme consumerism tendencies and the technological development of human beings are destroying nature. Human selfishness is the cause of many ecological disasters therefore, literature is necessary to look from ecocritical lenses to develop the deep ecological consciousness in human beings. This ecocritical analysis of poems will help to foster humans' relationship with nature.

These selected nature poems are not only advocating the beauty, hugeness, and greatness of creation. But, these poems comprised the deep ecological imagination that humans and nature have deep interconnectedness. Therefore, this paper opened the discussion of the importance of humans' role in nature. These interpretations of poems raise the question of a human-centric attitude towards nature that can meaningfully help humans to delve into themselves and find themselves as part of nature by expanding their consciousness and sensitivity. Relooking poems from deep ecological lenses makes the explanation more factual; it studies both humans and nature to reconnect from a deeper level which can finally lead our right consciousness towards nature and its crisis.

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Developing Professionally through Online Activities: Reflections and Revelations

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Abstract

Online professional development has significantly impacted the personal and professional lives of a language teacher during and after the COVID-19 pandemic. In this autoethnographic study, I (the first author) unveil my professional development activities as an English language teacher during and after the pandemic. I have collected the data through my personal lived experiences, narratives, memories and reflections, and I have embraced the interpretations. I subscribe to connectivism and experiential theory and interweaved with my professional development journey. The data were analyzed using the Gibbs (2008) thematic analysis framework. As this article was written based on the online professional development experiences of the first author, the first person pronoun indicated him, and the role of the second author was to conceptualize the article, suggest the first author during the writing process, review, copy edit and finalize the article. The study revealed a significant contribution of professional development activities like global networking, rapport building with educators, creation of digital content through online resources and interactions on social media platforms, and attending MOOC courses, which can enhance teachers' professional development.

Keywords: Teacher professional development, autoethnography, English language teaching, connectivism, experiential learning theory

Introduction

The COVID-19 pandemic has interrupted the whole education system in Nepal, forcing educators to rethink their classroom practices. The illness has spread globally, causing problems and crises in every aspect of society, including the educational sector. Babbar and Gupta (2021) stated that "The closure of educational institutions brought dramatic changes in the education sector" (p. 2). Many countries moved to the lockdown, which resulted in the closing of physical classes and shifting into online mode. Most educational institutions and systems were unprepared for this massive shift. As Rony and Awal (2019) mentioned, "This COVID-19 situation has… challenged the educators on lagging behind with the technology" (p. 63). This has led the teachers to struggle a lot with their roles and responsibilities in facilitating the online classroom. Language instructors have used autoethnographies or personal narratives to explore their identities, concepts of themselves, and motivations (Ruohotie- Lyhty, 2013). Identity is the core focus and goal of an individual concerned with establishing a personality through his or her working system (Karki, 2021). Professional development opportunities help teachers to develop, grow, and adapt to the changed context (Neupane & Bhatt, 2023; Neupane et al., 2022). Discovering various teaching and professional development practices and activities during and after the pandemic is important. It is crucial to uncover how ICT has affected professional development activities in the Nepalese context and teacher professional development.

The integration of technology into education has impacted teachers' ability to learn and improve, while also creating opportunities for increased professional development (Ross, 2013). There are many advantages of online professional development for educators. It facilitates time and meaningful interaction, in addition to the absence of geographic and economic barriers (Rienties et al., 2023). Online professional development is a form of learning that enables participants to continue their education through communication media without the need to meet their instructors in person (Rogers, 2001). Effective online development for teachers helps to create and deliver a significant high-quality online education, which is necessary for providing and enhancing the ongoing educational opportunities for learners (Reimers et al., 2020). These online professional development activities are generally carried out through the use of various ICT platforms (Van et al., 2022). However, in the context of Nepal, there is very little investment in teacher professional development (Neupane, 2023, 2024; Neupane & Joshi, 2022). My interest in the discipline encouraged me to investigate this topic to learn about the exploration of professional development activities to aid in teachers' professional development. I (first author) am curious to learn how teachers supported themselves and the learners in the online classrooms and what activities were uncovered while switching from a traditional to an online setting. As this article was written based on the online professional development experiences of the first author, the first person pronoun indicated him, and the role of the second author was to conceptualize the article, suggest the first author during the writing process, review, copy edit, and finalize the article.

The educators seemed to attend the webinars, online trainings, and conferences through various virtual platforms after the emergence of the COVID-19 pandemic. They were eager to attend the several MOOC courses offered freely by various organizations and universities. Most of the educators were busy attending the professional development activities which helped them to upgrade and be updated with the changing scenario. As a language educator, I was also curious to join such online courses and webinars to flourish my professional career. This was a new field for investigation and research which can help them to develop their professional growth. The current research study motivates and inspires other educators to incorporate ICT as well as professional activities to pursue their teaching journey ahead. Policymakers and curriculum designers can be able to reframe their plans and systems and can cooperate to make their learning process better. The teacher trainers can adopt similar sorts of online activities to be embedded in the lesson and the training package sessions I have explored my memories and experiences of involving in several professional development activities which have played a vital role in my successive growth in the teaching journey during and after the pandemic.

The purpose of this study is to explore various online professional development activities of an English language teacher during and after the pandemic. For this, the following research questions are taken as the guiding one:

1. What are the various online professional development activities that took place during and after the pandemic?
2. How do the online professional development activities flourish in the teacher's professional development?

Theoretical Framework

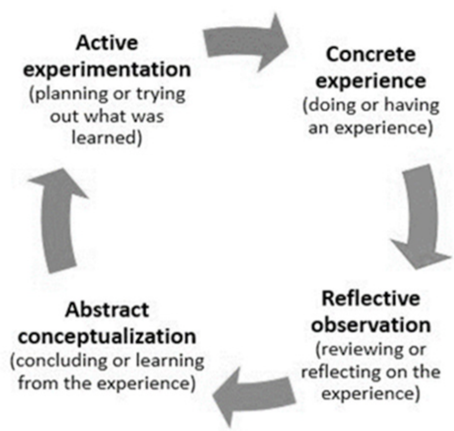
This study makes use connectivism and experiential learning as the theoretical frameworks. Connectivism was developed by George Siemens and Stephen Downes as a paradigm for the digital age. Because of this strategy, educators have been forced to investigate what is being done in digital education and reevaluate, debate, and philosophize how each component fits (Duke et al., 2013). Simply put, connectivism is social learning through networking (Duke et al., 2013). Stephen Downes claims that it is the notion that knowledge is dispersed over a network of connections and that learning is the capacity to create and navigate such networks (Downes, 2007). Blogs, videos, browsers, online discussions, and social networking sites play a prominent role in having a significant impact on the learning process (Karki, 2024). Early learning theories can be established with the aid of connectivism for their adaptation to a linked and global environment (Ally, 2007).

Without a doubt, the development of new technologies has made online learning possible. Technology has also been one of the major concerns in this theory (Karki, 2024). Designing and utilizing various interactive online resources can significantly improve teaching-learning activities.

Experiential learning theory (ELT) provides a comprehensive model for adult learning and development because it is based on what we know about learning, growth and personality development (Kolb et al., 2014). “Experiential Learning theory is concerned with learning through experience and a learning process in which knowledge is acquired by the combination of perceiving and interpreting an experience” (Devi & Thendral, 2023, p.73). The lived experience of self has been the major concern in this research study, which will investigate my involvement in various professional development activities via ICT platforms. According to the experiential learning theory, there are four stages of learning: concrete learning, reflective observation, abstract conceptualization, and active experimenting. These can be depicted through the given figure:

Figure 1

Four Stages of Learning according to Kolb



(Kolb, 1984; Kurt, 2022)

I have connected these two theories well in this research study. Integrating the technology seems to be crucial as it has brought a significant impact on the teaching and learning process. The significant role of various technological means, blogs, websites, digital resources, and social media platforms has brought drastic changes in learning. Moreover, connecting with global colleagues, establishing rapport, and networking with them have fostered my teachers’ professional development.

I have mentioned exploring various professional development activities, which were my personal experiences and memories during and after the pandemic. The lived experiences during and after the pandemic has provided a great concern to reveal how online professional development activities impacted in the field of our professional journey.

Methods and Procedures

Autoethnography seeks to describe and analyze personal experiences to understand cultural experiences systematically (Ellis et al., 2011). Hamdan (2012) states that the act of trying to narrate one's voice—a voice originating from inside, from one's soul—is known as autoethnography. Making that voice accessible to others is the process. The researcher's experiences, feelings, and views are a central concern in autoethnography (Hayes & Fulton, 2015). "Autoethnography involves the writer or researcher in crafting creative narratives shaped out of a writer's personal experiences within a culture and addressed to varied (mostly academic) audiences" (Poulos, 2021, p. 3).

As a language teacher, I wish to express my past experiences in narrative form and self-reflective data to other teachers regarding my teaching journey during the COVID crisis. As Cooper and Lilyea (2022) said, the major source of information is our own life. I wanted to share my experiences and stories about my various professional development activities which can add a milestone for enhancing my teachers' professional development. To support this, Luitel and Dahal (2021) stated that "autoethnography encourages researchers to represent their personal and professional lived experiences" (p. 5). This research explores the various professional development activities that I have undertaken during my teaching journey.

Data Generation Techniques, Process and Analysis

As I recounted my memories and past experiences during the pandemic, my personal life is the primary source of information (Dahal et al., 2024). To quote, Tarisayi (2023) argued, "Autoethnography relies on personal memory and subjective experience as data, so the researcher themself is the data source" (p. 58). I have attempted to capture my lived experiences in the form of narratives and reflections about my past days. One of the main benefits of personal narratives is that they provide rich data (Pavlenko, 2007).

After I recounted and reflected on my past experiences and memories of the pandemic, I followed the Gibbs (2008) framework for the thematic analysis of my narratives/data. At first, I marked some of the significant events, incidents, experiences, images, and feelings that have transformed my professional life during the pandemic. Then, I prepared a short synopsis of those professional development activities sessions by dividing it into three parts- start, mid, and end. Then, I created the mini-stories (Gibbs, 2008) of those sessions in the form of my self-reflective data.

The data were considered properly based on common meanings and themes. All the reflective data and experiences were filled with emotive language, imagery, and feelings (Gibbs, 2008). Similarly, I have noted those opinions and ideas in a paper. Then, I coded the themes generated from those short narratives and synopsis of the incidents or stories and made the coding frame. In the end, I developed the broader thematic structure (Gibbs, 2008) and started writing them down in the form of narratives and past experiences that I felt personally during the pandemic and afterwards. I have linked them with the various theoretical concepts and linked them finally with the scholar's ideas and their research findings.

Results and Discussion

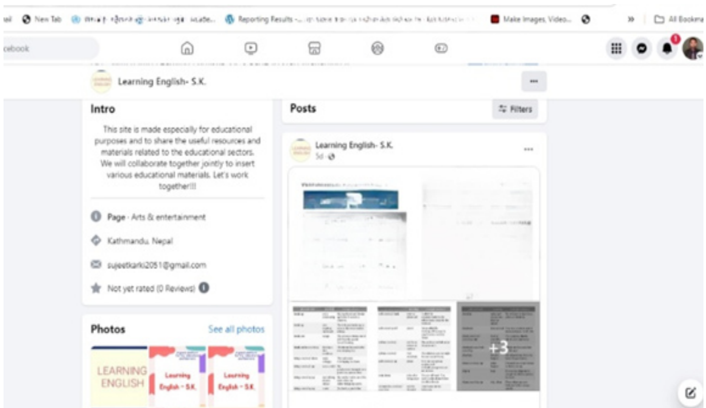
I have presented my narratives and life stories, which depict the online practices of an English language teacher during the emergency (pandemic) time in this chapter. I have shared my experiences regarding engagement in several professional development activities such as global networking among educators and learners, engaging in social media platforms, MOOC courses, and Microsoft Innovative educator programs.

Exploring the Social Media Platforms- Trying Something New

Networking with colleagues on the Facebook site was wonderful. I was in touch with various professional Facebook pages from which I was updated with information and webinars. I was in the process of flourishing my professional growth online. Many professionals and educators used to post and share important educational resources and pedagogical information, which truly helped me as a teacher to grow and build up my content and pedagogical skills. Numerous social media channels play a major role in expanding our network and enhancing our expertise... In the words of Kapri et al. (2021), "… Social media platforms like Facebook, Instagram, LinkedIn and Twitter are the most widely used…which connects us with our friends and family members… community building…" (p. 260). I was moving forward and now it was time to create a platform for the educators and learners to enhance their knowledge and skills. So, I made a Facebook page entitled, "Learning English- S.K.". This site was created for educational purposes and to share useful resources related to English language teaching and learning. The use of Facebook helps to create a new communication channel among teachers and learners, which enhances the learning process (Savvidou, 2013). This professional Facebook page further encouraged my digital skills and I even searched for other useful information to share on my Facebook page.

Figure 2

Sharing Materials through the Facebook Page



(Screenshots taken by the researcher)

I represented my country, Nepal in the IELTA (International English Language Teachers Association). So, I used the Facebook platform to create a professional page for IELTA Nepal on Google, which can help me create a free website page for my volunteer organization. Professionals use a variety of social media sites, such as Facebook, which is essential for creating an online community (Kapri et al., 2021). Educators can join various online platforms and social media such as Telegram, Instagram, Facebook, and Twitter for free (Al-Jarf, 2021). In specific, Facebook has become one of the common platforms to flourish the teachers' professional development (Al-Jarf, 2021) and its related activities.

Online communities play a determining role in enhancing the knowledge and skills of language educators in fostering their professional careers. The engagement further leads to global networking and support in building the 21st-century skills of the teachers. IELTA is an international organization that provides an immense space for enhancing positive relationships among global colleagues, supporting and fostering collaboration among educators worldwide. It was a great platform to collaborate with global educators and enhance our professional growth. I was lucky to be a part of such a prestigious organization! I got recognition, fame, and name through the help of IELTA in the world. I acquired valuable knowledge and flourished my pedagogical skills through the IELTA webinars and programs. I am currently the country representative of IELTA Nepal. I am doing a voluntary job as a language teacher to uplift the professional learning of Nepalese educators. I provide them with ongoing assistance and timely updates on a variety of information on

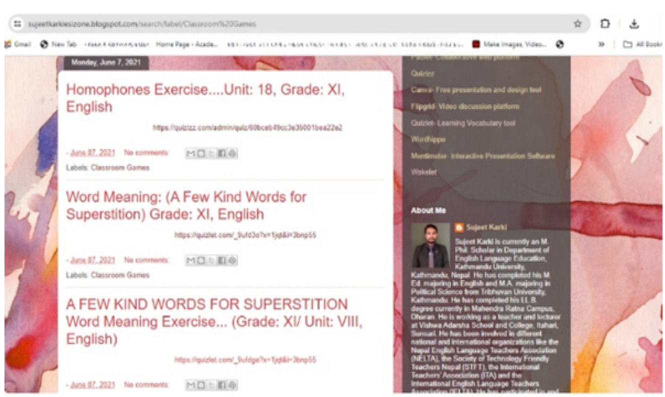
IELTA professional activities, including webinars, online seminars, and discussion forums. All these online discussions and webinars helped to enrich our knowledge related to pedagogy, teaching resources, and research-related activities, which can improve our professional learning. I felt proud to be an active member of IELTA Nepal and to volunteer my time and service to flourish in such a professional community nationwide.

I was a beginner, so I was just getting started when I made my first website on Google! As a novice website developer, I needed to update the information about our volunteer organization, IELTA Nepal. I even shared important information about the webinars for English language teachers so that they can fill out the form from earlier and actively participate in the various online webinars. I have developed programs that enable trainees to attend national and international conferences and initiatives to improve their students' learning. Thus, the professional- related activities can be developed further through the help of Facebook.

I was on the way to creating my blog platform to help educators and learners get various supporting and educational resources. A blog is a section of a website where you may submit descriptions, thoughts, text entries, links, videos, and comments. We can also interact with our audience by allowing them to remark on our posts (Sharma et al., 2011). The main concern was to create a space to support the learners. So, I kept the name: "ESI Zone- (English, Social, and ICT): Let's learn together", a blog page of my own. I made an effort to group them under several areas, such as the ICT section, audio/video, E-books, classroom games, TPD activities, etc.

Figure 3

My Blog Page with Various Materials



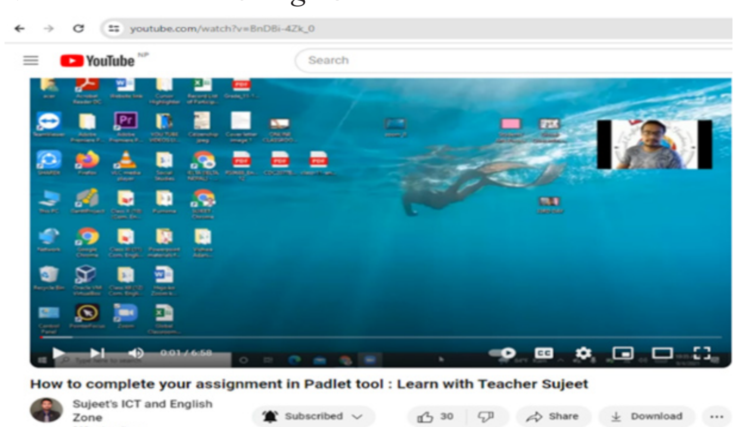
(ESI zone (English, social and ICT): Let's learn together, 2021)

I renamed my profile-related information and placed several links to online tools and resource options there. I felt glad to share my resources with others through the link (sujeetkarkiesizone.blogspot.com). My learners could access their learning materials through the blog platform. It was a marvellous experience for me that my blog site was even available in Google search. My intention to create this blog site was to help the learners get access to the learning materials and help them in the learning process. I have provided some materials that will be beneficial for learners at the basic, secondary, and bachelor levels. The blog site played an important role in the learners' collection of educational resources and in making them independent learners.

I had learned digital knowledge and skills from different national and international organizations, so I used it practically. I wanted to share my knowledge with other educators too, so I thought of preparing my own YouTube channel. As Burke et al. (2009) mentioned, "YouTube is a popular online video-sharing website for both scholarly and non-scholarly communication" (p. 1). The platform enables educators to create a comprehensive learning environment, making educational resources accessible to learners. In the words of Snelson (2011), "Online educators can establish YouTube channels to collect, organize, host and distribute video" (p. 160). YouTube helps educators share their educational materials and content in online forums, which can support learners in their learning process. Thus, the growth of various online video platforms and making their easy access can support the field of education.

Figure 4

Uploading the Video Related to Using ICT on YouTube



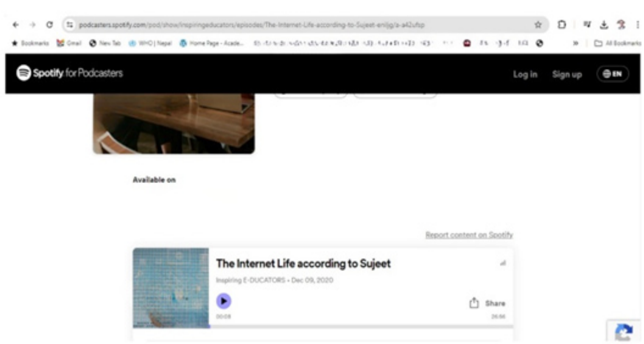
(Sujeet's ICT and English Zone, 2021)

Call the Phillipino and Indonesian Educator for the Interview

I was called by my Philippines colleagues to be interviewed for his podcast series on the benefits and impacts of the internet in daily life. Getting the opportunity to let my voice be heard on the globe matters a lot. It was through the podcast. Podcasting is primarily a communication medium that facilitates human contact and discourse, is widely regarded as a technology (Schlutz & Hedder, 2021). Language teachers use podcasts as a casual way to talk and share about a variety of subject matters of their profession (Turner et al., 2021). I was sharing my classroom experiences and the practices I made virtually during those pandemic days. The podcast is a highly effective online platform for recording and sharing our voices with global colleagues. It was a part of my professional development! It was another thrilling experience for me to share and evoke my opinions and experiences about the pros side of the internet and its impact on our professional lives. I was invited to participate in the Zoom meeting by the Filipino educator, who shared the meeting URL and asked for my thoughts on the respective subject. I had the great opportunity to hear pedagogical ideas and tips from other educators on the same platform. It was like an asynchronous discussion forum. Interviewing with the people and educators matters much to let us learn from sharing our classroom practices. It was a part of teacher learning!

Figure 5

Got Interviewed by the Filipino Educator in the Podcast



(Atencia, 2020)

Similarly, another educator from Indonesia had texted me in the messenger to interview me for one of her podcast series (Q and A with educator). The interview was about how I adapt to the pandemic situation personally as a teacher and how I inspire other learners during the pandemic situation. She appreciated me for their valuable contributions in sharing my views on her podcast. My journey was on! A Japanese educator invited me for an interview on his talk show. He was curious about the examination system of my country, Nepal (three-hour exam). I even thought about myself- Why does this examination timing matter to him? Was he curious about it? Then, we discussed our further plans and meetings via Facebook Messenger. He told me that he would provide some interview guiding questions for me so I could prepare for the questions before the interview. I pondered the Nepalese examination system and students' challenges during exam days. I suddenly noticed that it was too frustrating to sit in the exam hall for nearly three hours to attend my examination in the earlier days.

I realized that the Nepalese examination system was different, so the Japanese educator was interested in getting my interview on the respective topic. I prepared accordingly with those guiding questions and I sent some clicks and videos related to my school. The videos and images were helpful for him to keep in the talk-show video which he was going to prepare personally. The Japanese educator had finalized the date for the interview and invited me to join in the Zoom link. The link was seen in the Facebook messenger and then. I was ready for the interview. I had already set my interview script and when I joined, I was comfortable with his talk. He greeted me and asked about the questions related to the Nepalese examination system. I answered him honestly about the facts of the examination system practices here in Nepal. It was a great interview in the form of a talk- show. The video was finalized and later shared on YouTube and Instagram. Overall, it was added as an experience for me to share my views on the virtual platform. I can also represent my voice concerning Nepalese examination practices worldwide. Anyway, it was a lovely discussion! I thanked him (the Japanese educator) for letting my voice be heard on social media. I was thinking about how many benefits I received support from the teacher's network and digital platforms during the pandemic and beyond... I made a drastic change in my professional career, but I had to keep moving forward to continue my journey of growth. It was all a miracle brought by the ICT!

Attending the MIE Programmes

Microsoft supports enthusiastic educators who are committed to bringing changes in the lives of learners through the teaching and learning process and building a better world. The Microsoft Educator Community as noted by Monari (2019) is "a professional platform that challenges teachers on the inclusion of technology… influences teachers to enable new technologies" (p. 87). I was on the journey to attend the Microsoft innovative educator programs and upgrade my proficiency. "Microsoft Innovative Educator (MIE) programs recognise educators who are using technology to pave the way for their peers for better learning"

(Microsoft Innovative Educator Expert program, 2023). Through guidance from global educators, I was enrolled in becomingto a Microsoft innovative educator. There were many tasks and activities that I should have to complete in the session. The first module that I carried out was 'Engage and Amplify with Flip Grid". This one-hour course taught me about the important video discussion platform Flip Grid. It was fascinating to share our voices and experiences through Flip Grid.

Secondly, I attended another one-hour course, "Deliver powerful learning moments with Pear Deck". It was a great place to create and present our presentation via Pear Deck. As stated by Haschim (2021), "Pear Deck is a Google slides add-on application for creating interactive presentations with students" (p. 55). Through the help of this tool, the learners can engage on their own. "It can be an important and motivating platform for the learners to join online classes during the pandemic" (Hashim, 2021, p. 56). Similarly, I took another course, "How to use video and animation effects?" to learn the skills about the use of animation and video effects to create educational materials. Furthermore, my course continued with Canva for education, Prezi videos, mindfulness in the classroom, blended learning, and many more. These contents and sub-topics of the related course tried to enhance my knowledge and made me a competent teacher.

Finally, at the end of completing this course, I was awarded the title of Microsoft Innovative Educator which was prestigious for me. I was happy about it! Wasn't this a big achievement in my professional life? Gaining many insights and knowledge from such a professional course! Now, I had to keep my aim to become a successful teacher to bring changes in classroom practices. Let's see what happens in the future! Moreover, my journey of exploring has not come to an end! Still, I was looking for other professional activities that could lead me to new success... I got information about "Narrative 4 virtual facilitator training" which emphasized the process of story exchange. I came to learn about the four components (voice, story, life, action) of a story exchange. This training was beneficial for all the educators. The facilitator of the training has presented the needs, the role of an emphatic facilitator, and facilitation skills. Digital storytelling is one of the powerful tools for teaching in the online classroom. Digital storytelling is powerful because it combines images, music, dialogue and sound to bring characters, situations, experiences and understanding to life (Rule, 2010). The means of storytelling addresses and engages the interest of the audience. So, for this, we have to contextualize the story in the particular situation (Atta-Alla, 2012).

I learned about the foundations of communication and had the opportunity to share skills and flourish together. The training was short but all the colleagues enjoyed the ideas for framing the virtual story exchange. I suggest that other learners consider undertaking similar training in the coming days. Finally, this training course has helped me. By remembering all those skills, I can solve all the assignments, apply that knowledge, and explore the variety of resources and friends through social media support. Through storytelling and story exchange, we can bring the experiences and emotions of characters into the audience's mind (Choo et al., 2020). Moreover, teachers can develop and enhance their knowledge and pedagogical skills in forming digital stories and can use these materials while teaching in the classroom. The learning can be meaningful and supportive to the learners and create fun in the classroom environment (Choo et al., 2020). They can even start the discussion themselves and present the story. In the present era, the teacher can engage the learners in fostering their speaking abilities both inside and outside the classroom through the help of several ICT platforms (Arroba & Acosta, 2021). This can be done by engaging the learners in the virtual story exchange session. The teacher can make his/her classroom unique and different by engaging the learners in the online platform to discuss and collaborate with other learners.

Involving in the MOOC

It was the first time when I enrolled in one of the MOOCs (Massive Open Online Course), facilitated by Iowa State University. MOOC stands for Massive Open Online Course. It began in 2008 and has brought revolutionary changes in the educational environment (Nunez et al., 2016). As Zulkifli et al. (2020) stated, "MOOC has evolved and become the latest approach to online learning that offers students' learning regardless of the place, time, and environment" (p. 198). The new normal in the pandemic has brought a drastic change in the online education system along with enrollment in the MOOC course (Ahmad et al., 2022). This leads to a transformation in the life of educators and learners. It can promote the quality of the teaching and learning process (Mustapha, 2016). MOOCs play a significant role in teachers' professional development (Bakogianni et al., 2020). The MOOC course was entitled "Introduction to Technology for English Language Learning". I accessed the course by visiting the site (learn.Canvas.net). The MOOC course was connected with learning language with the incorporation of technology. The experts who initiated this course considered the six areas of language (reading, writing, listening, speaking, vocabulary, and grammar). It was a golden opportunity for me to get this course free of cost. I learned to incorporate various technological resources in the English language classroom. We can enrich with the knowledge and information related to educational technologies and teaching pedagogies.

I found some web resources like TED Talks, Grammarly, the Voice of America Learning English, and Google Docs to be more fruitful during module one. In module two, I learned to improve my reading and writing skills using technology.

I learned about various tips and advice from educators like readability tools, using stories, and collaboration software to facilitate the teaching and learning process. The MOOC course also offers free tips about how the teaching-learning process can be interactive and effective. Similarly, in module three, I learned to enhance my listening and speaking skills through the support of technology. The educators have well-facilitated resources and online activities that can make the lesson amusing, such as videos from the ESL lounge and lab, YouTube, and Sound Hound. I was thinking and felt charmed by knowing about this for my professional growth. Additionally, I learned about various technological tools and resources from experts that can be incorporated into my language classroom. Overall, this MOOC course was entertaining for me as I was fostering my skills and abilities to bring drastic changes in my English language classroom.

Certainly, upon completion of the initial MOOC course, I started the second MOOC course facilitated by the World Learning SIT Graduate Institute. The MOOC course was named: “Integrating Critical Thinking Skills into the Exploration Culture in an EFL Setting”. In this MOOC course, I gained insights into the foundational ideas about culture and tips for teaching culture, which can assess students’ learning. I further explored the intercultural encounters and the techniques and significance of critical thinking in the language classroom. Learning the MOOC courses from the virtual platform is compelling for all the participants like me. This is the main benefit of using the technology and connecting with the internet. I even became familiar with the concept of active listening and reading and raising cultural awareness in the English language classroom. Finally, this course offered the key elements of a good lesson plan, which was new for me.

Similarly, through support from one of the Nepalese teachers, I learned about one course related to professional knowledge for English language teaching (ELT). I was blessed to enrol in this course by creating a Cengage account. I learned about different concepts related to planning and assessing, techniques and activities, teaching various language skills, providing feedback, and three stages of creating a lesson. This course was engaging with different activities and was very informative and useful! Overall, my experience was great when I had the opportunity to access a variety of educational materials and techniques that can be applied in my language classroom.

Teachers are moving ahead to adjust to the shift in the teaching profession (Morina et al., 2023). They involve and participate in professional development to gain skills and improve their teaching process and techniques (Morina et al., 2023). Involvement and exposing our expertise and sharing in social media platforms not only motivate us but will be a way to further lead our teaching journey by improving our shortcomings and helping the learners to move ahead toward their destination. The various online professional development activities discussed above play a determining role in enhancing my personal and professional career to change me from a traditional to a techno-friendly teacher. These are solid pieces of evidence which may inspire other language educators to carry out various professional-related activities through ICT so that they can make a dramatic impact in the field of education. When considering the two theoretical frameworks mentioned above, the rich experiences of a language educator have highlighted the significant role of online teacher professional development. This has further brought a change in the area of English language teaching and learning. Moreover, the connectivism theory is concerned with the role of various online means like expansion in the pedagogical approaches, building online communities, social media and other virtual platforms and how we learn through these means.

Conclusion

This research aims to explore the significance of various professional development activities of an English language teacher during and after the pandemic. The study depicts the major role of integrating ICT in flourishing the professional development activities of a language teacher. The results highlighted the various online professional development activities that have improved the teachers' professional development. These professional development activities include global networking, involvement in MOOC courses, Microsoft educator programs, story exchange sessions, exploring social media platforms, creating and sharing digital content and resources blogs, Facebook, and YouTube platforms. In summary, this research study has shown the benefits of carrying out various professional development activities during and after the pandemic. The voices of self-reflections have been revealed in this autoethnographic study, which has revealed my personal experiences while I was involved in several online professional development activities. This research has opened up many areas of online professional development activities that can help further carry out investigations in various fields. The professional development activities that I mentioned in this research study may be useful for other subject teachers in enhancing their professional development.

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English Language Teachers' Perceptions and Experiences on Formative Assessment in Nepal

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Abstract

This study explores English language teachers' perception of formative assessment, their execution in the classroom, and the opportunities and challenges they faced while implementing it. We employed narrative inquiry to investigate the formative assessment practices of teachers working in public schools in Kathmandu. Four teachers from two public schools were purposively selected. We interviewed them to derive in-depth information on formative assessment. Later, we analyzed the interview transcript thematically. The findings highlight significant obstacles such as teachers' unpreparedness, infrastructure limitations, and alignment issues with curriculum guidelines. Despite these challenges, formative assessment positively impacts student learning outcomes by fostering engagement and personalized learning experiences. The study recommends targeted teacher training, resource allocation and policy alignment to optimize formative assessment practices in the public schools in Nepal.

Keywords: English language teachers, language learning, narrative inquiry, Nepal

Introduction

Choosing "English Language Teachers' Perception and Experiences on Formative Assessment in Nepal" as a research topic holds significant meaning as it is deeply rooted in our journey as teachers and teacher educators. We have taught at public and private schools for many years, and throughout our teaching career, we have observed various challenges and limitations in implementing effective assessment techniques. Proper understanding and implementation are critical because assessment is integral to the curriculum. As our curriculum evolved, with the introduction of internal and external evaluations, we became acutely aware of the need to improve formative assessment practices. While observing practices such as maintaining portfolios, providing regular feedback, and tracking student progress from our colleagues, we felt there was still much to do. In our teaching practices, we have emphasized the use of rubrics, regularly provided opportunities for improvement, and encouraged self-assessment through critical self-reflection. We have witnessed the positive impact of these approaches. Hence, this article aims to explore further and understand how other teachers approach formative assessment methods for positive learning outcomes.

By delving into this research topic, we aim to gain valuable insights into the perceptions and practices of teachers who have employed formative assessment methods in their actual classrooms. We strive to understand how they perceive formative assessment and practice it within this framework, identify the challenges they face during implementation, and explore the strategies they employ to maximize the effectiveness of the assessment practices. Through narrative inquiry, we intend to capture teachers' experiences and contribute to the subject's existing body of knowledge. Hence, our narrative deeply intertwines with our desire to enhance teachers' assessment practices and positively impact students' learning outcomes. This research provides valuable insights into formative assessment approaches contributing to the broader educational community.

Generally, assessment means any method or tool that helps the teachers to collect necessary information regarding the learning process of the learners with pre-established goals. Assessment is an integral part of the teaching-learning process. Without the proper assessment, teaching-learning cannot be successful. The school education system has different assessment practices, such as oral tests, paper-pencil tests, project work, and portfolios. Among them, the paper-pencil test is the most commonly used in public schools in Nepal. According to the Curriculum Development Center (CDC, 2007), assessment is a process of gathering, interpreting, recording, and analyzing data, using information, and obtaining feedback for re-planning educational programs. It is a systematic process of measuring every individual's goals, outcomes, and progress. Assessment is used to monitor the progress of the education system. It also assists teachers in performing better. Assessment makes parents, teachers, administrators, policymakers, and textbook writers aware of the situation. Assessment is an integral part of every instructional activity and education system. It is a continuous process that intends to provide diverse opportunities to students based on their learning evidence.

Most importantly, the Education Policy 2016 has specifically emphasized instructional assessment. It clearly states that the examination system will be revised to improve the quality enhancement of education across all levels. It is crucial to establish appropriate and efficient examination frameworks or strategies. Additionally, it emphasizes that effective assessment methods must be integrated into the educational system. However, the lack of proper training and development opportunities (Neupane & Joshi, 2022; Neupane, 2023, 2024; Neupane & Bhatt, 2023) has been a hindrance to proper teacher professional development and the development of required knowledge and skills in teachers, including assessment practices. The importance of this study lies in exploring the formative assessment method from the teachers' perspective, investigating their perceptions, experiences, and challenges in implementing this assessment approach. By gaining insights into teachers' attitudes, this study provides a comprehensive understanding of the factors that influence the successful implementation of the formative assessment method and its impact on students' learning outcomes.

In the context of Nepal, the history of formative assessment practice dates back to the piloting program, which was initiated in the five-year Compulsory Primary Education (CPE) in the education year 2000/2001 in grade one. However, the Basic and Primary Education Project (BPEP) also made efforts to support the Continuous Assessment System from 1996 to 1998. Gradually, the Ninth and Tenth plans introduced the Continuous Assessment System (CAS) at the primary level, with the Ninth plan focusing on grade 1 to 3 students and the Tenth plan on students up to grade five. The continuous assessment system has been implemented from grade one to grades 11 and 12 at present.

The basic principle of the CAS system is that the teaching methodology is student-centred (Nepali, 2012). It also provides that learning outcomes of the curriculum shall be used as the basis of teaching and assessment. Additionally, the teacher is supposed to assess the students continuously without the periodical examinations. Finally, the student's work and progress reports should be kept in their personalized portfolios. Both formative and summative assessments are equally important to enhancing students' learning. In the evaluation process, one cannot exist without another. At the school level in Nepal, there is a blended system of the evaluation process, which includes both formative and summative procedures (Regmi, 2014). National Curriculum Framework (NCF) 2076 established a policy regarding the assessment system, introducing both at the school level. According to the policy, at the basic level, especially from Grades one to three, there is a complete assessment for learning (formative assessment), and the school has an autonomous system to implement it independently. The Curriculum Development Center (CDC) has prepared guidelines for the internal evaluation based on the approved curriculum of each level. The main aim of developing these guidelines is to assist teachers in effectively implementing the internal assessment provision envisioned by the curriculum.

Assessment for learning (formative assessment) of the students is documented based on homework, classwork, attendance, classroom participation, project work, creative work, discipline, and behavioural change. The curriculum indicates that scores from formative assessment provide the basis for the internal evaluation. For this, the teacher should maintain each student's portfolio. The portfolio details students' performance in different assessment areas (e.g., participation, project work, unit tests, terminal exams, listening and speaking in language subjects, etc.). The Basic Education Curriculum, 2077 (Grade 6-8) was approved by the Ministry of Education, Science, and Technology (MoEST) on 28 January 2021 (CDC, 2022). According to this curriculum, there is provision for internal (50 %) and external (50 %) assessment. The record of project work, test papers, or other proof of the student's performance should be kept in their portfolio. Regarding the assessment system at the secondary level, there is a provision for 25% formative assessment and 75 % summative assessment.

In the context of Nepal, some studies have been carried out on assessment (Sapkota, 2023; Saud et al., 2024; Neupane, 2021). Saud et al. (2024) examined the existing internal assessment practices adopted by the English language teachers in the Secondary Education Examination of the community schools in Nepal. Their study found that the prominence of assessment of learning as the dominant practice has resulted in the marginalization of the other two purposes of the assessment for learning and assessment as learning. Sapkota's (2023) study found that very few tools were used to evaluate the student's learning achievements. According to him, both formative and summative assessments contribute equally to enhancing the student's learning, but formative assessment tools like portfolios, project work, classwork, etc., are rarely used during teaching-learning activities in the public schools of Nepal. Similarly, Neupane (2021) carried out research on assessment experiences of English language teachers. The findings revealed that assessment significantly affects learners' overall development and teachers' professional growth. Summative assessment was found to be a challenging task, primarily focusing on testing language contents. The study's findings suggest that teaching and learning become effective by accurately applying assessment strategies in English language classrooms.

Despite the development and revision of policies over time to accommodate both formative and summative assessments in teaching-learning activities, their implementation has not been satisfactory. By conducting a literature review and identifying these gaps, this study aims to contribute to the existing body of knowledge by focusing on teachers ‘perspectives regarding formative assessment practice. It seeks to address the identified gaps and provide insights into this system’s implementation, challenges, and outcomes. For this purpose, the following research questions become pertinent.

1. How do the teachers practise formative assessment?
2. What are their perspectives on factors that facilitate or hinder its implementation?

Methods and Procedures

To explore public school teachers’ experience in assessment practice, we engaged in a prolonged interaction with our participants under an interpretive research paradigm. This study employed a qualitative method to collect information. Two schools in Kathmandu Metropolitan City (one basic and one secondary) were significant areas of study, where we collected data related to assessment practices. Both primary and secondary sources of data were used. The primary data were collected from teachers at selected public schools in Kathmandu Metropolitan City. As secondary data, we consulted government policies such as the National Curriculum Framework, assessment records of the schools, and different research articles and books on testing and evaluation, as mentioned in the theoretical section.

Using non-random purposive sampling, we selected four teachers from two different public schools who were teaching at various levels. Data collection involved conducting semi-structured interviews with teachers, either in-person or via video conferencing, depending on the participant’s preferences and availability. Semi-structured interviews provided flexibility in exploring participant’s perspectives while ensuring that key research questions and themes were addressed. The interview questions were carefully crafted to elicit teacher’s experiences, perceptions, challenges, and strategies related to the formative assessment system. Probing questions were used to gather rich and detailed data on specific topics of interest. Taking permission from the participants, we recorded the interview, and later, we transcribed, translated, and thematized it. The analysis process was iterative, including familiarizing oneself with the data, generating initial codes, identifying themes, reviewing and refining the themes, and producing a final report.

Findings and Discussion

Three main themes emerged from analyzing participants’ responses: understanding of formative assessment, school assessment practices, and opportunities and challenges in implementing formative assessment.

Understanding the Formative Assessment

Our primary concern was understanding the teachers’ perception of formative assessment. When I asked one of the participants, Umesh, about his understanding of formative assessment, he replied:

> Formative assessment is a scientific system used to evaluate the overall aspects of a student. The areas that cannot be measured with paper-pencil tests can be assessed through formative assessment. It is developed to fill the gap created by summative assessment. Though it is the scientific system, we teachers are not ready to transform ourselves into a new one and prefer to follow the conventional evaluation system. The implementation part is not as envisioned by the policy or guideline.

Umesh's statement aligns with Black and Wiliam (1998), who noted that teachers often resist new assessment forms due to their comfort with traditional methods and concerns about the practicality and impact of new approaches on student outcomes. Here, the participant has talked about the teachers' resistance to adopting formative assessment despite its benefits. This resistance is often attributed to the disinterest of traditional evaluation methods, challenges in implementation, and possibly a lack of professional development or support in transitioning to new assessment paradigms.

Similarly, Muna explained the positive impact of formative assessment, which has increased the students' learning habits. She mentioned that students had become familiar with different assessment criteria and were motivated by various activities. However, she did not focus much on the reluctance to implement formative assessment, as Umesh shared. Her reflection resonates with the view of Black and Wiliam (1998), who argued that formative assessment practices enhance student learning habits by providing ongoing feedback that helps students understand different assessment criteria and encourages them to engage more actively in various learning activities. Teachers should articulate achievement targets in advance of teaching. Teachers should inform the students about their learning goals from the beginning of the teaching and learning process.

When Sima, another participant, was asked about her understanding of formative assessment, she responded:

> The overall evaluation of students within school hours is known as formative assessment. We observe their behaviour, whether they respect the seniors or teachers, behave with the visitors, and respond to classroom activities apart from just learning. Learning is, of course, the central part of assessment.

This response emphasizes a holistic view of student evaluation within the school environment, encompassing behaviours, interactions, and reactions during school hours. While this interpretation includes essential aspects of student conduct and social skills, it extends beyond the traditional scope of formative assessment in educational literature. Her perception aligns with Black and William (1998), who emphasize that formative assessment helps teachers understand what students know and can do at various stages of the learning process. This understanding allows teachers to tailor instruction to address learning gaps and promote a deeper understanding of the subject matter. Unlike the participants' broader interpretation, which includes behavioral observations and social interactions, formative assessment aims to improve academic outcomes by providing timely feedback and adjusting teaching strategies to meet student needs better.

Likewise, when asked about her perception of formative assessment, Rima responded that there were loopholes regarding its implementation. She noted:

> It is a good provision if it is implemented well, but if it is used only to provide marks on the basis of subjective evaluation, then it becomes a complete failure. It should be practised as per its actual norms. It is a good practice to conduct continuous assessments, as summative evaluation cannot evaluate all aspects of a learner. This system can assess the things that paper-pencil tests cannot evaluate. For example, some students can perform well in the classroom but cannot write in the exam; they can do different project works perfectly, present them in class, deliver a speech, manage group activities, and many more.

She emphasized that the formative assessment should be practised according to the Students' Assessment Guidelines 2080 norms. The participant's perspective suggests that while formative assessment is viewed positively in theory, challenges arise during implementation. This viewpoint aligns with Sapkota (2023), who emphasizes that effective use of formative assessment requires proper training and support for teachers to use it as intended- as a tool for continuous monitoring and improvement of learning rather than just for grading purposes.

Assessment Practices in Schools

Another central theme from the participants' experiences is implementing the formative assessment. While Umesh was asked to explain his practice of implementing formative assessment in his teaching-learning activities, he responded:

> I teach English subjects at the basic level. As per the criteria mentioned in the assessment guidelines, for evaluating speaking skills, I always ask the students to speak on a specific topic at the beginning of the class. The self-reading habit of the students is weak, so to compel them morally, I ask them to read any topic from the library and prepare to speak for the next day. It has motivated them to read, and everyone has to speak, so it has developed confidence in the students. I keep a continuous record of it. They should also

> show me the preparation notes based on it, and based on that, I evaluate their speaking skill and connect them with formative assessment. I record their speech on my mobile phone and post it in their class group. After the speech, I ask them to reflect on their work. This develops all aspects of language, such as reading, writing, and speaking.

When further asked about his practice of project work, he explained, "I ask my students to visit a shop and observe the customer and shopkeeper conversation and prepare the actual dialogue based on their observation."

The teacher's approach aligns with formative assessment principles, which involve gathering data on students learning, providing feedback, and using that information to modify teaching and learning. This aligns with Acharya (2021), who argues that having students speak, reflect, and receive feedback enables the teacher to identify gaps in understanding and adjust their instruction accordingly. While most teachers in Nepal still rely on summative exams, this example demonstrates that some educators are trying to implement more formative assessment practices in their classrooms. Adopting such practices improves the quality of teaching and learning in public schools in Nepal (Acharya, 2021; Sapkota, 2023). When Muna, another participant, was asked about her practice, she remarked:

> After one unit is finished, I assign project and practical work to be finished within a certain time, evaluate it, and do record keeping. I enjoy working with students. I follow the complete Student Internal Evaluation Guideline of 2080.

When further asked about time constraints, she replied, "If we budget the time accordingly, it becomes easy." The participants' responses highlight several key points about their formative assessment practices in the classroom. The teacher assigns project work and practical activities after completing a unit, which aligns with the views of Sapkota (2023), who says that this allows them to evaluate students learning on an ongoing basis rather than relying solely on summative exams.

When we asked Sima about the practice, she said she followed the CDC's guidelines. She also provides the assessment criteria to the students and evaluates their learning continuously. The participants' responses highlight the importance of delivering assessment criteria to students, helping them understand learning goals and expectations and enabling them to participate actively in their learning. As she evaluates students' learning continuously, formative assessment becomes an ongoing process in her classroom. This allows her to gather real-time data on students' progress and make timely adjustments to her teaching. If students are given opportunities to discuss the learning process with their teachers and peers, they can develop a deeper understanding of their learning (Assessment Action Group [AAG], 2001-2005).

Regarding the practice of continuous assessment, Rima responded that she adheres to the guidelines provided by CDC. She noted:

> It has been implemented after the change in curriculum. For this, I have developed an assessment format on my laptop. Every day, I go to class with a laptop. I teach students using activity-based techniques and record their participation on my laptop. Similarly, following the CDC guidelines, I assess all other practical and project work and provide marks accordingly. I take unit tests after the completion of each of the units and keep a record of them. The policy and guidelines have provided ways to implement it effectively in the classroom.

Rima's statement suggests clear policy directives and guidelines to promote using formative assessment in schools. Using technology and activity-based teaching techniques allows teachers to observe and assess students in real-time learning, providing opportunities for immediate feedback and adjustment. Overall, the response from Rima demonstrates a comprehensive and well-structured approach to formative assessment, incorporating technology, activity-based techniques, and transparent assessment criteria aligned with the policy and curriculum guidelines.

Opportunities and Challenges

Participants' narratives showed that formative assessment has significant potential to enhance teaching and learning, but its implementation has several challenges. While talking with Umesh about formative assessment implementation, he argued:

> The dedication and commitment of teachers are essential. Our classroom size, number of students, and infrastructure are also inappropriate. The lack of dissemination of ideas and proper supervision from the concerned authorities are reasons for the system not being implemented thoroughly.

Despite these challenges, Umesh seemed confident about implementing the provision as guided by the policy. He further noted that many teachers do not fully understand the purpose and practice of formative assessment, so training is needed. This belief aligns with Acharya (2022), who argued that teachers are not receiving proper guidance for implementing formative assessment. Teachers require support to strengthen and adequately implement the formative assessment.

When Muna was asked about the opportunities created by formative assessment, she said, "It has been a boon for the weaker students who cannot perform in paper-pencil tests. They become more motivated and inspired to get involved in practical work." This indicates that formative assessment allows weaker students to demonstrate skills and knowledge that may not be captured through traditional summative tests, aligning with Stiggins's (2002) and William's (2011) view. The participants' views highlight the benefits of formative assessment for weaker students, including increased motivation and engagement, improved time management, showcasing hidden strengths, and reduced disciplinary issues. Formative assessment also promotes self-directed learning. Nicol and Macfarlane-Dick (2006), Stiggins (2002), William (2011), and Cauley and McMillan (2010) reinforce the assertions of Muna. They argue that formative assessment can help engage struggling students and reduce behavioural problems in the classroom. When asked about the challenges, Muna replied:

> In the beginning, it was more complicated when it came to policy; it took time to understand it, and there was more confusion for the teachers. How to give the marks, how to manage grade sheets, it all was a problem. The concept was not clear. We practised it for a year, attended the training, and reviewed the guidelines many times. But now, in 2081, we all are clear. We have made it paperless. We have created all formats on the laptop and filled in the class immediately. We assess their learning based on the criteria. I trained all my colleagues. Now we are used to it.

This statement from Muna highlights teachers' significant challenges when formative assessment was first introduced. She also shared her coping strategies for overcoming these problems or challenges. Her initial confusion and lack of understanding align with the research, indicating that teachers often struggle to grasp the purpose and practice of formative assessment, particularly when it is mandated by policy changes (William, 2011; Wyle & Lyon, 2015). Regarding the implementation difficulties, Black and William (1998) argue that implementing formative assessment requires significant changes to assessment practices, which can be challenging for teachers.

Muna argued overcoming challenges through practice and training, which aligns with the view of Wylie and Lyon (2015) that teachers need support to implement formative assessment effectively. As the participant mentioned, her effort to train and support her colleagues highlights the importance of building a community of practice around formative assessment. According to Cauley and McMillan (2010), by sharing knowledge and expertise, teachers can help each other overcome the challenge and implement the approach more effectively. The participant's story reflected that formative assessment provided many opportunities for students to engage, fostering creativity. It helps them showcase their unique interest and talents, and teachers understand learners' preferences. Engaging in project work allows students to acquire practical skills applicable to real-life situations.

Rima, another participant, noted that despite challenges, the implementation primarily depends on the teachers' willingness. She further explained:

> The implementation part depends on the teachers' willingness; few of them are doing it effectively, they have followed the norms of the guidelines, and some are just doing it for formality. They fill out the form sitting in the office room without giving tasks and engaging in activities. I have also been unable to implement it perfectly, but I am doing my best. Time constraints are also one of the challenges; resource limitations, classroom infrastructure, and teachers' unwillingness are some of the major challenges. Teachers have not understood its norms because they haven't read the curriculum and assessment guidelines. They start to fill out the form after the terminal exam is finished. Classrooms are small and congested. Even the government has not organized a dissemination program; the setting is conventional, and training is not given to teachers, as it is the new system.

The sharing of Rima reflects that some teachers may not fully embrace formative assessment practices, treating them as mere formalities rather than meaningful learning tools. They may not have thoroughly read or understood the curriculum and assessment guidelines, leading to superficial implementation. The practice of filling out assessment forms only after terminal exams rather than throughout the learning process aligns with the view of William (2011), who says that this kind of practice undermines the purpose of formative assessment. Moreover, teachers are overloaded with practical activities required in the classroom. The lack of appropriate resources and overcrowded classrooms hinder the implementation of formative assessment. Additionally, teachers lack sufficient training, particularly in the new evaluation system. The problem mentioned by Rima aligns with the view of Willian (2011) that the lack of a dissemination program from the government can further exacerbate the challenge of implementing formative assessment effectively.

Conclusion

Participants' narratives revealed that when the government introduced formative assessment, many teachers were initially confused about fully implementing it. While some motivated and updated teachers tried to follow the guidelines, others just fulfilled formality. Some participant shared their successful practices, such as keeping the portfolio of each of the students, assessing based on active participation in the learning process, engaging the students in project-based learning, and motivating them towards creative work. As they navigated the formative assessment process, the participants highlighted the opportunities and challenges they faced. Regarding the opportunities, teachers who have embraced formative assessment found that it excites and engages students, stimulates creativity, allows students to explore their interests and talents, and promotes project-based learning and creative work.

However, they also mentioned several challenges. Lack of teacher readiness and willingness, overloaded teachers and overcrowded classrooms, limited resources, and inadequate teacher training and support were some of the factors hindering the effective implementation of the formative assessment system. To address the challenges and fully realize the benefits of formative assessment, schools and educational authorities should prioritize comprehensive teacher training, allocate sufficient time and resources for implementation, encourage teachers to embrace formative assessment as an integral part of the teaching and learning process and create an environment that enhances the student engagement and learning achievement.

Teachers should be responsible and accountable for their duties to implement the provision of the government. They should employ various strategies like project work, field visits, classroom observation, attendance, participation in the learning task, etc. while evaluating the learners. They should not solely depend on paper-pencil tests. To support the teachers, concerned authorities like School Management Committee (SMC) members, School Supervisors, and headmasters must monitor their assessment practices and provide feedback to implement the government's provisions better.

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English as a Medium of Instruction in Learning: Challenges and Prospects

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Abstract

English language has secured its prominence as a widely used means of communication in the global linguistic landscape. Its widespread appeal is evidenced by the multitude of individuals drawn to acquiring proficiency in English. The adoption of English as a medium of instruction (EMI) has emerged as a matter of global significance with several nations integrating it within their educational systems. This research delves into the perceptions, practices and experiences concerning the challenges and opportunities identified by teachers and learners. It also digs out the issue of the community's inclination towards EMI and its consequences. This qualitative phenomenological study focuses on the experiences of three teachers and two students selected from EMI-adopted schools in Hupsekot Rural Municipality. The study employed in-depth interviews guided by open-ended questions as the primary data collection method. The collected data were transcribed, coded and thematically analyzed to derive meaningful insights. The findings underscore the widespread attraction of EMI-based schools among both parents and children. However, they also highlight the pressing need to enhance teachers' capabilities to effectively instruct in English for enhancing learners' achievement. Moreover, learners from multilingual backgrounds encounter challenges expressing themselves in both Nepali and English.

Keywords: Phenomenological study, teachers' capabilities, cognitive development, multilingual background

Introduction

As a globally used international language, English language is being widely used as a means of communication. English language has gained popularity as the primary language of instruction in non-native English-speaking countries (Bradford, 2016), due to its high status as a widely used international language. The argument of receiving a dominant position by the English language in social and educational discourses in colonial as well as non-colonial countries is often being heard (Shah & Karki, 2023). "Global social, cultural, economic and political waves of changes have great impact on the wide use and rapid spread of English in the global sociolinguistic context" (Saud, 2020b, p.30). Thus, English has become an international language of communication and the use in education as a medium of instruction.

Medium of instruction refers to the language the instructors use to deliver the knowledge and instruction while learners use it to learn and communicate in an educational setting (Saud, 2020a). The language used as a medium of instruction in teaching and learning can be the national language of the country, a different language or both and encompasses the use of language in various instructional methods and assessment practices. The choice of language depends on the government directives and educational frameworks which can influence the choice of a language and implementation of the medium of instruction (Poudel, 2020).

English as a medium of instruction (EMI) denotes the use of the English language to teach academic subjects other than English itself where the first language of the majority of the population is not 'English' (Tai & Zhao, 2022). In the present scenario, there is a strong demand for EMI as a pedagogical technology for educational activities in institutions in those countries or regions where English is not the native language (Litovchenko & Shmeleva, 2020) like Nepal. These days, the attraction of students towards EMI is increasing as they are occupied with a deeply rooted belief in obtaining a job and securing a bright future if they learn through English (Ghimire, 2019). EMI policy has become a widespread phenomenon in Nepal's school education system (Saud, 2024). It can positively impact learning by creating effective classroom instruction initiating classroom change via raising awareness and integrating content and language in specific disciplines through collaboration (Yuan, 2023). At the same time, while using EMI in the teaching and learning process, a range of obstacles such as the lack of professional competence as well as the 'publish-or-perish' culture (Rui et al., 2022) which is a pressure for the learner in the educational field to be confronted sometimes.

EMI has become a significant issue in the context of Nepal due to several reasons. Even though English is being taught as one of the compulsory subjects in Nepal from early grades (MoE, CDC, 2019), the essence of introducing English not only as a subject but also as a medium of instruction for the entire curriculum is rising these days (Sayer, 2015). The globalization of education and the increasing demand for English proficiency in the international job market have contributed to the adoption of EMI in many educational institutions in Nepal. EMI allows the learners to access a wider range of resources and materials available in English which can assist in fostering global perspectives and help the learners stay updated in various sectors (Cakir, 2018). So many non-native English-speaking countries have adopted EMI due to the paradigm shift from teaching English as a foreign language to EMI (Saud, 2020a). This shift has raised concerns about the potential impact on students' learning outcomes, especially those from multilingual backgrounds. Additionally, there are challenges related to teachers' proficiency in English and their ability to effectively impart knowledge in a language that is not their first language. The emphasis on EMI can create an educational divide among learners from privileged backgrounds with high access to means and resources and those from under-resource areas may not be able to compete with others which can ultimately exacerbate inequality (Ojha, 2018). Moreover, the issue of balancing the promotion of English language skills with the preservation of the Nepali language and culture has also sparked debates and discussions in the country.

Nepal is a multicultural and multilingual country where learners from diverse backgrounds come to study in the schools (Saud, 2019). The adoption of EMI in Nepalese educational institutions poses several challenges and opportunities that require careful examination. The implementation of EMI contributes to the learners' English proficiencies (Aizawa & Rose, 2020) though it does not have an explicit language learning goal (Tai & Zhao, 2022). As the demand for English proficiency in the global job market grows, many schools and universities have integrated EMI into their curricula. This shift raises concerns about its impact on student learning outcomes, particularly for those from multilingual backgrounds. Additionally, educators face challenges in effectively instructing in English, and there is a pressing need for enhanced teacher training and professional development in this regard as sometimes, obstacles can be created in ensuring professional competencies (Rui et al., 2022). One of the frequently observed barriers to the implementation of EMI is the lack of English proficiency among the instructors, who are not trained to linguistically structure their lectures before adopting EMI in a classroom context (Ulfah et al., 2024). Moreover, the widespread inclination towards EMI among both parents and students raises questions about its potential influence on identity formation and the preservation of the Nepali language and culture.

Exploring the perceptions related to EMI in the Nepalese context is crucial for several reasons. First, it allows us to understand the challenges and opportunities associated with the adoption of EMI in educational institutions in Nepal. This exploration can shed light on the potential impact on student learning outcomes, especially for students from multilingual backgrounds. Additionally, investigating perceptions helps in identifying the specific challenges faced by educators in effectively imparting knowledge in a language that may not be their first language. Furthermore, by exploring these perceptions, we can address the broader issue of balancing the promotion of English language skills with the preservation of the Nepali language and culture. Understanding these perceptions is essential for informed decision-making and policy formulation regarding the use of EMI in Nepalese educational institutions.

Therefore, this research explores the impacts of EMI on student learning outcomes, identifies the challenges faced by students and educators, and digs out the prospects and potential benefits of using EMI in Nepalese educational institutions. The following research questions have been formulated to guide the study:

1. How do the learners express their experience of studying in an EMI-adopted school including its impacts on their learning?
2. What prospects do the students see after studying in EMI-based classes?
3. How do the teachers perceive EMI in developing learners' achievements?

Literature Review

Various studies were conducted to explore the perceptions of different stakeholders, teachers and students towards EMI in the context of Nepal. Evans and Morrison (2018) claimed that the students from secondary schools who adopt their mother tongue as a medium of instruction have lower academic English language proficiency than those from EMI schools. Tai and Zhao (2022) emphasized that university students who previously attended secondary schools which adopted a medium of instruction other than English tend not to be disadvantaged in improving their academic English proficiency. Similarly, Ulfah et al. (2024), revealed the positive attitudes of instructors, stakeholders' support in EMI implementation and the need for training materials in training.

Cakir (2018) stated that EMI can significantly improve students' learning and English proficiency in all the receptive as well as productive language skills. The enhancement of English proficiency can open up the doors of opportunities in national and international educational settings, scholarships and future career development (Wei, 2019). In line with enhancing language proficiency, the use of EMI can promote the cognitive development of learners by utilizing creative thinking and reasoning, problem-solving skills, critical and analytical thinking skills and so on (Baker, 2001;Wei, 2019) as learners tend to think the things in an exponentially new language.

In the diversified multicultural and multilingual background of Nepal, students from such background, whose first language is not Nepali, may struggle to grasp the concepts delivered in English (Ojha, 2018). The use of non-native language as a medium in learning environment can create disengagement of learners and ultimately can hinder their academic achievement (Poudel, 2017). Poudel (2017) revealed that due to the inadequacy of English language proficiency of some language teachers, they are facing difficulties in delivering instruction through the English language which can lead to unclear explanations, limited teacher-student interaction, and less engagement which ultimately hinders the learning outcomes of the learners.

Developing teachers' competency is crucial for the successful implementation of EMI because teachers need to have a high level of proficiency for the effective delivery of the content and meaningful engagement of the learners. Mahara (2023) examined the perceptions of the teachers on EMI in Nepalese public schools and the findings reveal that there is a demand for EMI due to its perceived economic benefits, however, the teachers grapple with challenges like limited resources, materials and training. Subsequently, Poudel and Li (2018) argue that the successful implementation of EMI needs careful planning and teacher training. Nevertheless, the perception of the teachers and students in those schools which are located in rural contexts is yet to be explored.

Policy Related to EMI

In the context of the historical evolution of education in Nepal, a noteworthy development occurred towards the end of the Rana regime with the establishment of 'Bhasha Pathashalas', which facilitated public access to education with a focus on promoting the Nepali language as a medium of instruction. Subsequently, following the downfall of the Rana regime, significant modernization of education was instigated through systematic policy changes. During the panchayat period, Nepal espoused the 'One-nation-one-language' ideology within its education system (Phyak & Ojha, 2019). However, with the advent of the Interim Constitution of Nepal in 2007, the country underwent a significant shift towards a neoliberal language ideology in education. This shift facilitated the inclusion of mother tongues, Nepali, and English as mediums of instruction, tailored to the needs and demands of the community and learners (Saud, 2020a).

In a policy report by Nepal's National Education Planning Commission (NNEPC), Dr. Huge B. Wood recommended Nepali as the sole medium of instruction in Nepalese schools and universities. The choice of the medium of instruction in schools was placed under the purview of the respective School Management Committees (MoE, 2009), marking a significant milestone in the adoption of EMI in public schools (Saud, 2020a). As a result, English is now being taught as a compulsory subject and is also used as a medium of instruction in several educational institutions. The constitution of Nepal has provisioned that the medium of instruction to be provided by the schools shall be the Nepali language, English language, or both languages (Constitution of Nepal, 2015). In line with this, there is the provision that English can be the medium of instruction except in subjects which concern national identity (MoE, CDC, 2019). There is the provision of enabling child-friendly environment in classrooms to ensure learning (MoE, 2010). Learners' physical and psychological safety has been given utmost concern in the School Education Sector Plan (MoEST, 2022), so the learners must not feel unsafe to learn due to the medium of instruction.

After the implementation of federalism, there has been a noticeable trend among parents to enroll their children in private schools, largely due to the appeal of English being used as the medium of instruction. Despite limited evidence showing a direct correlation between English-medium instruction and enhanced academic performance (Khati, 2016), the preference for private schools persists. In response to the increasing demand for English-medium education, public schools have also begun to adopt EMI often without fully considering its potential implications (Khati, 2016). Nevertheless, the use of EMI continues to expand its horizon and gain prominence in the educational landscape of Nepal, sparking ongoing and robust debate (Saud, 2020a).

Methods and Procedures

This is a phenomenological study where I have chosen two schools and five participants thinking that the smaller number of participants could make it easier for me to explore their lived experiences in depth and reveal the exact experience of those individuals (Smith et al., 2009). The participants' lived experiences have been explored to deal with matters in fact and provide a crystal-clear picture to understand how they feel. The research theme I have picked is an issue related to our educational context that can be explored through several cases within the school setting (Creswell, 2015). Identifying the schools that have adopted English as a medium of instruction, I purposively selected two community secondary schools of Hupsekot Rural municipality as my search site. One primary level teacher, one lower secondary level and one secondary level teacher, and one student from each of the schools were my research participants. The interview was the data collection technique of my study where I used some of the open-ended guiding questions as my research tool. For the purpose of meaning construction, the data was recorded, transcribed, and translated without distorting the meaning. After that, the process of coding and categorizing was done, and different themes were generated to organize similar ideas. And finally, literature support was taken for the meaning-making process (Green & Breece, 2020).

Results and Discussion

Based on the collected data obtained from the research participants, the received ideas and information were categorized and five themes were generated to analyze the data and make sense.

EMI as Demand-Driven Adoption

It is good if any programme is implemented only after assessing the needs of the concerned people and addressing their demands. The positive attitudes of the instructors and stakeholders support the implementation of EMI (Ulfah et al., 2024). The decision to adopt EMI is largely influenced by the demands of the parents and perceived benefits for the learners. Parents hold the belief that if the children are taught via English medium, that brings quality education (Saud, 2020a). In this concern, the collected data reveal that with the changing scenario, the attraction of the parents as well as the students was towards the English medium.

In this concern, a teacher participant, T-1 said that they started EMI to address the increasing demand of the parents. He mentioned that in the later years, the attraction of the parents seemed to rapidly increase towards English. He asserted, "Due to the high demand of the parents, and society and to control the flow of the students transferring to the private schools". He further added that the enrollment of the students in public schools was in decreasing order and the parents desired to teach their kids in private schools due to the difference in medium. So, with the purpose of providing quality education via EMI, they started to teach in both mediums making two streams one Nepali and another English. And both of the mediums were running parallelly for a couple of years. He mentioned, "Though we started EMI as per the demands of the parents as well as our students, in the starting years, it was difficult for us to find students in English medium but these days, Nepali medium is on the verge of extinction since no students are found to choose Nepali medium of instruction in junior classes".

Relating to this concern another teacher participant, T-2 opines that the medium of instruction should not be imposed by the stakeholders, but it should be according to the choice of the learners. He said, "Since we are teaching learners of multilingual backgrounds, the choice should be given to them. Thinking this we addressed the demand of the concerned people and started EMI from 2069 B.S. and running both mediums till date". He asserted that they had started EMI to stop the flow of students towards private boarding schools. When I tried to explore the perception of the students who study English medium, one of my student participants said that EMI was their choice to be able to compete in the competitive world. Another participant S-2 said that she was a student from a poor economic background and her father passed away when she was only four. She mentioned that she had a strong desire to study in an English medium school. She said, “Even though I didn’t get the opportunity to study in private schools, I feel proud to be called a student who studied in an English medium school.” She asserted that she was fortunate enough to get a quality education in EMI which can help her to foster her future. “Low investment, quality education! Tyo pani English medium ma! (Quality education in low investment! That too in English medium!) What do we need more than that?” The learners showed enthusiasm for getting opportunity to study in English Medium in public schools.

As English is taken as the linguistic capital which is beneficial for future careers and to expand international access achieving higher social status in society (Bourdieu, 1993), the obtained data reveal that the schools have started to adopt EMI to address the increasing demands of the parents as well as to fulfill the desires of the learners. Hence interest of the society is the push factor to use English as a medium of instruction.

EMI Bears Multiple Perspectives on Academic Proficiency

EMI is believed to be an assisting tool in enhancing academic proficiency providing access to a wider range of educational landscapes. It also helps the learners to access the educational resources and materials which are available on the Internet. The enhanced exposure to EMI fosters increased communication, and global perspectives, enhances better understanding and helps in keeping updated in this globalized world. EMI encourages the development of language skills.

In this concern, a teacher participant, T-1, with teaching experience of more than two decades has mentioned “Since we have adopted EMI, the flow of students is increasing every year and we have become able to give satisfactory results in BLE and SEE as well”. He further asserted that the students in his school are from multicultural and multi-lingual backgrounds, and English is the third language for them. So, they feel uncomfortable and awkward sharing things. He claimed that though the answers are known to the learners, they show an unwillingness to participate and share. He said, “No doubt, the medium has supported enhancing the better understanding and better results in English subjects, however, if we observe from a holistic perspective, this concept of EMI has limited proficiency in the Nepali language”.

T-2, a social teacher, opines that the medium of instruction can bring change in the way of thinking of the learners, as a result, it affects the learners’ learning outcomes. He asserted that in the previous years, ‘Social’ subjects used to be taught in English which could just give a surface knowledge to the learners that resulted in a low understanding of cultures, traditions and morale of the learners. He further articulated, "Thinking that students could get the real taste of Nepalese traditions mentioned in the 'social studies' book, the government made a policy to teach it in Nepali medium. We also have started to deliver the content by using Nepali. But just the opposite, the learners are found feeling it difficult to grab some of the words and can't express what they have understood". According to him, due to the medium of instruction, there has been a significant difference in the learning outcomes of the learners. He said that the learners seemed to be listening but when they were asked to express themselves either in written or spoken form, they felt it was difficult.

Another participant, a science teacher, T-3 said that the learners do not feel comfortable and are not able to grasp the basic concept of science due to the medium of instruction. She expressed, "I sometimes find it a bit difficult to clarify some of the concepts using English. In such cases, I make use of both languages to give my learners a clear concept. So, I think, the medium of instruction is hindering the potentiality of the learners in some cases".

One student participant S-1 has claimed that EMI assisted in developing her academic as well as linguistic proficiency. She said, "I always had a strong desire to be a fluent speaker like my English teacher. And I used to think that one day, I would be like her. But now, I realize that EMI helped me to achieve my goal. I regret that if we had used English not only as the medium of instruction but also as the medium of formal as well as informal communication, I would have been a better and more fluent speaker". With a confident voice, she said, "I am confident in the sense that I always secure good scores due to the opportunity to study in English medium".

EMI can significantly improve students' learning and English proficiency along with enhanced language skills (Cakir, 2018). The above-mentioned data reveal that EMI can assist learners in developing their academic as well as academic proficiency which depends on the desire, determination and motivation of the learners. Since English can be the medium of instruction except in the subjects which concern national identity (MoE, CDC, 2019), the study has given some evidence that the diversified multicultural and multilingual background of students whose first language is not Nepali, may struggle to grasp the concepts delivered in English (Ojha, 2018). The use of non-native language as a medium in the learning environment can create disengagement of the learners and can hinder the academic achievement of the learners (Poudel, 2017). It makes clear that there is doubt about getting the anticipated benefits by using EMI.

EMI and Cognitive Development of the Learners

EMI significantly contributes to the cognitive development of learners. By engaging with academic content in English, students are exposed to diverse perspectives and approaches, which stimulates critical thinking and enhances problem-solving skills. When the learners are exposed to a new language, they try to infer and translate the terms with deductive reasoning to understand, which means they begin to closely relate to the processing of the language (Tai & Zhao, 2022). EMI encourages students to analyze, interpret, and synthesize information in a language widely used in academia and the professional world, thereby strengthening their cognitive abilities. Moreover, the need to comprehend and communicate complex ideas in English fosters linguistic and cognitive flexibility, leading to overall cognitive development.

In this connection, T-2 articulated that they had an organization named EMBOCS, which assisted in the promotion of EMI in community schools by organizing training for teachers and several innovative programmes for the students which were very beneficial for the cognitive development of the students. In a similar connection, T-3 said, “EMI is considered more useful for those learners who have supportive parents at home, have access to the Internet and are proficient in English. By exploring themselves, they can be engaged in searching the things and thinking critically.” She opines that English should not be imposed forcefully as a medium of instruction since it could hinder the cognitive development of those learners who do not understand English well. T-3 shared that EMI makes learners able to compete in the global job market by fostering a sense of global competitiveness. She also asserted that the learners were developing their skills to explore things which is the credit of EMI.

The student participant, S-1 has mentioned that she is highly influenced by some of the teachers’ English fluency in her school. She shared that she used to think to speak in the same way as her teachers. She along with her friends used to practice speaking by trying to find new words and taking the help of the teachers to translate some of the Nepali words into English. Being enthusiastic she shared, “When we could do the given assignment by using only English language, we used to be very happy”. In line with the similar veins, another student participant, T-2 said that since he is from Magar ethnicity, he is fortunate enough to have proficiency and command over three languages. He believes that his proficiency will open up opportunities for jobs in the future. In this connection, one of the teachers mentioned that they must keep themselves updated due to the adoption of EMI in the school. To keep him updated he used to explore the Internet and make excessive use of a dictionary at home since he is a teacher from the Nepali language background. He claimed, “A teacher should be learner forever. Though it was difficult for me in the beginning days, it has helped my knowledge horizon".

The data reveal that EMI has assisted the cognitive development of individuals. When the learners are exposed to an English environment, they have to think actively to understand the contents and when they are assigned to perform any task they are involved in the mental process of critical thinking, planning, focusing, problem-solving, etc. as there is the positive relation between EMI and cognitive abilities of the learners (Jeon & Yamashita, 2014). The use of EMI can promote the cognitive development of learners by utilizing creative thinking and reasoning, problem-solving skills, critical and analytical thinking skills and so on (Baker, 2001; Wei, 2019) as the learners tend to think the things in an exponentially new language.

Teachers' Struggle Behind the Scene

Teachers are the source who create a safe learning environment in the classroom and engage the learners in learning. Sometimes, teachers have to face difficulty in delivering the content in English due to a lack of English language proficiency (Saud, 2020a).

In this connection, T-1, a primary-level teacher who graduated from Nepali medium of instruction opines that the teachers must be updated with the time. However, to fit in EMI, it was really difficult for those teachers who got an education in Nepali medium and were primarily appointed without any specific subjects in the primary level and with respective subjects in upper levels other than English. He said, "I am too, striving hard to manage everything despite having a strong desire to update myself". I requested him to share his efforts, giving him an option to share if only he felt safe. When I insisted, he shared, "As a teacher, I have to study far more than I was a student. Buying and keeping a dictionary and books at home, I used to read each and everything prior to the upcoming class, know the meanings of difficult words, write in the books and try to build confidence within myself. To prepare myself, I spent many sleepless nights studying at home, though I'm happy in the sense that the concept of EMI has given me opportunities for my self-development. People always blame the teachers but no one knows how a teacher invests extra time and effort to update oneself".

Aligning to this view, T-2 opines that if the learners do not understand what is being taught, the whole efforts of the teachers as well as the learners' attempts will be worthless. So, the choice of the medium of instruction should address the learners' ease and desires. That's the reason they are running both mediums in their school. He added, "We teachers have to be very cautious while designing classroom activities to ensure learners' participation and engagement otherwise we may fail in front of the learners".

In a similar vein, another teacher participant who graduated from an English medium-based school, T-3 says that she does not have any linguistic insufficiencies but her learners do. She strongly claimed that she could deliver the content by using English, but when her students seemed puzzled during the delivery and showed less engagement in the activities that disappointed her. She asserted that she had shared the problem with her staff, tried to change her teaching styles, encouraged the learners, even started to use English and Nepali both languages as mediums of instruction, and tried to explore the Internet to get new ideas from others and executed them however the situation remained the same. With a perplexed face, "Science is believed to be one of the most difficult subjects. After collecting several ideas, I try to deliver the content and engage my students in learning activities using English. When I teach, they understand the concept but when I ask them to express whatever they have learnt, they can't. This results in poor results, in which, I used to be blamed in society. Is it only my fault, mam?", she questioned me.

The analysis of the data reveals that the use of non-native language as a medium in the learning environment can create disengagement of the learners and hinder the academic achievement of the learners (Poudel, 2017). Due to the inadequacy of English language proficiency of some language teachers, they are facing difficulties in delivering instruction through the English language which can lead to unclear explanations, limited teacher-student interaction, and less engagement which ultimately hinders the learning outcomes of the learners (Poudel, 2017). In some cases, EMI seems to be a burden for some teachers who are from Nepali language backgrounds (Saud, 2020a).

Challenges and Sustainability in Multilingual Background

EMI can be particularly challenging for learners with a multilingual background. Navigating academic content in a non-native language requires a high degree of linguistic dexterity and adaptability. The cognitive demand of processing complex concepts in English alongside managing multiple languages can be daunting. However, with perseverance and strategic language support, students can overcome these challenges and reap the cognitive benefits of engaging with EMI.

Regarding the challenges and sustainability of EMI, T-1 emphasized the preparation and implementation of a plan, policy and programme with a long-term vision as a crucial aspect. In this connection, he asserted, "Without preparing any sustainable policy and without prior plan and strategies, we can't give the expected results, which become true to us as well". He mentioned that they had started to implement EMI without any strategic plan, so they had felt difficulties in managing infrastructures and faced a scarcity of human resources which resulted in difficulty in obtaining expected results. As both mediums have been run in both of the schools, there is a vast difference in the number of students in both mediums. The number of students is said to be very low in Nepali medium classes in comparison to EMI-based classes. Regarding the learners, they seem to be happy to get quality education at free of cost but still, they are not able to meet the targeted goal.

T-2 said he didn't believe that the medium of instruction hinders the learners in language proficiency. He highlighted, "Our ancestors also had command over several languages, so why can we not? But supervision is needed for us". He stressed that learners must have proficiency in English since it is a widely used language. Regarding the challenges, T-3 mentioned the diverse level of the learners, the proficiency level of the teachers, and multicultural and multilingual backgrounds are hindering the effective implementation of EMI.

Due to the pressurized demand of the parents, the medium of instruction has been shifted to English and EMI has been implemented in Nepal without any careful planning and necessary preparation (Ojha, 2018). Though the policy doesn't have any comprehensive plans for supporting the schools to implement EMI (Khati, 2016), the schools are striving to address the emerging demands of changing society by adopting EMI. Moreover, careful planning and vision are needed for its sustainability.

EMI and Future Prospects

While exploring the perception of the student, S-1 believes that the students have double benefits if they study in EMI-adopted public schools. She articulated, "There is a high chance of obtaining scholarships if we study in public schools and second, we do not have to pay much to get quality education here, and we also can get job opportunities as we have become able to search advertisements which are published in English and apply there". The analysis of the data obtained from S-2 reveals that the students can develop their English proficiency if their medium of instruction is English. She said, "We can easily communicate in English, so, if we want to go abroad, it may help us". Giving stress to the prospects and the need to develop teachers' competency T-1 said that the implementation of EMI has provided the teachers a platform to develop professionalism. T-3 claimed, "By using technology, we have to update ourselves, there are several ways of self-directed learning, just, we just have to have the desire to strive to be updated". Giving concern to the prospect for the learners, she added that those learners who are competent in English can get several opportunities in their higher studies as well as the job market so, the learners' base should be made stronger and they should be encouraged to use English while communicating formally and informally as well. She stressed the need to develop the competency of teachers as the teachers must be able to create a supportive and inclusive learning environment by adapting innovative instructional strategies to address the diverse linguistic backgrounds of the learners.

The expression of the learners exhibited the foreseen opportunities that she could grab because of her achievements and proficiency obtained in the EMI-based public school. Moreover, students have a strong belief in getting better job opportunities in the national as well as international job market if they study in an English Medium school. Thapa (2016) asserts that making graduates able to get jobs in the national as well as international markets is the main reason for adopting EMI. While examining the perceptions of the teachers on EMI in Nepalese public schools, there is a demand for EMI due to its perceived economic benefits in the future (Mahara, 2023).

Conclusion

In the Nepalese educational setting, EMI is undoubtedly one of the emerging and growing phenomena that is thought to be able to open up the doors of opportunities in Nepalese public school landscapes. The study shed light on the present scenario of EMI in Nepalese public schools. The adoption of EMI is found primarily driven by increasing demand from parents and the desire to provide quality education through EMI in public schools. There is a perceived advantage in studying in public schools with EMI, such as the potential for scholarships and access to quality education at lower costs. Teachers are facing challenges in transitioning to EMI, especially those who were primarily educated in Nepali medium and experienced limited support for professional development. Student engagement in EMI classrooms seems to be impacted by the students' multicultural and multi-lingual backgrounds, with some expressing discomfort in participating in classroom activities though they are found to be satisfied with the achievements and prospects resulting from EMI-based school. Only very few numbers of students are in Nepali mediums.

The study's key insights could inform policymakers and educators about the effectiveness of EMI programmes in rural settings, considering the specific challenges and potential benefits. The need for additional support like teacher training in English language acquisition methods, or providing supplementary resources in the local language. Alternative approaches, such as bilingual education programmes, balancing the need to learn English with maintaining students' connection to their native language and culture are crucial. By examining the challenges and prospects of EMI in rural contexts, the study can contribute to developing more effective educational strategies that promote both English language acquisition and strong academic performance for all students, regardless of their background. Most importantly, Nepali mediums seem to be on the verge of extinction, visionary plan is to be made. Further quantitative study can be done by covering a larger area to explore more.

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Teachers' Perceptions and Practices of ELT Pedagogy in Nepali Secondary Schools

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Abstract

The pedagogy of English language teaching has undergone a significant shift in recent times, reflecting the global trends favoring communicative and student-centred approaches. This qualitative research study aims to explore the perceptions and practices of English language teachers on ELT pedagogy in Nepali secondary schools. The participants of this study were purposively selected four English language teachers who teach at the secondary-level in public schools in Kanchanpur district, Nepal. I used interview protocols and class observation notes for the collection of data and the data were analyzed through thematic analysis. The findings of the study showed that secondary-level English language teachers have been shifting their pedagogical practices from traditional teacher-centred approaches to modern innovative approaches. The study also revealed that English teachers employ mixed way of pedagogy of methods and techniques, and translanguaging as a medium of instruction in the classroom. The implication of the study is that English language teachers need to focus on student-centred pedagogical approaches in their real teaching practices. They have to create more English-learning activities in the classroom to keep the students motivated and engaged in learning so that they get more learning and practising opportunities.

Keywords: English language teaching, observation, student-centred, translanguaging

Introduction

English language is often perceived as being very important in relation to global communication. In Nepal, English language teaching is an essential part of educational system from school level to university level, emphasizing the significance of the language for both local educational achievements and international communication. Proficiency in English is a necessity for students to obtain higher education and better employment opportunities both nationally and internationally. As a result, there is a great emphasis on creating effective ELT programmes and pedagogical strategies in secondary schools to increase students' competence and performance in English. This emphasis also aligns with broader goals of education and nation's efforts to enhance its competitiveness in the global marketplace.

As ELT pedagogy has shifted world widely towards communicative and student-centred approaches to learning, Ministry of Education, Nepal has also implemented communicative language teaching as teaching methodology since 1995 and has emphasized on learner-centred pedagogy (Tin, 2014). Similarly, Secondary Education Curriculum of English (2014) prioritized promoting child-friendly learning facilitation and stated that teaching strategies should meet different learning needs and scaffold students' learning so that they develop and consolidate the required knowledge and skills. Teaching of English language, in this sense, has been given due priority regarding instructional strategies to be made learner-centred in Nepalese school education curriculum. The recent Secondary English Education Curriculum of Nepal (2021) also aims learners to be able to communicate with confidence in the English language and states that the primary focus of learning English is for communication for which it suggests that "an English class should provide a rich and responsive learning environment with lots of real life communicative activities" (p. 49). It further states that "students should be given maximum exposure to the target language with a variety of written and spoken texts, for this, the teacher needs to provide students with the opportunity to learn English by speaking and by providing a language-rich environment" (p. 49). Similarly, National Curriculum Framework for School Education (2019) has also emphasized the adoption of student- centred teaching methodology in its strategy to implement newly devised curriculum. It has emphasized techno-friendly, project based and participatory teaching learning. It says that use of participatory, interactive, exploratory, practical and problem-solving teaching methods should be used for classroom pedagogy for result oriented learning (SSRP, 2021-2030). These curricular provisions of English language teaching pedagogy at secondary level provide a guideline to adopt student-centred pedagogical approaches in classrooms.

Recent developments in the field of language teaching and learning have modified teaching-learning styles and have made a paradigm shift in second language teaching and learning. Due to the drawbacks of traditional approaches to teaching, there is a noticeable change towards more interactive and communicative pedagogical strategies (Bhattarai, 2021). In this context, Bastola (2021) asserts, "there has been a paradigmatic paradigm shift in techniques and methodologies of teaching" (p. 45). These academics' assertions suggest that there have been significant changes in pedagogical methods and approaches over time. These changes include the use of communicative language teaching, problem solving techniques, content and language integrated learning, collaborative teaching learning that involve and engage students in task-based learning, role playing, presentations, discussions as well as other meaningful activities and provide them various learning opportunities to use the language in real-life contexts (Richards & Rodgers, 2014). These innovative pedagogical approaches not only enhance students' language proficiency but also develop critical thinking and collaboration among them (Thapa, 2021). These approaches also promote Vygotsky's ideas of collaborative learning environment and student-centered teaching-learning in which students actively participate in collaborative learning and problem-solving tasks (Zhou & Brown, 2017). Vygotsky emphasizes that social interaction (classroom teaching) and peer collaboration in learning in the classroom enrich students' linguistic and communicative competence. He states, "A teacher or more experienced peer is able to provide the learner with 'scaffolding' to support the student's evolving understanding of knowledge domains or development of complex skills" (1978, p. 85). This assertion suggests that, students construct meanings and understanding, and develop individual learning when they involve and engage in interactions and activities with peers and groups in the classroom.

Despite the significant changes and innovations in English language teaching pedagogy world widely, ELT pedagogy in Nepal has still been encountering with several challenges. Bhandari (2020), in this context, states "many English language teachers are still using solely the text books and grammar-translation method for teaching and learning English" (p. 10). Similar to the context, Bashyal (2018) states "many teachers are still applying traditional grammar translation method, teacher centered techniques and activities like question- answer, demonstration, drill and dictation" (p. 229). These classroom pedagogical methods and techniques focus on rote learning, explicit grammar teaching and translation of texts and exercises, which impede students' ability to use English in real-life communication and high order thinking (Harmer, 2015). Scholars have also identified a number of disparities like mismatch between curricular objectives and classroom practice, training inputs, professional skills, technology access, etc. In this context, Gnawali (2018) asserts that, "there is mismatch between training input, ELT methodology books and classroom reality" (p. 263). In line with the same, Bashyal (2018) states that, "the practice of ELT methods and techniques in Nepalese classrooms is not compatible with the curricular expectation of developing communication skills" (p.

229). Likewise, Duwadi (2018) elucidate the situation that the outcome of teaching and learning English cannot achieve the expected curricular goal, developing communicative competence in the language because Nepalese learners lack sufficient practice in speaking and at the same time there is no proper balance among all language skills in classroom practices (p. 182). Similarly, Sah (2015) states "Nepalese EFL teachers do not often seem to find themselves professionally skilled and are also not given opportunities for professional development" (p. 17).

Based on the above mentioned assertions of scholars that report Nepalese secondary level ELT pedagogy under the satisfactory level, and based on my own experience of teaching English for years to the students of undergraduate level who come with very poor basic knowledge in English, I am concerned that many of the teachers teaching English at secondary level are not employing student-centred pedagogy properly in their classroom practices. In this despicable condition of Nepalese ELT pedagogy and globally evolving teaching trends, it requires a thoughtful approach to address these challenges, and integrate modern innovative and engaging pedagogical strategies that could ensure students' learning of English. Considering the significance of the issue, the purpose of the paper is to explore the present ELT pedagogical practices in Nepalese secondary schools, with a focus on how English language teachers perceive and practice pedagogical approaches and methods in their classroom teaching.

Methods and Procedures

This is a qualitative narrative study based on primary information. In order to explore the perceptions and practices of ELT pedagogy, the researcher selected four English language teachers from four different public schools of Kanchanpur district, who have been teaching at secondary level for more than ten years. I selected Kanchanpur district, Nepal as a research site and four schools from different locations on the basis of convenience in data collection as I belong to the same district. I employed purposive sampling procedure to select participants from the research site. The rationale behind purposive sampling of participants depends entirely on the researcher's subjective judgment, putting the study's purpose into consideration. Likewise, to maintain the gender equality among participants and to get representative data from the participants, I selected two male teachers and two female teachers so that the data obtained from them could be more reliable and trustworthy. For the purpose of collecting data for research topic, I designed a flexible, informal, in-depth narrative interview protocols that included a number of open-ended questions. Likewise, taking the consent from the school administration and research participants, making them assured for privacy and secrecy of the audio and video records, I collected the data by observing real classroom teaching of research participants. I met the participants in person and took their interview. Before taking interview, I took permission from them to audio record their voices. To make it easier for them to share their experiences openly, I conducted the interview in Nepali language and later transcribed the audio records into printed form and translated transcriptions into English language. After transcribing and translating all data into English, I read and re-read the data several times to generate the themes. Based on the purpose my study, I organized the data into different themes. I triangulated the data obtained from interview and class observation to make the research findings more trustworthyand reliable. Finally, I analyzed and interpreted themes based on the process of thematic analysis developed by Braun and Clarke (2006): familiarizing the data, coding, generating themes, reviewing themes, naming themes and writing up, aligning with the research purpose of exploring perception and practices of ELT pedagogy of secondary English classrooms. As ethical considerations are inevitable in social science research studies, the researcher maintained and followed all necessary ethical and quality standards during every step of the study process, from data collection to interpretation.

Results and Discussion

Data collected using in-depth open-ended interview and class observations were analyzed and interpreted under the following three main themes.

Shifting from Traditional to Modern Innovative Learner-Centered Pedagogy

Generally, shift in pedagogy denotes a change in teaching learning process. On the basis of the role the teachers play and the way they present their class teaching, they are categorized as traditional pedagogy and modern innovative pedagogy. The traditional pedagogy is teaching of content and teacher-centered whereas modern innovative pedagogy creates learning opportunities for the students, therefore, is called student-centered, in which a teacher plays the role of a facilitator, a guide in the classroom. The traditional pedagogical approach emphasizes one way teaching of explaining the content from the part of the teacher where students become passive listeners in the classroom which Lyer (2013) states "Docile and Obedient Bodies" (p. 171). But, student-centered pedagogical approaches provide enough learning opportunities to the students in the classroom. In this context, my teacher participant Krishna recalled during his interview, about the way he was taught in his schooling. He stated,

> Teachers used to be mostly active and students used to be inactive/ passive in the classroom. It was one way delivery of messages like someone was delivering speech in front of the class.

This statement of Krishna indicates that teachers employing this style of teaching lack to consider the interests and learning needs of the students deprive them from opportunities for learning in the classroom. And teachers continue to have central role in traditional pedagogy. Similar to Krishna, Binita said,

> When I first started teaching, I used to explain content in the class. I wanted to keep the class silent and if any of the students spoke there, I used to scold them. Finishing the course in time was primary job of the teachers what I also used to do. However, in more recent years, I have modified my teaching style. Though there is noise in the class, I let the students speak freely in the the classroom and attempt to make my class student-centred.

This story of Binita demonstrates that English learning environment during her initial years of career was not student-friendly. As she shared, she made the use of GT method for teaching English in her classrooms. Her story also indicates that her years of experience of teaching brought transformation upon her that she started employing student-centered pedagogy in her classrooms. In the very context of shifting pedagogical approaches Dikshya narrated that,

> During my earlier teaching career years, I used to explain content in students' mother tongue language, providing them bilingual word lists, making them write answers of questions given in the text, giving home works, etc.

Dikshya's story also indicates that she learnt pedagogical approaches from her experience and modified her way of teaching. Similar with the context Deepak, another research participant, stated,

> I realized that I was not considering and addressing students' learning needs and interests in the class. Noticing it, I changed my teaching style and started focusing on students' learning.

The story of Deepak also shows that he brought transformation in his pedagogical style learning from his years of experience in teaching. These above mentioned stories of research participants demonstrated that long-term practice and experience in the same field of teaching brought perceptual and attitudinal change upon them and their teaching style (Prettyman, 2018). Their stories also showed that shift or change occurs from one's own experience as they shared they have shifted their teaching from traditional mode of teaching to student-centered teaching as Mezirow (1996) states that learning is understood as the process of using a prior interpretation to construe a new or revised interpretation of the meaning of one's experience in order to guide future actions.

I observed real teaching of research participants to verify whether the data in interview match with their real classroom teaching. As he entered one of the participants Binita's class at grade nine,

> She taught the lesson "Surprising Customs" on the day I observed her class. She started the class asking a few title-related questions to the students randomly. Some students answered, some attempted to answer and majority of students remained silent.The discussion happened for a while in the class in the initial phase.She attempted to involve students in interaction. Then, she explained the concept meaning of title and further asked a student to read the first paragraph, while reading she facilitated the student.Then she discussed on new vocabulary of the paragraph and moved ahead and explained the concept of the paragraph. She asked some questions related to the paragraph while explaining. Similar to this, she concluded her lesson.

Although Binita made good effort to involve students in teaching learning activities, most of the activities were simply of interaction in the form of question-answer and reading. As students read the passage they needed support and guidance in pronunciation and word meanings what Vygotsky called 'scaffolding' in learning. Vygotsky (1978) says, "The teacher or more experienced peer is able to provide the learner with 'scaffolding' to support the student's evolving understanding of knowledge domains or development of complex skills" (p. 85). In the classroom, Binita helped her students wherever they needed assistance. However, she took her more time in explanation. I observed the real teaching of another participant Krishna who also found employing similar like practice of teaching in his classroom. As I entered his class,

> He was teaching the topic 'Sky Burials' under teaching unit 'Customs and Culture'. He initiated his teaching with asking some questions and clarifying the title meaning. Further, he asked one of the girls to read the paragraph and facilitated her during reading. Then he discussed on difficult word meanings and try to elicit their meanings from the students, and during explaining the concept of the paragraph, he interrogated with students which made the class interactive.

This observation of Krishna's class showed that English language teachers in the classroom are making efforts to involve students in teaching learning activities. Due to different reasons, they are limited to a few activities like interaction in the form question-answer, reading activities. Students, most of the time, found silent in the classroom and teachers were found practicing traditional teaching techniques like explanation, translation, etc which hinder students ability to use language in real-life context and high order thinking (Harmer, 2015).

Further, as I observed the real class teaching of Dikshya and Deepak, I did not find much difference in their pedagogical techniques, too. They also, except slight difference in process during teaching, made the use of explanation more in the classrooms. Student-centered techniques were used in limitation only. For example, in Dikshya's class, I found teaching word meanings like 'bury' means 'khaldo ma gadnu'. They were found attempting to involve students in some activities but in random way which does not make students compel to participate. This indicates that teachers have knowledge of how to involve and engage students in the classroom but they are not keeping much concern of their participation. These all interviews and class observations of research participants demonstrated that they are currently in transitional phase of pedagogy. Since experience is transformed to develop knowledge (Kolb, 1984), the pedagogical shift research participants underwent within self.They have adopted student centered teaching approaches in their minds. However, in practice, they were found still more on teacher-centered teaching, and making efforts to employ student-centered teaching in their classrooms. Though they were confined to few teaching learning activities in their classrooms, they attempted to involve their students in teaching-learning activities. In this sense, paradigm shift in ELT pedagogy is still in evolving situation and hasn't fully permeated in Nepalese classrooms.

Integration of Pedagogical Methods and Techniques

In recent years, there has been a significant change in pedagogical approaches and methods. New and innovative techniques have been developed to enhance learning effectively. These innovative approaches and methods focus on engaging students and making learning more interactive and relevant to the real world situations. As a result, English language teaching also shifted from traditional way of teaching about language to modern language teaching learning status. Teaching methods emerged one after another claiming itself the best one for classroom pedagogy. If we go through the history of language teaching methods in foreign language teaching context, along with Grammar translation method, there can be seen several methods emerged and practiced one after another in different time period and situations, but no method could sustain for long time without any alternates. In this context, Richards and Rodgers (2014) aptly remark that "the history of language teaching in the last hundred years has been distinguished by a search for more operative ways of teaching the second or foreign languages" (2014, p. vii). So, language teaching field has been utilizing and experimenting newly emerging methods and techniques.

Since the single method of teaching cannot meet the demands of the class in terms of learning because prescribed methods and techniques impose theories on teachers and students instead of providing them freedom and autonomy. In this context, one of the research participants Binita talked about how she found it challenging to meet the objectives of her teaching when she employed a specific method of teaching. She said,

> In my early teaching career years, I spent a lot of time to using lesson planning. I used to make written lesson plans based on specific teaching methods but was unable to achieve objectives of teaching. I realized that I could not consider the learning needs of the students. Therefore, these days while teaching in the classroom, I do not follow any particular method. I use teaching techniques from different teaching methods according the need of the class.

The story Binita demonstrated that teachers cannot compel students to learn without considering their learning needs and classroom environment. She further added, “the classroom teaching strategies should be determined on the basis of how students understand.” In this context, another research participant Krishna told that “situations in the classroom demand the way of delivery and in my opinion using single teaching method teachers cannot deal with the immediate situations of the classroom.” Krishna’s opinion emphasizes on not to being rigid regarding pedagogical methods in the classroom because no method can be appropriate for every student and situation. In this context, Banjade (2020) states, “the need for more efficient practice in ELT has triggered a shift away from searching out a perfect one-size-fits-all teaching method towards focusing on certain learners in particular backgrounds” (p. 9). Similar to this, Bhandari (2021) argues that,”a method that works best in one context may not work effectively in other contexts, a teacher should select methods and techniques that are contextual and culture-sensitive” (p. 4). The experience of research participants and the arguments of scholars indicated that ELT teachers need to be skilled to determine teaching methodology according to the situation and students’ linguistic and cultural background and status.

Regarding employing classroom pedagogical methods, Deepak stated, “I mainly think about how students learn and always make efforts to make them learn.I use techniques from CLT, GT method, TPR, CLL, problem solving, etc.” Similarly, Dikshya said that she modifies her ways of teaching on the basis of immediate classroom situation and learning speed of the students. She stated,

> While teaching, I acknowledge the students’ speed of understanding and learning. If they feel complexity to understand me, I change my way of teaching. To make students understand the subject matter well, if I have to use Nepali and other languages in the classroom also, I use sometimes as necessary.

The experience of Deepak and Dikshya demonstrated that they have been employing pedagogical methods in their classrooms in their own way. Their experience also showed that to deal with the immediate classroom situations integrated form of pedagogical methods become more easy and comfortable. In this context, Richards and Rodgers (2014) state "as the teacher gains experience and knowledge, he or she will begin to develop an individual approach or personal method of teaching and adds, modifies and adjusts the approach or method to the realities of the classroom" (p. 251).In this way, the research participants of this study from their years of experience in teaching career, found practising classroom teaching methodology in blended way.

Regarding methodological practice in the classroom, I observed participants real class teaching to find out how they employ delivery methods in the classroom. As I noted in Binita and Krishna's class, they made the class delivery almost in the same way. They made the class interactive through interrogation, gave conceptual meaning through explanation, teach vocabulary using translation to students native language, involved students in reading activity, etc. While teaching, one process I minutely noted in Binita's class that she wrote some difficult vocabulary from the paragraph with their meanings on the whiteboard and instructed students to note down.Then she just read out meaning of words, told their meanings in Nepali and moved further. Similarly, the researcher noted one interaction from Krishna's class,

T: Why our cultures are important?' 'hamra sanskritiharu kina mahattwapurna hunchhan?
Ss: No reply
T: kinaki 'cultures are our identity', 'hamra sanskritiharule hamro parichaya dinchhan.
T: kina important raichhan?
Ss: hamra sanskritiharule hamro parichaya dinxan'.
T: Our cultures give our identity.

In this interaction, though the teacher encouraged students to speak English, students very rarely spoke English. With the similar way of discussion he made interaction in the class.

Furthermore, I observed real class teaching of Dikshya and Deepak to verify whether articulation in interview matches with their classroom practices. As noted in Dikshya's class, she started her teaching from questioning; asked questions, explained title meaning and later text meaning, gave word meanings mostly in exact translation like 'bury' means *'khaldo ma gadnu',* asked to read the text, etc. She attempted to make the class interactive but only by asking them questions. Similar to other research participants, Deepak also made the use of pedagogical methods in his classroom. He made the use techniques like explanation, translation, interaction, discussion, elicitation, reading aloud, interrogation, facilitation, etc. during his teaching in the classroom which are related to different teaching methods. In Deepak's class, one, more traditional way of teaching the researcher noted was, line by line translation of text in Nepali during teaching paragraphs.

In this way, all teacher participants' class observation result shows that they are flexible in terms of using teaching methodology especially regarding the use of students' native language and employing a blended way of teaching i. e. using teaching techniques from different methods, but more or less they are still in teacher centered and traditional Grammar-translation method based teaching therefore their claim of using learner centered teaching only partially meets with their classroom practices.The findings regarding teaching methodology match to the findings of Tiwari (2021), as he asserts "teachers often dominate, control and initiate teaching to create interaction in the form of short textual questions" (p. 384), the participants, in this study, too, found practising similarly. In this sense, in Nepalese context of ELT pedagogy, teachers have adopted student-centered teaching approaches in their minds but in real practices they are in-between teacher-centered teaching and student-centered teaching, and using techniques in a blended form from traditional and modern innovative teaching methods.

Translanguaging as Medium of Classroom Delivery

Translanguaging is an innovative classroom pedagogical approach which adopts and gives space to students' native languages in the classroom during teaching to incorporate them into teaching learning activities. Cenoz and Gorter (2021), in this context, state that "pedagogical translanguaging is a theoretical and instructional approach that aims at improving language and content competences in school contexts by using learner's whole linguistic repertoire" (p. 1). Similarly, Williams (1994) asserts that "translanguaging maximizes learner's and teachers linguistic resources in the process of problem solving and knowledge construction" (cited in Li, 2017, p. 15).According to Sah and Li (2020), translanguaging creates a dynamic hybrid and flexible space of language use (p. 2). The scholars' arguments indicate that translanguaging in the classroom has been taken positively during teaching. In this context, one of the research participants of this study Binita stated, "when I use Nepali or students' native language in the classroom during teaching they become happy and say that they understand the subject matter well." Similarly, Dikshya, the another research participant said, "during teaching if we use English only, students say, they understand nothing and then we become compel to use Nepali and other students' native languages." These statements of Binita and Dikshya indicated that students feel easy to understand the subject matter if their native languages are used in the classroom during teaching. Similar to their experience, Larsen-Freeman (2000) states, “The native language of the students is used in the classroom in order to enhance the security of the students. She further states, “It is used to provide the bridge from the familiar to unfamiliar and to make the meaning of the target language” (pp. 101-102). In this context, the research participant Krishna shared his experience of using students’ native language in the classroom. He mentioned,

> Most of the studentsafraid of English subjectbecause of their weak base in it. They hesitate to speak and do not want to take part in teaching learning activities. Their poor base makes us compel to use Nepali and other their native languages in the classroom during teaching.

The experience of Krishna indicated that students feel comfortable to take part in teaching learning activities if they are allowed to speak their mother tongue in the classroom. His narrative also indicated that according to the need of the class, students’ native language has to be used during teaching. Saud (2023), in this context states that “translanguaging serves as a translation tool to reinforce classroom instructions so that students can better understand the instructions” (p. 71). Similar to the context, Tiwari (2020) states that, “if L1 is used judiciously, there is no harm; it helps develop students’ participation in interaction” (p. 91).

Different scholars have argued in favor of using students’ native languages in the foreign language teaching classrooms that supported the experiences my participants shared with me. They stated that students feel more secured and confident with their first languages in the classrooms and that also facilitates their learning better and fast in comparison to English-only medium of instruction. Sharma (2023), in this context states that “using home languageimplies the need for alternative use of English and home language when the English-onlyinstruction could not be conversational and affecting to the students due to itsunintelligibility to them either due to their low proficiency level in English or the inherentdifficulty of the content required to be understood” (p. 203).In the context of using students’ L1 in the classroom during teaching, Dikshya shared her experience. She stated,

> Because of weak competence and performance in English,some, very rare number of students only show their interest for taking part in activities. Therefore, to make students understand the subject matter well and make them participate in learning activities I use sometimes Nepali and other languages in the classroom.

Dikshya’s experience pointed out that students having weak base in English need scaffolding through their native language use which motivates them towards learning, and encourage them to involve in teaching leaning activities.Their native language has to be included during discussion and/or interaction in the classroom otherwise they remain silent in the class. Similar to Dikshya, Deepak also shared his experience in regards to students L1 use, in the classroom. He said, “our students’ basic knowledge in English is so poor. So, we need to explain the concept in their mother tongue (Nepali, Doteli, Tharu, etc.), otherwise they do not understand well.” Deepak’s view also indicated that students remain in need to be facilitated through the use of their native languages in the classrooms to enhance their learning.In this sense, the research participants’ experiences regarding L1 use in Nepalese context of ELT pedagogy signaled towards translanguaging as medium of instruction.

To verify the interview data with their real practice in the classroom, I observed the class teaching of research participants. Regarding the medium of instruction, as I noted in Binita’s class, from the initiation of the class, she made the use of English and Nepali languages simultaneously. While teaching vocabulary first she told its meaning in simple words in English and then translated the word into Nepali. Similarly, during teaching paragraph also, first she explained in English and then same thing she told in Nepali. For example, she was teaching and clarifying the concept of surprising customs in the class; she did like this, “every society has different customs, *harek samaj ya samudayaka aafna aafna customs, cultures or ceremonies hunchhan, ritiriwajharu hunchhan.”* During whole time in the class, she used both English and Nepali as medium of teaching.

Similarly, as I noted in Krishna’ class, He explained like this, ‘Sky Burials’ is one of the ways of permeation of dead bodies of Tibetan Buddhists. Permeation means? Students replied: *dahasanskaar*. Tibetans Buddhists *haru k garchhan vane* dead bodies *lai euta dadomalagne,* cut into pieces and leave there. Vultures*harule khaun vanera chhodchhan*. That is their death permeation. *Jastai hamile kasko death ritual dekhyaxaun ta?*in our culture?, in our society? What is our death permeation? Ss replied: *polne, jalaune*. T: yes. We put the dead body in the fire. Fire means? Ss: *aago, chita,* T: yes. Then we wear white clothes *seto luga lagauchhau,* that is our death rituals. *Tyasaigarera* Sky Burials *pani euta* death rituals *ho*. With the similar practice, he taught new vocabulary and concept of the paragraph, as well.

Furthermore, I observed the real class teaching of Dikshya and Deeepak to verify their interviews with their classroom practicing. They were also found practicing English and Nepali in their classrooms. As noted in Dikshya’ class, she, while teaching vocabularies from the book, asked question, ‘what is atmosphere? Students replied: *vayumandal*. She asked Ecosphere means? She herself answered: *prayawaran, watawaran*, that we find up to four thousand meter from the sea level. Then she asked ‘hydrosphere’ means? She herself said, layer of water, you can see in the picture, its blue, *nilonilo chhani*. Similarly, I noted in Deepak’s class as he asked, what is the meaning of title words surprising? No students replied. He himself answered, ‘ the things that are wonderful *achamma lagne chalchalanharu,* customs means traditions, cultures/ *ritiriwaj/chalchalan.* Students also replied the same. Further, he made the students read the paragraphs. When they finished reading, he himself also read and explained the concept. He did more on line by line translation. He asked, ‘is there any unique custom in your culture?’ *Tapaiharuko samudayama kunai tyasta achammalagne khalka customs haruchhan?.* In this way, Deepak also found using students’ mother tongue during his delivery of content in the classroom.

The above mentioned observation results vividly showed the teaching learning events/process of the classroom utilizing English and Nepali as medium of instruction. Though teachers couldn’t’ express openly during interview that they use both languages, they only said they use students native language sometimes according to the need in the class. But observation showed that they made use of both languages around equally. One thing I felt during observing was that, in some contexts, teachers made use of Nepali language without finding the necessity of using it and/or of students’ need. They often used Nepali language as Tiwari (2021) asserts “to convey the meaning quickly to the students” (p. 380).In this way, our secondary ELT classrooms have been employing translanguaging as medium of instruction.

Conclusion

This research study aimed to explore the perceptions and experiences of English language teachers about ELT pedagogy in Nepali secondary schools. It also attempted to examine the pedagogy teachers employ in their real classroom practices. The study found that English language teachers have been shifting their pedagogical practices from traditional teacher-centred ways of teaching to innovative learner-centred teaching. They have adopted student-centred teaching approaches in their minds but in practical, found still practicing many teacher-centered techniques in the classroom. They were found having positive attitude of employing student-centred pedagogy in their classrooms but challenges like students’ poor English base, lack of proper seating arrangement and lack of technological access and facility hamper them implementing learner-centred pedagogy. Therefore, student-centered classroom practices were found with very limited activities and concern. The study also revealed that English language teachers of secondary-level employ classroom pedagogical methods and techniques in integrated/ blended form i.e. techniques combined from traditional teacher-centred and from new methods. The study further revealed that secondary-level English classes are employing translanguaging as the medium of delivery in the classroom. It showed that teachers and students both made the use of Nepali and other students’ native languages more than necessary during teaching. This study, in this way, explored the mismatch between participants’ perceptions and practices regarding ELT pedagogy.

As the study found mismatch between perceptions and classroom practices, it suggests English language teachers that they need to focus and work hard to implement student-centred pedagogical approaches in their real teaching practices. They have to create more English-learning activities in the classroom to keep the students motivated, active and engaged in learning so that they get more learning and practicing opportunities. English teachers also need to modify and adjust their real teaching practices to address the necessity of students individually as well in the classroom. This research study has some limitations like; it is a small-scaled study, confined to only four English teachers of public secondary schools of Kanchanpur district, Far Western Region of Nepal. The study employed only interview protocols and class observation for the collection of data. Therefore the generalizations of the results may not be applicable in every situation across the country. However, the English teachers of secondary-level could find the study insightful. Similarly, the study could be helpful and beneficial for the researchers who wish to conduct research on classroom pedagogy.

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Optimizing Reading Instruction through Flexible Grouping Practices

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Abstract

This study investigated the teachers' perceptions and effectiveness of various grouping practices in reading instruction within school classrooms. Employing a qualitative case study design, data were collected through classroom observations, semi-structured interviews and document analysis with three participating school teachers. These multi methods not only enrich the data but also strengthen the trustworthiness and credibility of findings to explore complex phenomena of grouping providing depth, contextual understanding and systematic data collection. Thematic analysis, involving coding, categorizing and identifying themes, was used to analyze the data. The study revealed key insights regarding the implementation and perceived effectiveness of grouping including increased student engagement, targeted skill development and opportunities for collaboration. However, challenges were also identified, such as time constraints, the need for adapting instruction within groups and managing student behaviour during group work. Therefore, careful planning and implementation are crucial to address potential challenges. Further research can provide educators with a more comprehensive understanding of the potential and limitations of flexible grouping in fostering successful reading development.

Keywords: Whole-class, small-group, pairs, one-on-one, benefits, challenges

Introduction

Effective reading instruction is a crucial aspect of school education as it lays the foundation of academic success. Classrooms are inherently diverse, with students displaying a range of reading abilities and learning styles (Dhakal, 2021). This raises the challenge for educators to provide targeted and differentiated instruction that caters to each student's individual needs. Effective reading instruction is essential for student success in all academic domains. One promising approach that has gained significant attention in addressing this challenge is instructional grouping to respond to students' needs (Tomlinson, 2014).

Grouping for reading instruction is a pedagogical strategy that involves organizing students into various groups based on certain criteria such as ability, interest, or instructional need (Fountas & Pinnell, 2012). It can take various forms, including whole group, small group, pair, and individual instruction (Dhakal, 2021; Tomlinson, 2014). Each format has its own set of advantages and challenges, and the effectiveness of each can depend on the specific educational context and student needs.

Grouping is employed for various reasons, as evidenced from the literature. One reason is the potential for improved reading outcomes (Serravallo, 2010). Teachers can adapt their teaching methods, materials, and pacing to better meet the diverse needs of their students by organizing students into groups (Tomlinson, 2014). This personalized approach can lead to improved reading comprehension, fluency, and overall literacy development (Deunk et al., 2018).

Homogeneous grouping, where students are grouped by ability, has been associated with slightly higher reading growth, particularly when considering students' initial reading skills and group placement (Patrick, 2020). Moreover, grouping can foster a sense of community and peer support within the classroom. When students are grouped with peers of similar abilities, they can engage in collaborative learning activities, share strategies, and provide feedback to one another (Fountas & Pinnell, 2012). This collaborative environment can significantly enhance the learning experience and promote a positive attitude towards reading. Similarly, alternative grouping formats, such as student pairs and small groups, have shown positive effects on reading outcomes for students (Serravallo, 2010). Moreover, smaller group sizes are highly effective for supplemental reading instruction (Vaughn, 2003). The choice between them may depend on specific educational goals and classroom dynamics. While small group instruction may excel in providing differentiated support and fostering collaboration among multiple students; paired reading offers personalized peer support that can boost confidence and enhance communication skills through direct interaction between two students. Additionally, differentiated instruction based on students' interests, learning styles, and grouping orientation significantly improved reading comprehension and engagement (Tomlinson, 2017).

It is important to note that the implementation of grouping for reading instruction requires careful consideration and planning. Educators need to ensure that the grouping process is based on accurate and ongoing assessment of student performance, and that the groups remain flexible and adaptable to accommodate changes in student needs (Tomlinson, 2014). Additionally, teachers must be mindful of potential issues, such as the stigmatization of lower-performing groups or the lack of exposure to higher-level content for advanced readers (Deunk et al., 2018). Paired reading may tend to reduce stigma by providing a more personalized learning experience. Success of grouping strategies may also depend on the degree of teacher autonomy and the ability to differentiate instruction (Reeve, 2006). The literature suggests that grouping can be a beneficial instructional strategy when implemented with consideration of students' individual characteristics and educational contexts (Tomlinson, 2014).

Recently, scholars (Cash, 2018; Serravallo, 2010; Tomlinson, 2017) advise educators to employ flexible grouping, which is a dynamic instructional strategy where students are placed in temporary groups based on specific learning objectives, needs, or interests. This stands in contrast to static grouping arrangements, where students remain in the same group for extended periods, often based solely on grade level or ability. While the potential benefits of different grouping strategies in reading instruction have been acknowledged, a comprehensive understanding of its implementation and perceived effectiveness in the classroom context remains under-explored.

Despite the growing body of research on grouping in elementary classrooms, there is a gap in our understanding of how secondary teachers utilize grouping practices within their reading instruction. This study addresses this gap in knowledge by employing a qualitative case study approach to investigate the implementation and effectiveness of various grouping strategies in reading instruction within school classrooms in Nepal. Cultural factors such as ethnic diversity, communication styles, educational attitudes, teachers training, and community values all play significant roles in shaping the effectiveness of grouping strategies in classrooms. Through the analysis of data collected from classroom observations, semi-structured interviews, and document analysis with three participating teachers, this study aims to unveil various grouping strategies in reading instruction. By exploring teacher perspectives and experiences, this research aims to inform instructional practices and contribute to the ongoing dialogue about effective strategies for promoting reading success in secondary classrooms. The findings presented in this article contribute to existing research by illuminating the lived experiences of educators implementing varied grouping formats and offer valuable insights for further research and practice because teacher perspectives play a crucial role in implementation of grouping strategies within classrooms. This study addresses the following research questions:

1. How do teachers group students for reading instruction?

2. What are the perceived benefits of grouping for reading instruction?
3. What are the challenges associated with grouping for reading instruction?

Literature Review

Effective reading instruction is essential for student success across all academic domains. However, classrooms are inherently diverse, with students displaying a range of reading abilities and learning styles (Allington, 2018). This presents a significant challenge for educators who require to provide instruction that caters to each student's individual needs (Tomlinson, 2017). Addressing student diversity in Nepal involves navigating a complex landscape of linguistic differences, socioeconomic disparities, cultural stigmatization, curriculum limitations, teacher preparedness, geographic barriers, and gender inequality.

One promising approach to address this challenge is grouping for reading instruction. While research acknowledges the potential benefits of grouping in reading instruction, including increased engagement and targeted skill development (Vaughn et al., 2000), a comprehensive understanding of its implementation and perceived effectiveness in the classroom context remains under-explored. Grouping can take various formats including whole class group, small groups, pairs, and individualized instruction. In the context of Nepal, these strategies reflect a blend of traditional practices and emerging pedagogical approaches aimed at addressing student diversity.

Whole class grouping is a common practice where the teacher leads the instruction and students are expected to engage collectively. It is often used for introducing new concepts or providing instruction to all students simultaneously. Research on whole class grouping for reading instruction has been explored in various studies, with a focus on its effectiveness, particularly for students with disabilities. Efficacy of whole group instruction compared to other grouping formats is debated (Albaum et al., 1999). The dominance of whole class instruction in many educational settings is influenced by its efficiency, ease of management, cultural relevance, traditional preferences, resource limitations, and curricular demands.

The effectiveness of whole class grouping can be influenced by the teacher's ability to manage the classroom and integrate various instructional strategies. For instance, teachers may need to differentiate their instruction to meet the diverse needs of students, which can be challenging in a whole class setting (Vaughn et al., 2003). Moreover, whole class instruction may not always provide the individualized attention some students require, particularly those with special educational needs (Milsom, 2006). Despite these challenges, whole class grouping can have benefits, such as fostering a sense of community and facilitating social interaction among students (Monobe et al., 2017). However, it may not always address the individual needs of students with diverse abilities (Vaughn et al., 2001). Classroom observations indicate that alternative strategies such as small group instruction can better support individual learning trajectories by fostering engagement and tailored support.

Some studies have found that whole class instruction is frequently used, even when it may not be the most effective method for all students (Dhakal, 2021; Hollo & Hirn, 2014; Vaughn et al., 2003). Students often make little academic progress in such settings, and their attitudes towards reading do not improve over time (Schumm et al., 2000). Moreover, research suggests that reading instruction for students with special needs is generally of low quality in whole class settings, with insufficient explicit instruction in key areas like phonics or comprehension strategies (Swanson, 2008). Evidence shows that prevalent whole class reading instruction may not be the most beneficial approach for all students, particularly those with special learning needs. The lack of individual support, curriculum limitations, teacher preparedness gaps, physical accessibility issues all contribute to a challenging educational environment for these students. Therefore, there is a pressing need for more inclusive practices that prioritize individualized instruction and promote integration within mainstream classrooms.

Alternative grouping formats, such as small groups or pairs, may offer more positive outcomes for these students (Schumm et al., 2000). Research on small group reading instruction has explored various aspects of its implementation and efficacy. The literature suggests that the traditional practice of grouping readers by text levels may not be as effective as targeted skill practice (Smith et al., 2022). Studies have also examined specific strategies within small group interventions, such as text previewing and keyword pre-teaching, with findings indicating that while both strategies are effective, the keyword strategy is more efficient (Burns et al., 2011). Small group instruction strategies have significant potential to enhance learning outcomes in the classrooms in Nepal, particularly for students facing language barriers or diverse leaning needs.

Small group instruction allows for targeted skill practice and can be more effective than grouping based on text levels alone (Toste et al., 2023). It also provides opportunities for differentiated instruction and frequent interactions with text, which can be beneficial in large classes (Marinez & Plevyak, 2020). Small group instruction targeting reading fluency has been shown to be effective, with most participants improving significantly (Begeny et al., 2018). The effectiveness of small group reading interventions is further supported by meta-analysis of small group reading interventions, which indicates a moderate overall effect, with targeted interventions being more effective than comprehensive ones (Hall & Burns, 2018). The impact of small group instruction is also evident in English Language Learners (ELLs), with higher gains observed in students enrolled in direct instruction interventions that explicitly target foundational reading skills (Calderon & Slavin, 2011). Integrating small group instruction into classroom practices can foster an inclusive and effective learning environment that meets the diverse needs of students.

A broader range of reading skills, including high frequency words and grapheme-phoneme correspondences, taught through frequent practice and real books, has shown positive outcomes (Savage et al., 2018). Finally, evidence-based curriculum delivered in small groups as part of a three-tier model of prevention and intervention has been found to be beneficial, with students in directed, explicit intervention groups generally outperforming those in comparison groups (Gilbert et al., 2013). This evidence shows that small group reading instruction can be tailored to address specific reading skills and strategies. The research indicates that targeted interventions, especially those that are skill-specific and efficiently designed, are effective in improving reading outcomes. The evidence also suggests that small group instruction can be particularly beneficial for ELLs and young struggling readers (Reis et al., 2011). Targeting specific skills through small group instruction has significant applicability by providing differentiated learning opportunities that cater to the diverse needs of the students.

The research on homogeneous grouping for reading instruction presents a complex picture. Homogeneous grouping for reading instruction, where students are separated based on ability levels, has been a subject of extensive research with varying conclusions. Studies have explored its impact on students' reading growth, with some suggesting that when substantial time is dedicated to reading instruction, homogeneous grouping can be beneficial (Liddell, 2016; Reis et al., 2011; Tieso, 2005). However, the effectiveness of this approach appears to depend on factors such as the amount of instructional time and the initial reading skills of the students (Hong et al., 2012). Contradictory findings emerge when considering the broader implications of homogeneous grouping. While some research indicates that homogeneous grouping may lead to slightly higher reading growth on average, other studies have not supported the hypothesis that such grouping leads to greater gains in reading achievement (Patrick, 2020). The social and instructional dynamics within ability groups also play a crucial role in reading development, emphasizing the need for a nuanced understanding of these contexts (Gavelek & Bresnahan, 2014). Particularly, it depends on cultural factors as well as the educational objectives. Educators need to weigh these considerations carefully when deciding on grouping strategies to respond to the needs of all learners.

Research on mixed-ability grouping for reading instruction reveals a complex landscape where perceptions and outcomes vary across different educational contexts. Some studies suggest that mixed ability grouping can be beneficial for students' reading development. For instance, in elementary settings, students have reported a preference for mixed-ability groups, suggesting that such arrangements can foster cooperative learning and help students progress in reading (Condron, 2005). However, international studies have shown that extensive ability grouping can lead to lower overall performance and greater achievement gaps (Blanco-Varela et al., 2024). Review of the literature on setting and streaming through thematic content analysis by Francis et al. (2016) identified seven potential explanations for poor outcomes among those in low sets and streams. They are: misallocation to groups; lack of fluidity of groups; quality of teaching for different groups; teacher expectations of pupils; pedagogy, curriculum and assessment applied to different groups; pupil perception and experiences of 'ability' grouping, and impact on their learner identities; these different factors working together to cause a self-fulfilling prophecy (p.4).

The meta-analytic review in Elbaum et al. (1999) provides evidence that alternative grouping formats, particularly student pairing, have positive effects on reading outcomes for students compared to whole class instruction. Research supports the use of pairing strategies in reading instruction, particularly for students with disabilities (Elbaum et al., 1999). Pairing students can foster cooperative learning and help students progress in reading by allowing them to get help from classmates (Milarisa & Dewi, 2019). However, some students may not have experience with this format, which can limit its effectiveness (Elbaum et al., 1999). The role of the student within the pair and the context of the instruction may influence the effectiveness of this approach. While the research is promising, it is also clear that more rigorous studies are needed to fully understand the potential of pairing in reading instruction across various contexts and student populations. This is a feasible approach to enhance student engagement and enhance leaning outcomes as it creates collaborating learning environment that responds to the diverse needs of the students.

The research on one-on-one reading instruction indicates that when applied consistently over time, it can lead to improved reading skills in students (Bladel, 2018; Crouch et al., 2007; Foorman & Torgesen, 2001). Individual instruction, while potentially beneficial for students with significant disabilities (Vaughn et al., 2003), should complement rather than replace classroom instruction. The evidence supports the use of evidence-based reading instruction and professional development for teachers as a means to increase student achievement (NRP, 2000). However, the debate on the most effective instructional methods, such as the role of systematic phonics, continues to be a point of contention and development within the research community (Wyse & Bradbury, 2022). Further research is needed to reconcile these perspectives and to refine instructional approaches for one-on-one reading instruction.

Overall, earlier studies on grouping for reading instruction present a nuanced picture. The effectiveness of grouping for reading instruction is not conclusive and appears to be context-dependent. While some studies show positive outcomes, particularly for specific student populations or under certain instructional conditions, others find no significant benefits. The research reveals the importance of considering individual student needs, the amount of instructional time, and the adaptability of instruction when implementing grouping strategies (Vaughn et al., 2003).

The effectiveness of various grouping may depend on various factors such as the amount of instructional time and the ability to adapt instruction to students' needs (Parsons et al., 2018). Current body of research on grouping for reading instruction presents both supportive evidence and challenges to its efficacy. Each grouping format has its merits and demerits. Whole class grouping is dominant instructional approach for reading instruction and its effectiveness depends on the teacher's ability to engage students actively and manage diverse learning needs within the classroom. However, small group instruction appears to be particularly effective for addressing individual student needs and improving reading outcomes. The choice of instructional grouping should be informed by the specific needs of the students and the instructional goals of the teacher. It is one component of reading instruction program that should be complemented with other grouping formats to cater to individual student needs and promote comprehensive literacy development. There is a need for more rigorous studies that explore teacher perception and strategies for grouping for reading instruction. This study underscores the critical role of small group instruction in enhancing reading outcomes for students.

Methods and Procedures

This study employed a qualitative case study design to explore the implementation and perceived effectiveness of grouping in reading instruction within school classrooms. The case study approach allowed for an in-depth examination of the lived experiences of educators within a specific context (Yin, 2018). Selecting a case study design aligns with research questions focusing on gaining in-depth understanding of complex phenomena of grouping for reading instruction. The ability to address nuanced "how" and "what" questions further enhances its applicability in diverse research settings.

Participant selection is a critical factor in case study research that significantly influences both the depth of data collected and the potential generalizability of findings. Therefore, three school teachers (one secondary and two basic level) from a diverse public school in Kathmandu were recruited for this study. The participants were purposefully selected based on their reported experience and expertise in implementing grouping strategies for reading instruction. All participants held valid teaching licenses and had at least five years of experience teaching in respective school classrooms. Choosing these relevant, diverse, and knowledgeable participants enhances the richness and validity of insights gained while also shaping how these finding might relate to broader contexts.

Multiple data collection methods were employed to gain a comprehensive understanding of the phenomenon under investigation. The researcher observed each participating teacher's reading instruction for a total of 5 lessons across a two-week period. During the observations, the researcher focused on how teachers implemented grouping strategies, interacted with students within groups, and adapted instruction to meet individual needs. Detailed field notes were taken to capture the observations. Combining observation with other data collection methods such as interviews and document analysis significantly enhances the depth and reliability of research findings.

Individual interviews were conducted with each participant following the classroom observations. The interviews explored the teachers' experiences and perspectives on using varied grouping strategies, including its perceived benefits and challenges, implementation strategies, and any adaptations they made for successful use in their classrooms. Interviews were audio-recorded and transcribed verbatim for analysis. By integrating interviews with observations, this study achieved a more comprehensive understanding of grouping practices for reading instruction, leading to richer findings that inform practice and effectively

Relevant school documents, such as lesson plans and curriculum materials were collected from each participating teacher. These documents provided additional context and insight into the teachers' planning and implementation of grouping for reading instruction. These documents significantly contributed to the triangulation of data in the study by providing complementary information, validating findings, and offering richer contextual understanding of the issues under investigation.

Thematic analysis was employed to analyze the data collected from all three sources (Braun & Clarke, 2006). This involved coding the data for recurring themes, categorizing the codes, and then identifying higher-order themes that captured the essence of the data. The analysis was an iterative process, with constant comparison occurring between the data and emerging themes. To ensure trustworthiness, member checking was conducted by sharing the preliminary findings with the participants for feedback and verification of accuracy. The iterative nature of thematic analysis was essential for ensuring a detailed and comprehensive understanding of qualitative data. This approach allowed to capture the complexity and richness of participants' experiences effectively by continuously engaging with data, refining themes, enhancing credibility, integrating multiple perspectives, and adapting to emerging insights.

Results and Discussion

Teacher perceptions significantly influence the implementation of grouping strategies in classrooms that impact both academic outcomes and social dynamics among students. Thematic analysis of the data (Braun & Clarke, 2006) collected from classroom observations, semi-structured interviews, and document analysis revealed three central themes related to the implementation and perceived effectiveness of grouping strategies in reading instruction: grouping formats, perceived benefits, and challenges associated with grouping for reading instruction. They are described below.

Grouping Formats

Four sub-themes emerged from the analysis of the field data on grouping formats. They are whole class groups, small groups, pairs, and individualized instruction. Teachers used these grouping formats for reading instruction to enhance reading instruction.

The first sub-theme that emerged from data related to grouping formats was whole group instruction. When asked about teaching whole group reading instruction, teacher C, who was teaching in grade five said, "Whole class instruction is most common in my classroom. I know that all students may not benefit from such instruction. Poor readers may be left behind because there are so many students in my class and I don't have enough time to deal with them daily." Similarly, teacher B, who was teaching in grade 8 revealed, "Whole class instruction saves instructional time. It can be used to model strategies so that students can watch and imitate". Teacher A agreed with this and added,

> A lot of content can be covered in short period of time in whole group instruction. Discussions and activities around a common text can arouse interest and love of reading and it prevents classrooms from being noisy and chaotic. It will be easier to manage compared to small groups". These findings suggest that whole class grouping for reading instruction can be valuable tool for modelling strategies, managing classrooms, and building community (Teacher A, personal communication, March 31, 2023).

Classroom observation revealed that the most common implementation of this method involves the teacher delivering instructions for the assignment to the class, followed by individual seat work. Emphasis during instruction is primarily based on teacher explanations and encouragement to promote student learning. Explaining the benefits of whole class instruction, teacher B said,

> Teaching to whole class is beneficial because there is one lesson for the entire class. Due to time limitation, less time is spent preparing and developing instruction and lesson plans for various ability levels. Students who are poor are left behind in this type of grouping. Students who work faster with bored time on their hands, or students who work slower feeling rushed, left behind, or simply not being able to finish (Teacher B, personal communication, February 16, 2023)

The above statements reveal that whole-class instruction favors equality in education, rather than equity. Those who are struggling are left behind and those who are excelling also have to wait for their peers. Only the average students seem to be benefitting much from this type of grouping format for reading instruction.

The second sub-theme that emerged from data in grouping formats for reading instruction is small group instruction. Participant teachers believed that small group reading instruction provides opportunities for teachers to meet the individual needs better. For instance, teacher A said, “Small groups can provide teachers an opportunity to provide individual attention as per their need. Students also can learn from each other.” She further added, “Small groups are often noisier than whole group.” These statements reveal that small group reading instruction offers valuable opportunities to increase student participation, peer learning, and targeted support based on their individual needs. However, it creates challenge on the part of teachers for classroom management.

Pairing students for reading instruction is next sub-theme that emerged from the field data. According to teacher C “students love working together in pairs. They learn from each other. Especially, struggling readers can benefit from their better peers.” Teacher B added that students “enjoy working in pair”. She admitted, “Pairing in reading instruction can encourage student motivation and promote peer learning.” However, teacher A warned, “It is problematic when pairs do not accept each other. Therefore, I most often ask them to make pair themselves so that they can accept each other.” These statements suggest that pairing in reading instruction can motivate student in reading and develop collaboration among peers.

The next sub-theme that emerged from the field data was individualized instruction. During classroom observation it was evident that participant teachers provided individualized instruction to some of the needy students. Some students seek help themselves while for some students; teachers had to identify. When I asked teacher A during interview about individualized reading instruction, she said,

> Individualized reading instruction gives us opportunity to find strengths and weaknesses and adjust instruction effectively to their need. This also helps to establish a strong connection with students. They feel more care from teachers. But we have limited time. We cannot spend much time dealing with individual students. We have only 45 minutes. There are nearly sixty students in each class. Nearly, one minute can be spent for a student. What can we do in one minute? (Teacher A, personal communication, March 31, 2023)

Contradictorily, teacher B cautioned, “It is not feasible to provide individualized instruction all the time”. These statements unveil that individualized instruction provides personalize support to students however it is not practical to provide such instruction all the time, particularly in the large classes. Teachers see very little option other than whole class instruction.

Perceived Benefits of Grouping

All three participating teachers identified various benefits associated with grouping for reading instruction. These included: increased student engagement, targeted skill development, and opportunities for collaboration.

Participant teachers reported that students were more engaged and motivated to participate in reading activities when placed in group works. For instance, teacher C said, “Students feel comfortable to work with their close peers and they feel a sense of belonging and acceptance with their peers and become more motivated, engaged, and keep effort to read.” This shows that grouping helps students to get opportunities for collaboration, fostering positive learning environment that promotes intrinsic motivation and academic success. This type of positive learning environment provides opportunity to work with peers of varying abilities, and the focus on specific learning objectives relevant to individual needs. This finding is similar to Tomlinson (2017) who advocated using grouping for reading instruction.

Classroom observation revealed that grouping allowed participant teachers to provide instructional support to meet the specific needs of individual students within each group. This enabled them to provide targeted instruction for developing specific reading skills, such as decoding, fluency, or comprehension. Moreover, working within groups provided students with opportunities to collaborate with peers, discuss reading materials, and develop their social and communication skills. In this regard, teacher B said, “When students work in small groups, they have the opportunity to engage in meaningful discussions, share ideas, and support each other’s learning”.

This is similar to sociocultural theory of Vygotsky (1978) which emphasizes the importance of social interaction in learning, suggesting that students learn best when they work together and construct knowledge through social interactions (Vygotsky, 1978). Grouping allows students to benefit from this social learning process, leading to improved reading comprehension and critical thinking skills. Teachers observed instances where students helped each other with challenging concepts, shared different perspectives, and built a sense of community within the classroom.

This study's findings on the perceived benefits of grouping align with previous research highlighting its potential to increase student engagement (Vaughn et al., 2000) and provide targeted skill development (Ainsworth, 2008). The dynamic nature of groups, as observed by the teachers, resonates with the idea that students are more likely to be engaged when challenged appropriately and presented with opportunities to collaborate (Ainsworth, 2008). Furthermore, the ability to tailor instruction within groups allows teachers to address individual needs and provide targeted support for specific reading skills, as noted in the findings and supported by previous research (Vaughn et al., 2003).

Challenges Associated with Grouping for Reading Instruction

Teachers not only acknowledged the benefits, they also identified challenges associated with grouping effectively for reading instruction. These included: time constraints, differentiation within groups, and managing student behavior.

Based on the analysis of data, finding sufficient time within the daily lesson plan to effectively plan, implement, and manage groups was a recurring challenge for all participant teachers. For instance, teacher A said,

> Sometimes, I wonder how much time to engage students in group work. We have only 45 minutes in a period. When I use small group work, I have to spend more time than in whole group. Similarly, sometimes, I have hard time to reach to all of them and meet their needs. Some students don't participate in group activities. Some of them even go out of track sometimes. It is really hard to engage all students at the same level of engagement (Teacher A, Personal Communication, March 31, 2023).

Providing varied instructional strategies to cater to the diverse needs of students within each group was another challenge reported by participant teachers. For instance, teacher C said, "Grouping is time consuming. It takes a lot of planning and time management. It takes a lot of efforts from teachers' side to make it work better." Teacher C highlighted the need for careful planning and the development of instructional materials that catered to a range of reading abilities and learning styles within each group.

Maintaining focus and managing student behavior during group work emerged as a concern for some teachers. For instance, teacher B pointed to the diverse nature of the students even within the groups when she said, "Students in a group don't have similar needs. Some need more support while some of them can work on their own after minor guidance". This involved establishing clear expectations for group work, providing effective scaffolding and support, and addressing any disruptive behavior promptly.

The identified challenges associated with grouping, including time constraints, meeting the needs within groups, and managing student behavior, are also consistent with existing literature. Studies have acknowledged the pressure on teachers to manage their time effectively when implementing flexible grouping, requiring careful planning and organization (Ainsworth, 2008). Similarly, the need for differentiation within groups presents a significant challenge, as highlighted by the teachers (Tomlinson, 2017). Developing appropriate instructional materials and activities to cater to diverse learning styles and abilities within each group requires additional planning and resources. Finally, managing student behavior during group work is a concern echoed in previous research, emphasizing the importance of establishing clear expectations and providing effective support for successful collaboration (Ainsworth, 2008).

These findings suggest that grouping offers valuable benefits for reading instruction. Careful planning, effective classroom management strategies, and ongoing reflection are crucial to address the associated challenges and ensure its successful implementation (Tomlinson & Moon, 2013). This study contributes to the existing body of knowledge by providing a deeper understanding of the lived experiences of educators utilizing varied grouping in reading instruction. By triangulating the data from classroom observations, interviews, and document analysis, the study offers a comprehensive perspective on the perceived benefits, challenges, and key considerations for successful implementation.

Conclusion

The decision to group students for reading instruction is a complex issue that requires careful consideration of the potential benefits and drawbacks because it is often difficult to decide exactly how to choose different grouping strategies. Findings reveal that ability grouping may offer advantages in terms of targeted instruction and heterogeneous grouping can foster a more inclusive and collaborative learning environment. This study suggests that while grouping offers valuable benefits for reading instruction, careful planning, and effective strategies to address the identified challenges are crucial for its successful implementation. Grouping for reading instruction needs to be flexible and teachers need to utilize whole-group, small group, pairs, and one-on-one instruction based on the requirements of the students' abilities, classroom context, available time, and resources. Whole-group instruction is appropriate when teachers need to introduce new concepts, build shared understanding, and foster a sense of community within classroom. Small group instruction is appropriate in order to meet the diverse needs of the students in the classroom. Paired instruction helps create effective and engaging learning environment. Individualized instruction is necessary for the students with special educational needs and those students who benefit less from whole group and small group instruction.

Further research is needed to explore the long-term impact of this instructional approach and its effectiveness with diverse student populations. By building upon existing research and addressing identified limitations, educators can make informed decisions about grouping for reading instruction to enhance student engagement, promote targeted skill development, and foster a collaborative learning environment. This study is limited by its small sample size and focus on a specific geographic region. Further research with a larger and more diverse sample population could provide a broader understanding of the effectiveness of grouping across different contexts and student demographics. Future studies can overcome the limitation of sample diversity by optimizing sampling techniques to produce more robust and generalizable findings.

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Exploring English Language Proficiency Challenges among Rural Students

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Abstract

Secondary-level students often struggle with reading, writing and speaking simple words in rural areas. This study investigates the influences of English language weaknesses among secondary school students in rural Nepal. The purpose of this study is to dig out the challenges contributing to weaknesses in English language proficiency among rural secondary school students in Khatyad Rural Municipality of Mugu District. I employed a qualitative research approach, motivated by the theory of rurality. I selected Khatyad Rural Municipality as my research site. Two secondary-level teachers and three students were my participants. I employed in-depth interviews to acquire information. Thematic analysis was used to examine the data. My results showed a number of important themes regarding the challenges that contribute to English language deficiencies in secondary school students in rural areas. They are the lack of a positive learning environment after school, a lack of ongoing professional development opportunities for educators, lack of English proficiency in teachers and students, ill-equipped classrooms, little classroom interaction and feedback, and inadequate instructional materials. Understanding these challenges is essential for developing targeted interventions to enhance English language education. Educators should implement more effective educational strategies and resources to address these obstacles to improve the quality of English language education in these regions.

Keywords: Lingua franca, ELT, rural education, academic success

Introduction

Due to the position of English as an important medium for international interaction, its influence as a lingua franca is increasing across the globe (Rao, 2019). Agustiana et al. (2024) highlight English as the dominant global business language, essential for cross-border communication and efficient operations in diverse environments. Its use extends beyond English-speaking nations to multinational corporations and global markets, making English proficiency crucial for professionals in various sectors. The importance of English as a language continues in education, research, tourism, print and electronic media, and international trade and business, especially in the context of globalization (Chhetri, 2023). Proficiency in the English language has become an essential skill for academic and professional success. English serves as a dominant language across various sectors, including business, arts, education and culture, facilitating global communication and integration (Tamtam et al., 2012).

In Nepal's educational system, English is a mandatory subject taught and learned at the school level. There is a noticeable increase in interest towards English-medium education due to the global prominence of the English language (Ghimire, 2024; Saud, 2019). Parents believe that proficiency in English opens up significant opportunities for their children (Ghimire, 2019). English-language instruction is preferred in schools because it plays a crucial role in developing students' listening, speaking, and vocabulary skills, which are essential for academic success and future prospects (Shrestha, 2023). Recent developments in Nepal's community school system indicate a growing adoption of English as a medium of instruction (EMI), representing a significant linguistic shift (Saud, 2020; Saud, 2024). Sah (2021) emphasizes the global importance of English education, widely acknowledged for its prestige and influence, including Nepal (Ghimire, 2024). Sah and Li (2018) argue that EMI serves as crucial linguistic capital, perceived by students, parents, and educators alike, to enhance advanced English proficiency, support academic advancement, stimulate economic and social prosperity, and facilitate access to higher education. Consequently, many public and community schools in both rural and urban areas of Nepal have now adopted EMI into their educational frameworks.

Dutta (2019) stated that English is a highly influential and widely recognized language across the globe. It serves as a gateway to global opportunities, enabling full participation in academic, business, cultural, social and political aspects. As the dominant language in education, commerce, entertainment, travel, and the digital world, English equips learners with essential skills to thrive in a globalized society (Shrishthy, 2023).

English language proficiency among secondary-level students in rural Nepal, specifically within the Khatyad Rural Municipality of Mugu District, is a pressing issue marked by significant challenges. Despite the increasing global importance of English and its perceived benefits for educational and career opportunities, students in this region encounter substantial obstacles in achieving proficiency. From my own experience teaching in the remote areas of Mugu District at the secondary level, I have observed that students struggle to communicate even using simple sentences, both orally and in writing. They are weak in the four language skills of English: listening, speaking, reading, and writing, which are essential for secondary-level education. These weaknesses can be attributed to various reasons. Understanding these reasons is vital for addressing the educational disparities faced by rural students and for enhancing their access to quality English language education.

Therefore, the purpose of this study is to identify the challenges contributing to the weaknesses in English language proficiency among rural secondary school students in Khatyad Rural Municipality, Mugu District. Specifically, the research seeks to answer the question: What are the challenges faced by rural secondary school students in Khatyad Rural Municipality in learning English?

Literature Review

In Nepal, English is a compulsory subject in schools. Basically, students from rural areas encounter numerous challenges that hinder proficiency in the English language. The challenges encountered by students directly leads to weaknesses in English subject. Several national and international studies have investigated these challenges, shedding light on barriers to effective language learning in rural settings. Singh (2023) underscores the prevalent issues in rural Nepali schools. He highlights the weak language skills, overcrowded classrooms, and inadequate resources as primary obstacles. His study conducted in the remote village of Dolpa, Singh observed that students struggled to engage with English language textbooks that were outdated and did not resonate with their cultural context. Despite the government's efforts to implement a communicative language teaching approach, many students found it challenging to apply their learning due to disconnection between the curriculum and their daily lives.

In the same way, Tuladhar (2023) expands on these challenges, specifically noting the scarcity of trained educators and limited resources in rural settings, which significantly impact inclusive education efforts. Ranjit (2022), focusing on secondary-level education in remote Nepali schools, highlights additional hurdles such as teacher communication barriers, varied class sizes, and ineffective classroom management strategies. These findings collectively illustrate the multifaceted nature of challenges impeding English language education outcomes in Nepal's rural communities.

Moreover, insights from international contexts offer comparative perspectives. For example, studies from Indonesia by Endriyati et al. (2023) identify student-related concerns such as motivation and parental support, alongside teacher-related challenges including technological familiarity and pedagogical expertise.

These findings resonate with the Nepali context, highlighting the universal nature of challenges faced by rural educational systems in fostering English language proficiency. Al-Sohbani (2016) identifies challenges in Yemeni schools, including outdated teaching materials, teacher motivation issues, and student disengagement due to perceived unfair grading practices. These challenges mirror those faced in Nepal, underscoring the broader implications of inadequate educational resources and support on student learning outcomes. Issues such as curriculum constraints, lack of infrastructure, and poverty-related barriers further exacerbate the difficulties in providing quality English language education. In Malaysia, Musa et al. (2012) identify student attitudes and perceptions towards English as critical factors influencing language learning outcomes. The study emphasizes the need for targeted interventions to enhance student motivation and engagement in English language education.

Overall, while existing literature provides a comprehensive understanding of the challenges in English language education across diverse contexts, there remains a notable gap in research specifically addressing the nuanced challenges faced by rural Nepali students. This study aims to address this gap by exploring the influences of English language weaknesses among secondary school students in Khatyad Rural Municipality, Mugu District, Nepal. By identifying and addressing these challenges, stakeholders can develop targeted interventions to enhance English language education and improve academic outcomes for rural students.

I utilized the theory of Rurality as the primary theoretical foundation for my research study. This theory comprehensively addresses rural contexts, specifically focusing on Khatyad Rural Municipality, Mugu District, Nepal. It critically examines the challenges faced by secondary school students in their English language learning. With this theoretical framework, I assessed the English language proficiency weaknesses among students in rural secondary schools within the municipality. According to Leibowitz (2020), "rurality serves as a broader case study for examining questions of locality and difference." Furthermore, Singh (2024) highlights its significance, emphasizing that the theory of rurality encompasses the educational dynamics in rural settings. Through this approach, I conducted a thorough analysis aimed at understanding and addressing these language proficiency challenges effectively.

Methods and Procedures

In my study, I adopted an interpretive research paradigm rooted in a socially constructed ontology, enabling me to see what has happened and how it has happened (Pervin & Mokhtar, 2022). This paradigm is particularly suited to my objectives as it emphasizes understanding the subjective experiences and perceptions of rural secondary school students regarding their challenges in learning English.

I used qualitative research approach. Qualitative research approach involves collecting and analyzing non-numerical data (e.g., text, video, or audio) to understand concepts, opinions, and experiences (Bhandari, 2023). I have purposively selected participants based on their relevance to my study. I selected two secondary-level English teachers who have been teaching English for several years in Khatyad Rural Municipality, and three students from secondary-level community schools who have been facing challenges in learning English. The site of my study was Khatyad rural municipality, Mugu district.

The protection of human subjects through the application of appropriate ethical principles is important in any research study (Arifin, 2018). That's why ethical considerations were carefully addressed throughout the study. Informed consent was obtained from all participants, emphasizing voluntary participation, confidentiality of responses, and the right to withdraw from the study at any time without consequences. The study adhered to ethical guidelines and received necessary approvals from relevant institutional bodies. Pseudonyms were used (teacher A, teacher B, and Student A, Student B, Student C) to protect their identities. Interview was recorded through mobile recordings and note-taking.

Data Collection Process

I used a purposive sampling method to select participants who could provide rich and relevant information about their experiences learning English in community schools. I chose three students and two teachers from secondary level in Khatyad Rural Municipality. I designed semi-structured interviews to explore the students' experiences and challenges in learning English. Each interview was conducted in a familiar setting to ensure participants felt comfortable and open to sharing their experiences. I used open-ended questions to encourage detailed responses. I audio-recorded all interviews with the participants' consent to ensure accuracy, and I took additional notes to capture non-verbal cues and contextual details. I carefully addressed ethical considerations by fully informing participants about the purpose of the study, their role in it, and their right to withdraw at any time without consequences. I used pseudonyms to protect the identities of the participants, and I stored all data securely to maintain confidentiality. I transcribed the audio recordings verbatim to capture all nuances of the participants' responses, and I cross-checked the transcriptions with the audio recordings for accuracy.

Data Analysis

The data analysis involved a thematic analysis approach to identify and interpret patterns and themes within the collected data. I began by transcribing the interview recordings and observational notes. Then, I coded the data to generate initial categories reflecting the participants' experiences and challenges. Through iterative refinement, these categories were developed into broader themes that captured the essence of the issues faced by rural students in learning English. This thematic analysis allowed for a detailed exploration of the factors contributing to the weaknesses in English language proficiency among the students.

Results and Discussion

From the responses of teachers and students, I generated the themes regarding the challenges contributing to English language weaknesses among rural secondary school students.

Absence of a Positive Learning Environment after School

There is a lack of a positive learning environment at home in Khatyad Rural Municipality. According to Lee (2024), "By creating positive and engaging learning environments, teachers and parents can lend their students the physical, psychological, and emotional support they need to thrive and be successful in school, the workplace, and beyond". That's why parents and educators responsibility is to create supportive environment at home and at school. But it is different in rural area like Khatyad Rural Municipality. From the interview with teachers and students it was found that Many students face challenges such as working to support their families or lacking supportive home environments conducive to studying. Student A ". After school, I have to take care of our home, cook meals, look after my brothers, and support my parents in their work. I don't have much time left for studying at home"(student A). She takes the responsibility of their parents at home she had no time to study at home. teachers struggle for students to improve English at school but learners have no home environment to improve English. Which makes learner weaker day by day? (Teachers A). "There is no learning environment at home for kids to learn. They need to help their parents, who affect their English and other subjects too" (Teacher B). That's why students in Khatyad Rural Municipality lack the supportive home environment needed to improve their language skills

Lack of Ongoing Professional Development Opportunities for Educators

In the study, teachers acknowledged their proficiency in English but highlighted the critical need for ongoing professional development to refine their teaching skills and adapt to evolving language teaching methods. Teacher A shared, "I have been teaching for five years but have not had any opportunities for teacher training. I consider myself proficient in English, but continuous professional development is essential for effective teaching and keeping myself updated. Unfortunately, there are no programs like this available for teachers in rural areas (Teacher A). Similarly, Teacher B added, “I have not had the chance to attend workshops focused on language teaching methodologies and integrating technology into the classroom.”

The benefits of continuous professional development were evident in refining teaching strategies and aligning with advancements in language education. However, participants also expressed a significant gap in ongoing support and training needed to effectively integrate technology and access diverse teaching materials. These challenges underscore the importance of investing in comprehensive teacher training programs that address both language proficiency and pedagogical skills.

Enhancing teacher training and development initiatives can empower educators to create more engaging and effective learning environments and improve the student’s achievement.

Lack of English Language Proficiency in Students and Teachers

Teachers and students have identified significant challenges in students’ English language proficiency, including difficulties with grammar, pronunciation, vocabulary retention, and a lack of confidence in speaking fluently. Teacher A highlighted these challenges: The primary issues among students include limited vocabulary retention, difficulty with grammar structures, and a lack of confidence in speaking English fluently (teacher A). To address these challenges teacher emphasized vocabulary-building activities; grammar exercises tailored to their proficiency level, and provide opportunities for regular speaking practice to their students. Students reported significant challenges that their teachers are not competent to teach English. Student A said, “Our teacher does not focus on speaking and listening activities in the classroom. He is not very confident in speaking English because he only reads what is written in the book, but he does not teach us how to read, pronounce the words, or understand their meanings. We rarely get class work and homework in English, and when we do, it is not checked by the teacher”.

The lack of English language proficiency is influencing weaknesses among rural students in Nepal. This is evident from the challenges highlighted by both Teachers and students, such as limited vocabulary retention, difficulties with grammar and pronunciation, and a lack of confidence in speaking fluently. These challenges directly impact the students’ ability to engage actively in classroom activities and effectively practice language skills, thereby contributing to their overall weaknesses in English proficiency.

Ill-equipped Classrooms

A positive classroom environment is one in which students feel comfortable sharing their thoughts, taking risks, asking questions, and confronting challenges in their learning (Preply, 2023). Educators can foster this environment by presenting clear classroom expectations, providing ample opportunities to enhance skills, building relationships with their students, and offering relevant content. In such a setting, students feel valued by their educator, which encourages them to become more active participants in the learning process and leads to a more productive learning environment but in the context of rural area the situation found different.

Student A shared, "There are many students in my class room, and it's hard to concentrate whatever teachers teaching and saying about in the classroom." Students in overcrowded classes are more likely to feel disconnected from the learning process and less motivated to actively participate in class discussions and activities (Marais, 2016). Teacher A said, "students come from far from different places to our school so Our classrooms are overcrowded there is no division of section also and there is lack of teaching materials our classroom are ill-equipped that is making difficult for us to control the class and teach English effectively". In overcrowded classrooms, teachers are often overwhelmed by the high learner-to-teacher ratio, resulting in limited interaction with each learner (Lockspeiser & Kaul, 2016).This observation underscores the impact of large class sizes on students' ability to focus and engage effectively during lessons and making student weaker in English.

Additionally, Student C noted "Our classroom lacks essential facilities like dustbins, a proper book corner, and an appropriate whiteboard and new technologies in the classroom. The classroom is often dirty, overcrowded, and noisy, and nobody cleans or sweeps it regularly. There aren't enough good benches and desks in classroom."

This comment reflects the practical difficulties faced due to limited resources, affecting both comfort and concentration among students and hindering their ability to engage in additional activities in the classroom. The physical environment of a classroom plays a crucial role in facilitating effective learning and academic performance, especially in language acquisition like English (Nwokedi, 2023). That's why physical arrangement and features of the classroom environment, including seating arrangements, can influence students' behavior and attention to academic tasks. These observations underscore the challenges posed by overcrowded classrooms, lack of essential facilities, inadequate physical environments, and resource constraints in creating a supportive learning environment. These challenges influence students, creating an unsupportive learning environment for learning English.

Lack of Classroom Interaction and Feedback

Classroom interaction and feedback play a pivotal role in the teaching and learning process, particularly in second language instruction. Interaction empowers students to actively participate in discussions, ask questions, and collaborate with their peers, thereby enriching their overall learning experience in acquiring a second language. Siddig and AlKhoudary (2018) assert that student-teacher interaction is vital as it significantly influences positive academic progress and social development (p. 86). Feedback serves as a powerful tool essential for improving assignments and enhancing the understanding of concepts (Angelos & Darra, 2023). Consequently, the processes of feedback and classroom interaction are crucial components within effective English language education, providing students with essential guidance and insights to enhance their skills.

Students A reported limited classroom interaction, primarily characterized by teacher-led activities, "Our classes are mostly teacher-centered; the teacher reads from books and speaks, and we are not allowed to speak or ask questions in class. We listen quietly and often work alone without opportunities for group or pair activities." Another student added, "Group work or discussions are rare. If we try to speak, the teacher scolds or punishes us, so we stay silent." These comments highlight a predominantly passive learning environment where students have few chances to engage in meaningful communication or collaborative learning.

Student C mentioned "Our teachers never give us to engage in different teaching-learning activities in the classroom. There is no pair work, group work, speaking practice, listening practice to improve our English in the classroom". The lack of opportunity for classroom interaction severely hinders students' ability to practice English language skills effectively. In rural areas, where such opportunities are limited, students face challenges in developing proficiency in English. This passive learning environment contributes significantly to students' weaknesses in English language skills, as they lack opportunities for meaningful dialogue, peer collaboration, and active engagement in language learning activities. Therefore, enhancing classroom interaction through student-centered activities, peer collaboration, and supportive teacher practices is essential for improving English language proficiency among students in rural areas. Providing opportunities for interactive learning experiences can significantly enhance students' language acquisition and overall educational outcomes.

Lack of Teaching Materials for English

Teaching materials come in various forms and serve the common purpose of supporting learning. They are essential for making lessons interesting, facilitating easy learning, and enabling teachers to effectively convey concepts. Teachers use different kinds of teaching and learning materials to achieve objectives of content in the classroom. Students and teachers indicated a lack of adequate materials for learning and teaching English. They have only textbook available in the school as a teaching learning materials but they don't get textbook in time. According to students and teachers there are no other materials like audio, video, audio video and new technologies in the school to teach and learn English.

Teacher B expressed "There are no resources available in the school to practice the English language. There is no library in the school for extra materials for teaching. We struggle in English and only use lecture methods and textbooks because of the lack of teaching and learning materials needed for the English subject. This is making students weaker in English language skills since they do not get to practice the four key skills: reading, writing, speaking, and listening. The lack of a school library and the absence of digital tools and supplementary materials severely limit students' opportunities to practice and develop their English language skills in rural area.

Student C added "Our teacher only uses textbooks during the teaching and learning process. We haven't had any opportunities to practice the four language skills because there are no teaching-learning materials in the school, such as speaking materials, ICT tools, radio, tape recorders, and other resources needed for learning English (Student C). Student B mentioned, "We don't have basic learning aids like a proper whiteboard or visual materials. The whiteboard also becomes old teachers rarely write on the board with a finished marker. There are no pictures, radios, tape recorders, audio-visual aids, or digital resources available to us. Teachers never use any materials to teach English; they only use books and the board."

These statements reflect critical gaps in material resources, which may impede students' ability to grasp English concepts and improve their language skills. That's why the lack of teaching and learning materials in rural areas creates weaknesses for students, hindering their ability to become proficient in English and preparing them for the twenty-first century.

During my observations conducted with permission in three classrooms across three schools within Khatyad Rural Municipality, several critical insights into the English language teaching environment emerged. The focus was on understanding student participation, classroom atmosphere, interaction between teachers and students, teacher proficiency and support, evaluation and feedback practices, utilization of teaching-learning materials, techniques employed by teachers, and the challenges encountered by students.

Firstly, the observations revealed varying levels of student participation across classrooms, reflecting a need for more interactive and engaging teaching methods. While the overall classroom atmosphere appeared positive, there was a notable absence of robust interaction between teachers and students. Teachers predominantly relied on traditional lecture-style teaching, which limited opportunities for active student involvement and dialogue. Secondly, the observations highlighted a significant deficiency in the use of teaching-learning materials and technology. Classrooms lacked essential resources such as visual aids, digital tools, and supplementary materials, which are crucial for enhancing the four language skills effectively. Moreover, technological tools like smart boards or projectors were not utilized, further hindering interactive learning experiences. Thirdly, teacher support and proficiency varied noticeably. Some teachers demonstrated strong English proficiency and engaged teaching styles, while others relied heavily on textbook-based instruction without fostering interactive learning environments. This disparity in teaching approaches underscored the need for continuous professional development to enhance teaching skills and adapt to more innovative methods. Regarding evaluation and feedback practices, students reported receiving limited assignments and feedback on their work. Evaluations seemed sporadic rather than systematic, missing opportunities to provide constructive feedback that could aid students in improving their English language skills over time.

Lastly, several challenges faced by students were evident during the observations. Overcrowded classrooms with inadequate seating arrangements were observed, forcing multiple students to share benches. Basic facilities like access to drinking water were lacking, leading students to leave the classroom during lessons. Additionally, variations in students' language proficiency, including instances of using Nepali instead of English, indicated challenges in maintaining an immersive English language learning environment.

Conclusion

My research concludes that the findings from observations and perspectives gathered in rural secondary schools within Khatyad Rural Municipality highlight several key factors contributing to weaknesses in English language proficiency. The study revealed significant challenges, including the absence of a positive learning environment after school, a lack of ongoing professional development opportunities for educators, inadequate English proficiency among teachers and students, overcrowded and ill-equipped classrooms, limited classroom interaction, and insufficient instructional materials. Observations also indicated a heavy reliance on traditional teaching methods and a shortage of interactive learning materials and technologies, which hinder student engagement and proficiency development. Students' perspectives echoed these challenges, particularly regarding classroom overcrowding, inadequate infrastructure, and inconsistent teacher support and proficiency.

My study underscores critical areas for improvement in rural English language education, such as enhancing interactive teaching methods, providing essential teaching-learning materials, improving teacher proficiency through professional development, establishing consistent evaluation and feedback practices, and addressing infrastructure challenges to create conducive learning environments. Addressing these issues will be crucial to ensuring that rural students receive quality education and opportunities to effectively develop proficiency in the English language.

The findings have many implications for English language education in rural areas. To enhance students' language proficiency and academic success, it is essential to diversify teaching strategies, improve resource availability, enhance teacher training and support, foster meaningful classroom interaction, implement effective feedback mechanisms, and address infrastructure deficiencies. By implementing these recommendations, rural schools can create a more supportive environment for English language learning, equipping students with the skills necessary for future educational and professional opportunities. This study highlights the importance of addressing systemic challenges in order to improve English language education in rural settings, emphasizing the practical applications of enhancing teaching practices and learning environments to support student success.

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Social Media Influence on Investment Decisions: Insights from Nepal's Capital Market

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Abstract

This study investigates the influence of social media and online community groups on individual investors' decision-making processes, with capital market literacy serving as a mediating factor. The research employed a descriptive and causal-comparative design, utilizing a purposive sampling method to select 384 respondents. Data collection was conducted through a structured questionnaire comprising multiple-choice and Likert-scale items. The reliability of the instrument was evaluated using Cronbach's alpha, and data analysis was performed using descriptive and regression techniques. The findings indicate that Facebook is the predominant platform utilized by investors, who are primarily between 26 and 35 years of age, hold bachelor's degrees, and self-identify as having intermediate investment experience. The analysis reveals a statistically significant positive correlation between social media, online community groups, and investment decisions, with capital market literacy partially mediating this relationship. These results underscore the increasing impact of online platforms on investment behaviour and emphasize the necessity for enhancing capital market literacy. Future research should explore the long-term effects of social media on investment performance and examine the influence of various social media types on different investment strategies across demographic groups.

***Keywords*:** Social media, online community groups, investment decision, capital market literacy

Introduction

Social media have a significant impact on individual investors' investment decisions, and capital market literacy plays a mediating role in this relationship. Research indicates that online investor communication can effectively disseminate firm-specific information through social networks when investor interactions are moderate (Wu et al., 2024). However, beyond a certain threshold, heightened interactions contribute to market noise, potentially distorting the stock-price discovery process. Interestingly, the study reveals that increased investor interactions on social media platforms can stimulate irrational emotions at both market and stock levels, ultimately impairing capital market efficiency (Wu et al., 2024). This finding contradicts the notion that more information leads to better decision making, highlighting the importance of capital market literacy in interpreting and utilizing social media information effectively. Social media can be a valuable source of information for individual investors and their impact on investment decisions is moderated by capital market literacy. Financial literacy has been shown to play a significant role in investment decision-making, potentially mitigating the negative effects of behavioural biases and improving the quality of investment decisions (Ahmad & Shah, 2020; Ullah et al., 2024). Therefore, promoting capital market literacy among individual investors is crucial for leveraging the benefits of social media, while minimizing its potential drawbacks in the investment decision-making process.

Social media have become prominent tools across various sectors, including education, healthcare, and finance, and investors use them to share and obtain investment information and enhance communication and research (Kavitha & Bhuvaneswari, 2019). Social media, defined as online platforms that enable user-generated content and interaction, significantly influence investment decisions (Kaplan & Haenlein, 2010). This influence is complex and has been the focus of various studies, with Grover et al. (2022) noting its impact on individual decision making in both organizational and marketplace settings. Although the long-term effects of social media on share prices may decrease, they can positively impact stock prices (Ismail et al., 2018). Moreover, stock market decisions are shaped by factors, such as news, reputation, and financial literacy (Ali et al. 2021; Abu-Taleb 2021). Social media, such as Elon Musk's tweets, often influences investment behaviour (Subramanian, 2021).

Scholars addressing a variety of disciplines have investigated how social media affects investor decision-making, looking at a range of factors and using data from several countries. Nevertheless, there is still a dearth of data regarding the influence of social media on stock markets and investor choices, especially in light of recent changes in global capital markets. A positive correlation has been observed between social media presence and investment decisions, as some studies indicate that heightened visibility of investment material on social media spurs higher levels of investment activity. Other people are more likely to be inspired to invest when conversations on social media sites, such as Facebook and Twitter, grow (Abu-Taleb, 2021). To improve communication with consumers, partners, and investors, businesses are increasingly using social media platforms, such as Facebook, Twitter, and WhatsApp for networking purposes. Consequently, the use of social media data to predict actual results is growing (Siikanen et al., 2018). Moreover, studies have shown a crucial connection between information from online social media and investment choices (Hasselgren et al., 2023). Furthermore, research indicates that capital market literacy functions as a complete mediator between social media engagement and investor trading behavior, thus positively influencing investor participation in the stock market (Junaidi & Nurhidayah, 2023). Nevertheless, no study has examined how social media affects student investors' decisions to invest in Mahendranagar has been found.

Although research on the impact of social media on investment decisions is growing, studies by Khatik (2021) explored the influence of platforms such as Instagram, YouTube, and Twitter, but did not fully examine how these platforms affect different types of people. Further research is needed to compare the impact of various platforms, particularly less-studied ones, such as TikTok, LinkedIn, and emerging networks, on a broader range of investors. There is also a significant gap in understanding how social media influences investment decisions in the Nepalese capital market, as most studies have focused on broader groups or different locations. The goal of this study is to address this gap.

Research has shown that increased discussions on social media platforms, such as Facebook and Twitter, can lead to higher investment activities (Abu-Taleb, 2021; Hasselgren et al., 2023). This study examines how investors use social media information and online community participation in their investment decisions, focusing on the mediating effect of capital market literacy. It explores how digital sources impact investors' choices and aims to provide insights beneficial to both scholars and those interested in the effects of social media trends on investment practices in the region.

Literature Review

The frameworks of Social Influence Theory (SIT), Social Learning Theory (SLT), and the Theory of Planned Behaviour (TPB) provide complementary perspectives, offering a robust and multidimensional understanding of the factors influencing investment decisions.

SIT emphasizes the role of external social factors such as peer groups, societal norms, and influential figures in shaping individual behavior. In the context of investment, these factors are crucial for understanding how investors' decisions are often interdependent and influenced by the actions or opinions of others. According to SIT, individuals' thoughts, feelings, and behaviors are shaped by their actions and appearance in their social environment, either directly through persuasion or indirectly through observation and comparison. Social networks and peer interactions play a crucial role in shaping attitudes and decisions, and social media amplifies this effect by continuously exposing users to peer opinions and behaviors (Liu et al., 2019).

SLT focuses on learning through observation and emphasizes the importance of modeling and reinforcement. In investment behavior, individuals often learn strategies and develop attitudes by observing others' success or failure. Albert Bandura's SLT, developed in the 1960s, suggests that individuals learn behaviors, attitudes, and emotional responses through observation and imitation. Learning occurs in a social context and can occur by watching others or through direct instruction, especially when influential figures such as peers, mentors, or media personalities model these behaviors (Bandura, 1977; Patton, 2021).

The TPB provides a cognitive framework for predicting and understanding behavior by analyzing attitudes, subjective norms, and perceived behavioral control. This theory is particularly effective for studying the decision-making process that precedes investment actions. TPB, developed by Ajzen (1991), suggests that investment decisions are influenced by an individual's attitude towards investing, perceived social norms, and confidence in their ability to manage investments. These factors collectively shape students' intentions and guide their decisions to invest.

Recent research highlights the growing influence of media, especially social media, on investors' behavior. Al Atoom et al. (2022) found that media content, particularly how information is framed, significantly affects investor decision-making in the Amman Financial Market, though it did not explore the differences between traditional and social media. Ali et al. (2021) identified a strong correlation between social media activity and market fluctuations, raising concerns about the sustainability of these effects and the credibility of social media. Haque et al. (2022) and Ridings and Gefen (2004) demonstrate that social networking groups and online communities positively impact purchase decisions and retail investor behavior, respectively, by facilitating the sharing of investment-related opinions (Bukovina, 2016). Pentina and Zhang (2017) emphasized that real-time information and expert advice on social media shape investor decision-making. Khatik (2021) also confirmed that platforms such as YouTube, Facebook, and Twitter significantly influence investment decisions, while Pandit (2022) found that Nepalese investors are cautious about social media's reliability, but use it to gauge market trends. By contrast, Subramanian (2021) noted that social media significantly impacts young adults' investment choices, particularly in Mutual Funds, Cryptocurrencies, and Stocks.

Hypothesis Formulation

The observation of a significant correlation between information on online social media and investment choices highlights the evolving role of digital platforms in shaping investor behavior. This finding aligns with previous research, which underscores the crucial role of online social media as a primary channel for information dissemination, particularly among individual investors. Individuals' investment decisions are significantly influenced by the behavior of online communities on social media. A company's image of online social media significantly affects investment decisions. Investors tend to achieve substantial returns when they purchase stocks of companies with significantly improved reputations on social media. Håkansson and Witmer (2015) showed that an individual's intention to use online social networking sites significantly influences their stock market investment decisions.

H_1: Online community groups have a significant positive impact on investment decisions in the Nepalese capital market.

H_2: Information on social media has a significantly positive impact on investment decisions in the Nepalese capital market.

H_3: Capital market literacy mediates the influence of social media use on investment decisions in Nepalese capital market.

The Mediating Role of Capital Market Literacy

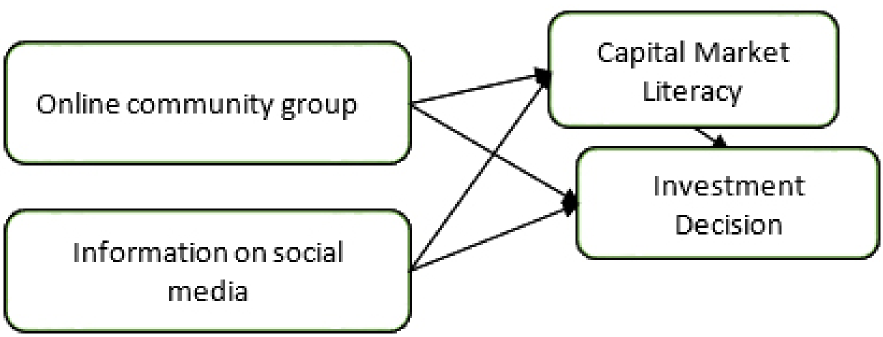
Capital market literacy plays an important mediating role in this context as it determines the level to which investors can critically evaluate and utilize information obtained from social media. Interestingly, while social media can influence investment decisions, the impact is moderated by an individual's level of capital market literacy. This implies that Capital Market Literacy can serve as a buffer, enabling investors to discern and filter social media content effectively. Similarly, Junaidi and Nurhidayah (2023) explored capital market literacy as a mediator between social media and investor behavior and found that clear information on social platforms promotes rational investment decisions and increased market participation. This underscores the importance of financial literacy in managing social media's overwhelming data flow but also highlights disparities in access to financial education. However, these studies do not directly address the mediating role of Capital Market Literacy in the context of the influence of social media on investment decisions. Empirical research has primarily focused on capital market literacy (CML) as an independent variable. Studies have shown that financial literacy moderates the relationship between behavioral biases such as overconfidence, heuristics, and investment decisions (Ahmad & Shah, 2022). Moreover, capital market literacy positively impacts investor trading behaviour, especially in recognizing market trends during bearish phases (Junaidi & Nurhidayah, 2023).

Conceptual Framework

The conceptual framework aims to analyze how social media and Capital Market Literacy influence investment decisions. The dependent variable in the research is the observed variable, while investment behavior is the main outcome or response variable, referring to individual decisions regarding investments. Researchers have manipulated the independent variable social media influence on the investment behavior of individual investors. The study's mediating variable, Capital Market Literacy, serves as a link or mechanism influencing the relationship between social media and investment behavior.

Figure 1

Conceptual Framework



Investment Decision

Investment decisions constitute the primary outcome or response variable, subject to investigation. It encapsulates individual selections pertaining to investments, including the acquisition or divestiture of financial assets. Investment choices denote the evaluative process undertaken by individuals or organizations to appraise and differentiate among various investment alternatives predicated on anticipated returns, risk profiles, and congruence with their financial aspirations. This decision-making framework generally necessitates the examination of financial data, prevailing market conditions, and personal or organizational investment objectives to allocate resources in a manner that optimizes financial returns while mitigating associated risks (Afiqah & Sabri, 2016). Investment decisions serve as the dependent variable within the research, representing a fundamental concept in both research methodology and experimental design.

Social Media Influence

Social Media Influence serves as the independent variable in the present analysis, denoting the degree to which social media platforms (including Facebook, Twitter, Instagram, YouTube, and LinkedIn) impact or mold students' investment decisions (Pandit & Vaidya, 2022). Specifically, social media platforms act as channels for disseminating information that can shape investor behavior by either reinforcing existing biases or introducing new perspectives. This influence is measurable through a variety of key metrics, such as the accessibility and volume of information on social media, level of Engagement in Online Community Groups, and perceived Company Image formed through these platforms. These factors are critical for determining how students perceive market trends and make investment choices. Each of these variables constitutes an essential part of the broader independent variable framework within the study, reflecting the multifaceted role that social media plays in modern investment behavior. The independent variable in any research design represents a factor that researchers purposefully alter or manipulate to observe its potential effects on other variables. By modifying or analyzing the level of social media influence, researchers aim to assess their direct impact on students' investment decisions. It is often described as the "cause" because it is expected to have a measurable effect on the dependent variable, which is the investment behavior or decision-making process of students in this context. Therefore, understanding the dimensions of the independent variable is crucial for isolating its role in shaping the financial choices of young, tech-savvy investors (Pandit & Vaidya, 2022).

Capital Market Literacy

Capital Market Literacy refers to the knowledge and comprehension of how capital markets function, encompassing an understanding of various investment products, such as stocks, bonds, mutual funds, and other securities. This form of literacy equips individuals with essential tools to analyze market trends, evaluate investment opportunities, and make informed decisions that align with their financial goals. Furthermore, it enables individuals to assess and mitigate the risks associated with market fluctuations, helping them avoid impulsive or emotionally driven investment choices (Lusardi & Mitchell, 2013). Capital Market Literacy plays a crucial role in fostering financial independence and long-term wealth creation by enhancing understanding of financial instruments and the market's operational mechanisms. In this study, Capital Market Literacy is treated as a mediating variable, which acts as a bridge that helps clarify the relationship between social media influence (the independent variable) and students' investment decisions (the dependent variable). A mediating variable is integral to providing a deeper explanation of how and why the two variables are related. Capital Market Literacy may reveal how social media influences students' investment decisions by shaping their financial understanding and risk evaluation. It sheds light on whether increased exposure to investment information on social media enhances students' financial literacy, which in turn affects their investment choices. This intermediary role of Capital Market Literacy offers critical insights into the process that underlies the observed relationship between social media influence and investment decision making, adding a layer of complexity to the analysis (Lusardi & Mitchell, 2013).

Methods and Procedures

This study employed a quantitative methodology in which descriptive and causal-comparative research approaches were used to examine the influence of social media on the investment behavior of individual investors in Nepal. It uses capital market literacy as a moderating variable to test the hypotheses and to gather empirical evidence. The study encompassed individual investors who were actively engaged in Nepal's capital market, and the sample of investors was chosen using a purposive sampling technique. This was related to the individuals who had conducted at least one investment transaction in the previous year. Purposive sampling was used to focus on investors who utilize social media for decision making, allowing for the collection of valuable insights into the impact of social media on investment behavior. A sample of 384 investors was selected, targeting investors with varying levels of market knowledge and strategies. A diverse range of perspectives on the influence of social media information, online community behavior, and firm image on decision-making processes were captured. This method gathers data on social media platforms and capital market literacy, allowing for a comprehensive analysis of these variables on investment behavior. The structured questionnaires were multiple-choice and Likert scales, adhering to ethical guidelines and confidentiality, and identifying data anonymized or removed. To analyze the data, Cronbach's alpha reliability tests were performed, and the demographic characteristics were analyzed using descriptive statistics. This study employed regression analysis to investigate the impact of social media on individual investors' investment decisions in the Nepalese capital market. Regression was determined to be the best approach for conducting hypothesis tests because it made it possible to estimate and model the relationships between the variables. The software used for data analysis was the SPSS 27.

The following model was used to ascertain the effect of online community group (OCG) and information on social media (ISM) on investment decisions (ID).

$$IB = \alpha + \beta_1 OCG + \beta_2 ISM + \varepsilon_i$$

Similarly, the model that shows the moderating role of capital market literacy (CML) in the relationship between social media and investment decision (ID) in Nepalese capital market, expressed as,

$$ID = \alpha + \beta_1 OCM * CML + \beta_2 ISM * CML + \varepsilon_i$$

Reliability and Validity

To evaluate the reliability of the questionnaire, Cronbach's alpha was used to ensure accuracy and consistency. The self-administered nature of the instrument, in conjunction with the continuous monitoring of participant-provided data, further substantiated its reliability. The investigation demonstrated high internal consistency across several variables, including online community groups, social media information, capital market literacy, and investment decisions. Cronbach's alpha values exceeding 0.70 for these variables indicate strong correlations between the items and a comprehensive assessment of the constructs.

Results

Respondents Profile

The responses of 384 respondents were used for the additional analysis. Male respondents made up 58.10 percent of the sample, whereas female respondents made up 49.90 percent. The majority of respondents (43.23 percent) were between the ages of 26-35, with 23.96 percent falling between the 36-45 age range. Similarly, most respondents had a bachelor's degree (48.96%), followed by 23.70 percent (intermediate) and 21.35 percent (master's degree). Most respondents used Facebook (57.80%), followed by Instagram (30.70%), and Twitter (6.30%) as sources of information related to investment. Regarding investment experience, the majority of respondents (48.40 percent) had intermediate experience, followed by 29.20 percent beginners, 21.60 percent advances, and only 8% of respondents were experts in the capital market. Table 2 lists the sample profile specifics.

Table 1

Respondents Profile

Description		No. of Respondent	Percentage
Gender	Male	223	58.10%
	Female	161	49.90%
Age	18-25	65	16.92%
	26-35	166	43.23%
	36-45	92	23.96%
	46-55	37	9.63%
	Above 55	24	6.25%

Mostly used social media	Instagram	118	30.70%
	Facebook	222	57.80%
	Twitter	24	6.30%
	Other	20	5.20%
Academic Qualification	SEE/SLC	18	4.68%
	Intermediate	91	23.70%
	Bachelor	188	48.96%
	Marter's	82	21.35%
	MPhil/PhD	5	1.30%
Investment Experience	Beginner	122	29.20%
	Intermediate	186	48.40%
	Advanced	83	21.60%
	Expert	3	8.00%

This table presents a comprehensive analysis of respondents' demographic characteristics, social media utilization, educational attainment, and investment experience. The data facilitates an understanding of the distribution of key factors that may influence behavior and preferences within the context of social media engagement and investment practices.

Table 2

Model Summary

Variable	R	R square	Adjusted square	R Square change	P-value
Model 1	0.557	0.310	0.306	0.310	0.000
Model 2	0.640	0.409	0.404	0.099	0.000

a. Predictors: (Constant), Online Community Group, Information on Social Media

b. Predictors: (Constant), Online Community Group, Information on Social Media, Capital Market Literacy

c. Dependent Variable: Investment Decision

This table presents the results of the two regression models, illustrating the relationship between independent and dependent variables. The R and R^2 values indicate the models' strength and explanatory power, with Model 2 demonstrating a superior fit compared to Model 1. The Adjusted R^2, which accounts for the number of predictors, corroborates that Model 2 explains a greater proportion of the variance. Both the models exhibited a statistically significant p-value of 0.000. This table elucidates the explanatory power of the models and demonstrates how the inclusion of additional variables enhances predictive capability.

Model 1 shows that online community groups and information on social media have a moderate positive correlation (R = 0.557) with investment decisions. The R- value of 0.310, explaining 31% of the variance in investment decisions, is explained by information on social media and online community groups with statistical significance (p = 0.000). When Capital Market Literacy was added to Model 2, the correlation increased (R = 0.640), improving the explanatory power to 40.9% (R^2 = 0.409) with an Adjusted R^2 of 0.404, and adding 9.9% more explanatory power. Both models are statistically significant, but Model 2, which includes Capital Market Literacy, provides a better fit, explains a larger portion of the variance, and shows a stronger correlation.

Table 3

Regression Analysis for Mediation of Capital Market Literacy between Independents and Dependent Variable

Model	Variable	B	95%CI	SE B	Beta	t	p-value
Model 1	(Constant)	1.300	[0.956,1.645]	0.175	-	7.416	0.000
	Information on social media	0.241	[0.125, 0.328]	0.241	0.207	4.079	0.000
	Online community group	0.431	[0.328, 1.064]	0.052	0.417	8.220	0.000
Model 1	(Constant)	0.714	[0.363, 1.064]	0.178	-	4.003	0.000
	Information on social media	0.193	[1.084, 0.301]	0.055	0.165	3.498	0.000
	Online community group	0.309	[0.208, 0.409]	0.051	0.298	6.053	0.000
	Capital market literacy	0.322	[0.243, 0.401]	0.040	0.347	7.985	0.000

Dependent Variable: Investment Decision and CI: Confidence Interval

The table presents the results from two regression analyses, demonstrating associations between various predictors (social media information, online community group participation, and capital market literacy) and a response variable. Key statistical measures included are unstandardized coefficients (B), indicating the change in the dependent variable per unit increase in each predictor; standard errors (SE B), reflecting the uncertainty of these estimates; and standardized coefficients

(Beta), representing the relative magnitude of each predictor's relationship with the dependent variable. Furthermore, t-values and p-values were used to assess the statistical significance of each variable within the model.

Table 3 shows the impact of online community groups, social media information, and Capital Market Literacy on investment decisions. The regression analysis results indicate that, in Model 1, both information on social media and online community groups have a significant positive impact on investment decisions. The unstandardized coefficient for information on social media was 0.241 ($p = .000$), with a standardized coefficient (beta) of 0.207, indicating a moderate influence. Meanwhile, the Online Community Group had a stronger effect, with an unstandardized coefficient of 0.431 ($p = .000$) and a beta of 0.417. In Model 2, when Capital Market Literacy is added, all variables remain statistically significant. The effect of information on social media diminished slightly ($B = 0.193$, beta = 0.165, $p = .001$), and the influence of the Online Community Group also decreased ($B = 0.309$, beta = 0.298, $p = .000$). However, Capital Market Literacy emerged as the most influential factor with an unstandardized coefficient of 0.322 ($p = .000$) and the highest beta value (0.347). The confidence intervals for all variables indicate consistent positive effects across both models, with Capital Market Literacy proving to be the strongest predictor of investment decisions. The regression weights for information on social media reduced from Model 1 to Model 2 (0.207 to 0.165) and for the online community group reduced from Model 1 to Model 2 (0.417 to 0.298), but remained significant, which confirmed partial mediation. More specifically, information on social media and online community groups has both direct and indirect effects on investment decisions.

Discussion

The significant positive relationship between online community groups and investment decisions supports the findings of previous studies on the growing influence of online platforms on individual investment behavior. This finding emphasizes the importance of social media and online forums as influential sources of information for investors, suggesting that these virtual communities facilitate investment strategy sharing, market trend discussions, and collective decision-making. Future research should investigate the specific mechanisms through which online community groups impact investment choices, and examine the associated risks and benefits of relying on these platforms for financial decisions. Håkansson and Witmer (2015) affirmed the critical role of online social media in disseminating information to investors. Social media and online communities enable the exchange of information, ideas, and strategies, thus influencing investment decisions. These communities often foster collective intelligence and shared decision making, with their interactive nature allowing real-time discussions and market analysis, potentially leading to more informed investments. The accessibility of online communities has democratized investment knowledge, helping novice investors to learn from experienced traders and experts. Haque et al. (2022) support this by noting that online community groups' features, such as precise, high-volume, and real-time information flows, significantly aid in spreading investment knowledge, making online communities effective in providing up-to-date information for swift, accurate decisions. Consequently, investors increasingly engage with online communities to remain informed about investment opportunities, highlighting the critical role of online platforms in navigating market trends and making informed decisions. However, these communities pose the risk of information overload and misinformation, potentially misleading inexperienced investors. The rapid spread of unverified information can cause market volatility and herd behavior, leading to suboptimal choices. Echo chambers within these communities may reinforce cognitive biases and limit exposure to diverse perspectives, impeding objective decision making. In the Nepalese capital market, the relationship between social media and investment decisions is partially mediated by capital market literacy as indicated by Junaidi and Nurhidayah (2023). Their research shows that capital market literacy mediates the relationship between investment decisions and social media, enhancing investor trading behavior, especially in identifying market trends during periods of negative performance (Junaidi & Nurhidayah, 2023). To make informed investment decisions, investors must possess adequate capital market literacy by utilizing information from online community groups and social media platforms.

Conclusion

This study elucidates the significant impact of social media platforms and online community forums on the investment decisions of individual investors, with financial market knowledge serving as a partial mediator. The findings indicate that Facebook is the predominant platform among investors, primarily young adults with moderate investment experience and tertiary education. The observed positive correlation between social media utilization, engagement in online community groups, and investment decisions underscores the transformative effect of digital platforms on the investment landscape. The investigation also demonstrates that while social media and online communities function as valuable resources for information dissemination and decision making, the extent of financial market knowledge plays a crucial role in optimizing the benefits derived from these platforms. Investors with higher levels of financial literacy demonstrate greater capacity to comprehend and apply online information effectively, resulting in more informed and rational investment decisions. These findings emphasize the importance of targeted initiatives to enhance financial market literacy among individual investors and ensure that they can effectively navigate the digital investment environment. Government agencies, financial institutions, and educational organizations should prioritize the development of programs that address knowledge deficits and promote informed investment practices.

Further research is recommended to explore the long-term effects of social media on investment outcomes by examining how various platforms and content types influence investment strategies. Moreover, studies could investigate the influence of demographic and cultural factors on the utilization of online platforms for investment purposes, further enhancing the understanding of this dynamic phenomenon.

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Student Dropout Trends and Causes in Higher Education: The Case of Kailali Multiple Campus

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Abstract

This study examines the present situation and major causes of student dropout in higher educational institutions. Kailali Multiple Campus located in Kailali district of Nepal was selected for the study. The study utilized a quantitative research approach with a descriptive case study research design. Secondary and primary data were applied to analyze the trends of dropout and the influencing factors behind it. The secondary data source was students' enrollment and presence in the campus final examination record; primary data were collected from the dropout students using a structured questionnaire. The study's findings demonstrated that compared to programmes like MBA, BALLB, BBA, BBM and B.Sc. CSIT, students drop out from general programmes like BBS, BA and B.Ed. are more frequent. The study found the primary cause of student dropout is weak economic conditions. Additionally, the survey of the dropout students shows that the majority of dropout students had been getting ready to travel abroad. The implication of this research consists of providing crucial perspectives for policymakers in education, aiding establishments in enhancing academic and infrastructure standards, encouraging community engagement and directing students' choices.

Keywords: Causes of dropout, educational institutions, faculties, descriptive

Introduction

Student dropout rates in higher education institutions continue to be a chronic and problematic issue, creating major barriers to academic success on an individual basis, institutional success and social advancement (Aina et al., 2021). Even with greater accessibility to higher education, a major proportion of students begin their academic journeys only to abruptly leave the programmes they have selected. In addition to impeding the afflicted persons' personal and professional development, this dropout tendency also adds to the reduction of the prospective workforce, which impedes social and economic advancement (Mouton et al., 2020).

A notable number of students encounter academic obstacles that compromise their capacity to continue their education beyond high school. These obstacles include challenges adjusting to the demanding nature of the curriculum, inadequate preparation for coursework, and a dearth of necessary academic support (Mouton et al., 2020). Similarly, financial limitations remain a formidable obstacle to completing an education; the rising cost of tuition combined with living expenses forces many students to make the difficult decision to drop out of campus. Problems with social integration, feelings of isolation, and cultural disparities also play a major role in the high dropout rate (Araque et al., 2009). Finally, the absence of a supportive community and the incapacity to navigate a diverse and inclusive educational environment aggravate these challenges.

Access to and caliber of support services are critical components of higher education institutions' capacity to keep students. A sense of alienation and separation is a major contributing factor to dropout rates, which are ultimately caused by inadequate academic advising, counseling, and other forms of assistance (Johnson, 1997).

Higher education institutions worldwide struggle to keep students enrolled for the duration of their degrees. According to the University Grant Commission (UGC) Nepal, in higher education (HE), dropout rate is a serious issue in Nepal. Individuals, colleges and the socioeconomic system are all severely harmed by student dropout rates. As such, one of the biggest challenges facing HE institutions is reducing educational dropouts. Therefore, the first step in minimizing student dropout is understanding the factors that influence student dropout.

The issue of student dropout threatens the efficacy of higher education systems as a whole, affecting student outcomes, institutional performance, and social progress. Troelsen and Laursen (2014) stated that the financial difficulties that many students face include growing tuition fees, restricted access to scholarships, and inadequate financial assistance choices. Students have been giving priority to jobs over campus due to financial problems. The academic challenges of higher education can pose issues for students, including insufficient basic skill preparation and difficulties in adapting to the academic environment (Araque et al., 2009). Smith and Naylor (2005) argued that experiencing academic difficulties can lead to several outcomes, including academic probation, feelings of despair, and ultimately, the possibility of dropping out.

Kailali Multiple Campus (KMC) is one of the renowned and oldest higher education institutions in Sudurpashchim Province. The campus has been providing multiple academic programs with experienced teaching staff. The campus also provides scholarship facilities to those with weak economic backgrounds and excellent students. The infrastructure of the campus is also comparatively better. However, the dropout of students on this campus is a prominent issue. So, the present study is concerned with analyzing the trend of student dropout and its causes. This study investigates the current situation and student's dropout at KMC. The specific objectives are:

1. To analyze the program-wise and overall dropout trend of students at KMC
2. To analyze the factors affecting the students dropping out at KMC

Literature Review

Troelsen and Laursen (2014) studied the variables affecting dropout rates in Denmark. Two theories, in their opinion, have an impact on dropout rates. The first theory holds that parental education and socioeconomic status have an impact on dropout rates. According to the second theory, student dropouts are a result of Danish government policies on education, which force students to switch universities, enroll in different study programs, or decide not to pursue their education at all. Pérez et al. (2018) talked about the Colombian dropout students' prediction analysis. The demographics of students and their transcript histories are the factors that influence student dropout rates in Colombia. The factors that result have a strong impact on dropout students and are used to predict dropout students.

Chen et al. (2018) investigated dropout predictions in the US as well. Chen's study employed data from high school, demographics, college enrollment, and information per semester to predict dropout. The rationale behind using these factors in predictions is not made explicit. Nonetheless, the chosen factors strongly influence student dropout rates, according to the analysis's findings.

Mouton et al. (2020) reported that a variety of factors affect German student dropout rates. Usually, a confluence of many causes is the cause. Mouton et al. identified pupil dropouts by using latent class analysis. Based on socioeconomic considerations, academic achievement, academic self-concept, and desire to drop out, the results demonstrate why students drop out of programs or institutions. Based on socio-demographic and academic criteria, Ortiz-Lozano et al. (2020) assessed the factors influencing student dropouts in Spain. The research findings indicate that this variable has a significant impact, yet the rationale for the selection of this variable is not entirely evident.

Aina et al. (2021) mentioned that socioeconomic factors have an impact on the percentage of people who drop out of school. It examines how sociological and economic factors affect students' success using a theoretical model. The review emphasizes that a student's decision to persist in their studies or drop out is impacted by a variety of individual, institutional, and economic factors. Notably, a student's level of integration into the academic system is one of these elements. Policymakers can modify certain things, while others are unchangeable. To improve study performance, effective interventions should concentrate on filling in knowledge gaps and strengthening students' integration into the social and academic spheres.

Lorenzo-Quiles et al. (2023) argued that university dropout is a significant issue that affects students globally. Addressing this problem is crucial for improving the education system and reducing dropout rates. The research uses both quantitative and qualitative methods to explore the issue. The study aims to analyze student satisfaction, identify the causes of dropout, and review literature and databases to find relevant authors on the topic. Five major factors contributing to university dropout are identified: student adaptation, personality, socio-economic level, teacher-student relationships, and the quality of education. Additional sub-causes, such as demotivation, low self-esteem, and personal issues like pregnancy, are also important for understanding and addressing dropout.

Different studies related to students' drop in higher education show that different nations have different views on the importance of education, and support systems. As a result, a wide range of circumstances might contribute to a student's academic success or failure. As a result, the factors affecting student dropout are tailored to the circumstances of the nation. Furthermore, it is still necessary to ascertain the correctness of the variables because the factors influencing dropout students in the current research do not originate from direct information from dropout students. This study attempts to uncover the elements that influence dropout students in higher educational institutions. It is crucial to comprehend the characteristics that affect students' dropout rates. Direct information from students who have dropped out of college is the main basis for this research's determination of the reasons behind these decisions, which is then supported by validation from stakeholders and the general public. The majority of Nepal's higher education institutions have been dealing with the issue of student dropout.

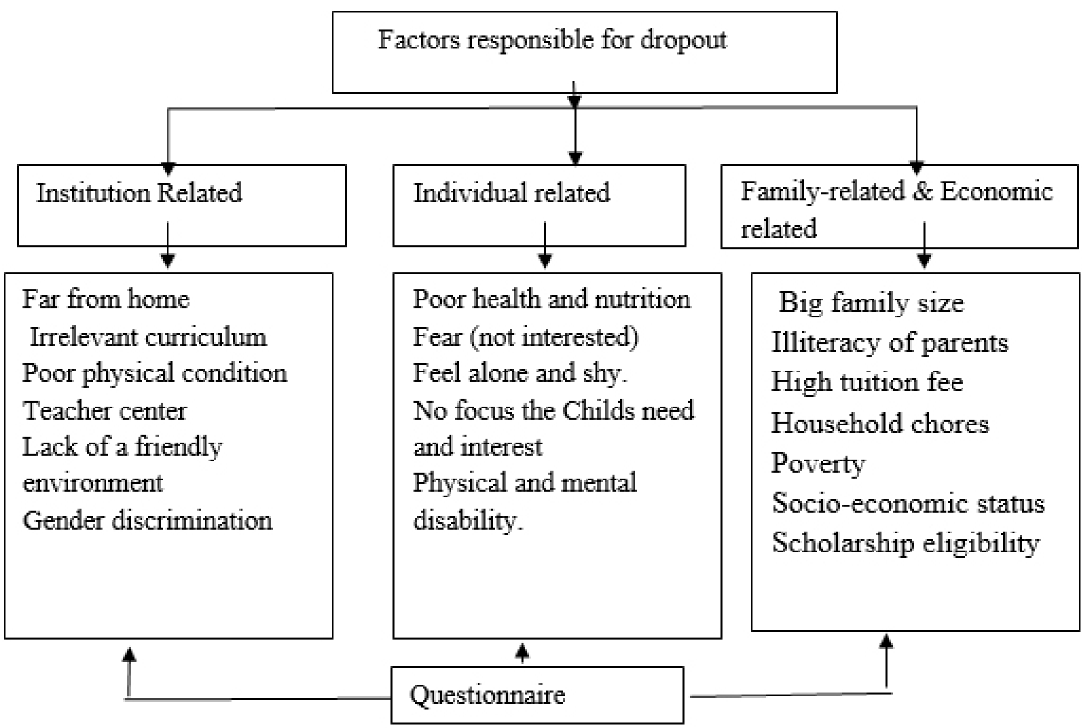
One of the main challenges faced by KMC is the high number of students who leave college before completing their bachelor's or master's degree. So far, no studies have been conducted on student dropout at KMC. Examining the variables that drive high dropout rates in KMC, this study has bridged the gap. Direct information from students who have dropped out of college is the main basis for this study.

Conceptual Framework

According to the relevant research studies mentioned above, a few are pushing and pulling factors that cause students to leave college. Numerous factors have been mentioned in the empirical studies on the subject of reasons behind student dropout, including Johnson (1997), Smith and Naylor (2005), Chimka et al. (2008), Werblow (2009), Guimaraes (2010), Min et al. (2011), and Perez et al. (2018). These can be divided into categories such as family background, socioeconomic status, types of education, instruction medium, distance between the campus and the student's home and surroundings, teaching methodology, interest/need, and health of the student, among others. These are the factors that are connected to student enrolment, achievement, repetition, irregularities, and dropout rates. Interventions must be implemented in these areas if students are to have better access to and performance in their education from the variables listed below.

Figure 1

Conceptual Understanding of this Study



Methods and Procedures

This section of the study incorporates research design, population and sample, methods of analysis and variables used in the study.

Research Design

The study employed a quantitative research approach with a descriptive case study design. Descriptive statistical tools were used to analyze the secondary data. Furthermore, the secondary data were used to determine the rate of students' dropout in higher education institutions, whereas primary data were utilized to analyze the factors affecting student dropout.

Population and Sample

The population of the study is total dropout students of the last five years from KMC. 127 students were traced out but only 33 students gave responses for conversation, so the sample size of the study is 33 dropout students. A purposive sampling technique has been employed.

Sources of Data

The primary data, as well as secondary data, have been collected from KMC. The source of secondary data is the record of the student's enrollment and appearance in the final examination. The source of secondary data is the website www.kmcpaathshala.com. The primary data were collected from the structured questionnaire by telephone conversations with dropout students.

Data Analysis Tools

Frequency tables, bar diagrams, and charts have been used to analyze the data.

Results and Discussion

Empirical data collected from secondary as well as primary sources have been presented and analyzed in this section.

Table 1

Students Enrollment and Dropout of Admission Batch 2075/2076

Program	2075/076		2076/077		2077/078		2078/079			
	Total Students	Dropout	Total Students	Dropout	Total Students	Dropout	Total Students	Dropout	Total Dropout	% Drop
BBS	692	60	632	104	528	61	467	25	250	36.13
BA	497	48	449	89	360	44	316	0	181	36.42
B.Ed.	222	22	200	36	164	22	142	18	98	44.14
BSC	45	7	38	5	33	3	30	0	15	33.33
BBM-Sem	61	0	61	0	61	0	61	0	0	0.00
BBA-Sem	19	0	19	0	19	0	19	0	0	0.00

One Year B.Ed.	52	0	52	0	52	0	52	0	0	0.00
M.Ed.	64	0	64	0	64	0	64	0	0	0.00
MA	96	0	96	16	80	9	71	3	28	29.17
MBS-	124	0	124	14	110	4	106	0	18	14.52
MBA-Sem	4	0	4	0	4	0	4	0	0	0.00
Total	1876								590	31.45

Table 1 shows the B.Ed. program has the highest (44.14%) dropout rate, with a significant percentage of students dropping out over the years. MBA-Sem, BBM-Sem, BBA-Sem, One Year B.Ed., and M.Ed. programs have no dropout rates (00.00%), suggesting either very high retention. The overall dropout rate across all programs is 31.45%. This figure gives a general sense of student retention across the various programs listed. In BBS, BA, and BSC programs have shown relatively consistent dropout rates over the years, with BBS and BA having dropout rates around 36 percent, and BSC having a lower rate of 33.33 percent at the bachelor level. The dropout in MA fluctuated from 0 percent to 29.17 percent, indicating a change in student retention or reporting practices. Similarly, MBS had a significant drop in dropout rates from a higher rate of 14 percent in 2076/077 to percent in 2078/079. Different programs show varied dropout rates, which might be due to program-specific factors such as curriculum difficulty, student support services, or changes in program structure. Some programs, like MBA-Sem and M.Ed., show no dropout rates across the years. This could indicate very effective retention strategies.

Table 2

Students Enrollment and Dropout of Admission Batch 2076/2077

Program	2076/077		2077/078		2078/079			
	Total Students	Dropout	Total Students	Dropout	Total Students	Dropout	Total Dropout	% Drop
BBS	801	152	649	146	503	0	298	37.20
BA	483	73	410	80	330	0	153	31.68
B.Ed.	342	70	272	39	233	0	109	31.87
B.Sc.	48	6	42	5	37	0	11	22.92
BBM-Sem	88	0	88	1	87	0	1	1.14
BBA-Sem	33	0	33	0	33	0	0	0.00
One Year B.Ed.	0	0	0	0	0	0	0	0.00

M.Ed.-Semester	40	0	40	0	40	0	0	0.00
MA Semester	60	2	58	0	58	2	4	6.67
MBS-Semester	161	8	153	16	137	1	25	15.53
MBA-Sem	3	0	3	0	3		0	0.00
Total	2059						601	29.19

Table 2 depicts the BBS program has the highest (37.20 %) dropout rate among the programs listed. The BBM programme has the lowest (1.14%) dropout rate, indicating a very high retention rate. The overall dropout rate across all programs is 29.19 percent. In the programs, BA (31.68%) and B.Ed. (31.87%) both have similar dropout rates, showing consistent challenges with student retention. The BSC (22.92%) shows a significantly lower dropout rate compared to other programs. The MA (6.67%) exhibits a very low dropout rate, suggesting effective student support or a smaller program size. M.Ed.-Semester and One Year Bed (0.00%) no reported dropouts, potentially reflecting complete retention. BBA-Sem, MBA-Sem, and One Year B.Bd. programs show no dropout data, which could be due to effective retention strategies. Comparing this dataset to the previous academic batch shows a slight overall decrease in dropout rates. This might indicate improvements in student retention strategies or changes in student enrollment patterns. Programs like BBS and MA show a significant variance in dropout rates compared to others. This could be related to differences in program content, student support, or academic pressures.

Table 3

Students Enrollment and Dropout of Admission Batch 2077/207

Faculty	1st Sem -2078	2nd Sem 2079	Dropout	3rd Sem 2079	Dropout	4th Sem 2080	Dropout	Total drop	% drop
BBS-FWU	625	489	136	418	71	365	53	260	41.60
BA	662	569	93	446	123	365	81	297	44.86
B.Ed.	334	297	37	255	42	221	34	113	33.83
BSC	41	36	5	35	1	35	0	6	14.63
BBA	84	83	1	72	11	67	5	17	20.24
BALLB	44	37	7	35	2	35	0	9	20.45
B.Sc. CSIT	47	45	2	44	1	41	3	6	12.77
M.Ed.	25	22	3	20	2	20	0	5	20.00
MA	96	75	21	67	7	68	0	28	29.17
MBS-Sem	96	80	16	73	7	72	1	24	25.00
MBA	19	14	5	14	0	14	0	5	26.32
Total	2073	1747	326	1479	268	1303	176	770	37.14

Table 3 reveals that BA faculty has the highest (44.86%) dropout rate, indicating significant challenges with student retention. B.Sc. CSIT faculty has the lowest (12.77%) dropout rate, reflecting relatively better student retention. The overall dropout rate across all faculties is 37.14 percent. This represents the percentage of students who dropped out over the semesters. BBS-FWU shows a high and relatively consistent dropout rate over the semesters, suggesting ongoing issues with student retention. B.Ed. exhibits a stable dropout rate with only minor fluctuations. BA shows a high dropout rate with fluctuations, peaking in the 3rd semester. MA the dropout rate decreases over time, with a final rate of 29.17 percent. The negative dropout value in the 4th semester might indicate data inconsistencies or errors. B.Sc. (14.63%) and B.Sc. CSIT (12.77%) both faculties exhibit lower dropout rates, suggesting better student retention. BALLB, BBA, and M.Ed. also have relatively lower dropout rates compared to others.

Faculties with higher dropout rates, like BA and BBS-FWU, may need to implement more effective student support and retention strategies would be useful to review and verify this data. The data suggests that while some programs manage to retain students effectively, others face significant challenges, reflecting possible differences in program difficulty, student engagement, and support services.

Table 4

Students Enrollment and Dropout of Admission Batch 2078/2079

Faculty	1st Sem -2079	2nd Sem 2080	Dropout	3rd Sem 2080	Dropout	Total Dropout	% Dropout
BBS-FWU	502	410	92	347	63	155	30.88
BA	546	451	95	358	93	188	34.43
B.Ed.	295	259	36	223	36	72	24.41
B.Sc.	32	27	5	26	1	6	18.75
BBA	81	71	10	67	4	14	17.28
BALLB	44	42	2	42	NA	2	4.55
B.Sc. CSIT	43	41	2	40	1	3	6.98
M.Ed.	39	34	5	NA	NA	5	12.82
MA	137	113	24	NA	NA	24	17.52
MBS-Sem	41	35	6	NA	NA	6	14.63
MBA	9	6	3	NA	NA	3	33.33
Total	1769					478	27.02

Table 4 shows BA faculty has the highest (34.43%) dropout rate among the faculties listed, similar to previous data. In BALLB (4.55%) program has the lowest dropout rate, suggesting high student retention. The overall dropout rate across all faculties is 27.02 percent, showing a decrease compared to previous totals. BBS-FWU shows a relatively high and consistent dropout rate over the semesters. B.Ed. Exhibits a stable dropout rate with a slightly lower final rate. BA Maintains a high dropout rate with significant numbers dropping out across semesters. MBA despite the small number of students, shows a notable dropout rate (33.33%). B.Sc. (18.75%) and B.Sc. CSIT (6.98%) both have lower dropout rates, indicating better retention compared to other faculties. M.Ed. (12.82%) shows a relatively low dropout rate as well. BALLB, MA, and MBS-Sem data for the 3rd semester and beyond are not available or marked as NA (not available), which could affect the accuracy of the dropout rate calculation.

There is a decrease in the overall dropout rate from previous datasets, suggesting possible improvements in student retention strategies or changes in program dynamics. Faculties with high dropout rates such as BA and BBS-FWU may need targeted interventions to address the factors contributing to student attrition. Missing data for some programs in later semesters can limit the completeness of the dropout rate analysis

Table 5

Students Enrollment and Dropout of Admission Batch 2079/2080

Faculty	1st Sem -2080	2nd Sem 2080	Total Dropout	% Dropout
BBS-FWU	314	268	46	14.65
BA	282	239	43	15.25
B.Ed.	301	267	34	11.30
B.Sc.	37	33	4	10.81
BBA	89	86	3	3.37
BALLB	46	46	0	0.00
B.Sc. CSIT	46	43	3	6.52
Total	1115		133	11.93

Table 5 depicts that BBS-FWU has a relatively high dropout rate compared to other faculties. The rate is notably higher than the overall average of 11.93 percent, suggesting possible challenges in student retention for this program. The BA program has the highest dropout rate among the listed faculties. This could indicate difficulties with the program's structure, content, or student support systems. The dropout rate for B.Ed. is slightly above the overall average, but it is lower compared to BBS-FWU and BA. This suggests a relatively better retention rate, though there may still be room for improvement. B.Sc. has a lower dropout rate compared to most other faculties. BBA has the lowest dropout rate among all faculties. This suggests excellent student satisfaction and support, or possibly a more effective program structure that retains students well. BALLB shows a perfect retention rate with no dropouts. This could indicate either exceptionally high student satisfaction and program effectiveness or perhaps a very selective admission.

Table 6

Program-wise Enrollment and Dropout of the Last 4 Academic Batches

Academic Programs	Program Wise Enrollment	Program wise Dropout	% Dropout
BBS	2620	963	36.76
BA	2188	819	37.43
B.Ed.	1193	392	32.86
B.Sc.	166	38	22.89
BBM-Semester	314	19	6.05
BBA-Semester	140	23	16.43
One Year B.Ed.	142	6	4.23
M.Ed.-Semester	168	10	5.95
MA Semester	389	84	21.59
MBS-Semester	422	73	17.30
MBA-Semester	35	8	22.86
BALLB-Semester	88	11	12.50
B.Sc. CSIT-Semester	90	9	10.00
Total	7955	2455	30.86

Figure 2

Program-wise Enrollment and Dropout

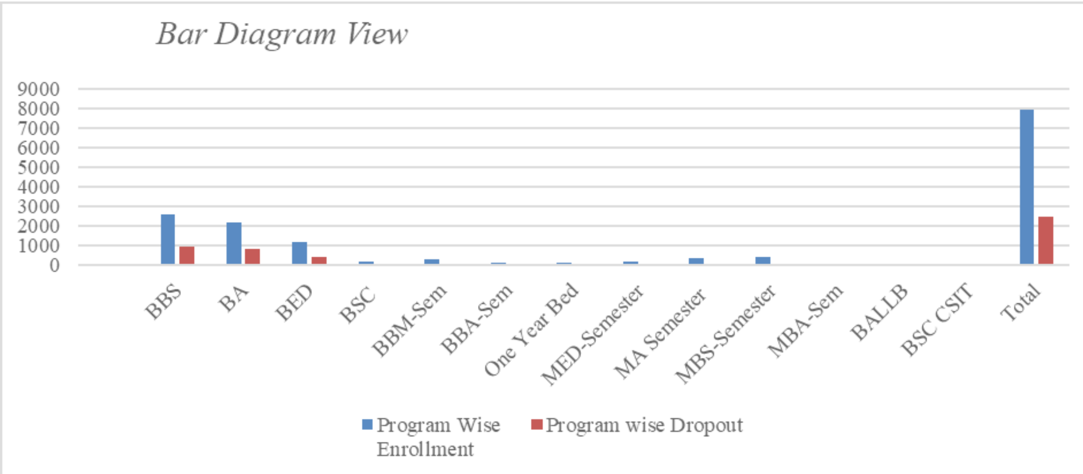


Table 6 and Figure 2 show the program-wise dropout of 4 academic batches selected for the study. BBS and BA show high dropout rates, suggesting a need for comprehensive review and improvement. Potential areas for investigation include curriculum design, academic support, student engagement, and external factors influencing student retention. B.Ed., B.Sc., MA Semester, and MBS-Semester have moderate dropout rates. These programs may benefit from targeted improvements based on specific feedback and retention analysis. BBM-Sem, BBA-Sem, One Year B.Ed., M.Ed.-Semester, and B.Sc. CSIT have lower dropout rates. These programs might have effective practices that could be adapted for other programs. BALLB and One Year B.Ed. have meager dropout rates, indicating high effectiveness in retaining students. Best practices from these programs could be explored and shared with other faculties.

Table 7

Total Student Enrollment and Dropout of the Last 5 Academic Batches

Admission batch	Total Students enrolled	Total dropout	% Dropout
2075/076	1876	590	31.45
2076/077	2059	601	29.19
2077/078	2073	770	37.14
2078/079	1769	478	27.02
2079/080	1115	133	11.93

Total	8892	2572	28.92

Table 7 shows the batch-wise total dropout of students. Batches 2075/076, 2076/077, and 2077/078 have higher dropout rates. These batches should be closely examined to identify specific issues that led to higher dropout rates. Factors to investigate might include changes in program structure, student support services, external economic factors, or changes in student demographics. Batch 2078/079 has a moderate dropout rate, indicating some improvement but still areas needing attention. Batch 2079/080 shows a significant improvement in retention. Analyzing what changes or improvements were made during this period could provide valuable insights for further reducing dropout rates in future batches.

Table 8

Major Causes of Student Dropout

Reasons	Frequency	Percent
Better job opportunity	1	3.00
Economic issue	14	42.40
Family-related	1	3.00
Further study	2	6.10
Economic issue	1	3.00
Irrelevant curriculum	7	21.20
Missed exam form	1	3.00
Personal reason	1	3.00
Physical and mental disability	2	6.10
Social factor	3	9.10
Total	33	100

Table 8 shows that economic issues are the most common reason for dropouts, accounting for nearly half of the cases. This suggests that financial challenges are a significant barrier for students, highlighting the need for financial aid, scholarships, or other economic support mechanisms. A significant portion of students cited the curriculum as irrelevant. This indicates that the curriculum may not be meeting students' expectations or needs. Reviewing and updating the curriculum to better align with industry demands and student interests could help reduce this issue. Social factors, which might include peer influence or social environment issues, contribute to dropout decisions. Addressing social aspects and fostering a supportive community could mitigate this issue. Some students leave to pursue further studies. While this reason is less common, it suggests that students might be seeking more advanced or specialized education opportunities. Disabilities, both physical and mental, contribute to dropouts. Enhancing support services for students with disabilities can help improve retention and provide a more inclusive educational environment. Securing a better job opportunity is a less common reason but indicates that some students might leave school for employment that offers immediate benefits. Family-related issues are another reason for dropout, suggesting that personal or family circumstances can significantly impact students' ability to continue their education. Income issues are related to economic issues but might reflect more specific financial challenges that are not directly tied to general economic conditions. Administrative issues like missed exam forms are rare reasons but highlight the need for better administrative support and communication. Personal reasons, which are often unique to individual circumstances, also contribute to dropout rates. Personalized support might help address such issues.

Table 9

Current Position of Dropout Students

Current Position	Frequency	Percent
Abroad	2	6.1
Involve in job	6	18.2
Preparing for a foreign country	13	39.4
Married	3	9.1
Housework	8	24.2
Preparation for Loksewa	1	3
Total	33	100

Table 9 shows that a significant portion of dropouts (39.4%) is engaged in preparing for moving to a foreign country. This high percentage suggests that many students are likely leaving their programs to pursue opportunities abroad, which could include further education or employment. About 18.2 percent of dropouts have entered the workforce. This indicates that some students leave their studies to take up job opportunities, possibly due to financial needs or career aspirations. Offering career services and internship opportunities could potentially help students balance work and study. 24.2 percent of dropouts are currently not involved in any specific activity. This could indicate uncertainty or lack of direction after leaving the program. Career counseling and guidance might assist these individuals in finding their next steps. Marriage is a reason for some dropouts. Balancing family life and education can be challenging, so offering flexible study options or support for students with family responsibilities might be beneficial. A smaller number of students are already abroad, which may be related to their preparation for moving or pursuing opportunities. This figure is less significant but still worth noting. A small number of students are preparing for Loksewa, which is a competitive examination for government jobs. This indicates a focus on public sector employment, which might require targeted support or guidance.

When analyzing the trend of program-wise student dropout, it is found that the BBS program had the highest number of students discontinuing their studies followed by the BA and B.Ed. programs. However, there were only a few students who dropped out of the programs such as BBA, BBM, and BALLB. During the COVID-19 pandemic, the dropout rate peaked, with 37.14% of students leaving the campus at that time. The results show dropout rate of students at KMC is in a fluctuating position. The primary reason for students dropping out was economic issues, with about 42.4 percent of respondents discontinuing their studies due to their family's poor economic condition. The second cause is the irrelevant university curriculum. As a result, 21.2 percent of students discontinue their studies due to concerns about job opportunities after completing the program. Among the dropout students, 39.4 percent of the respondents were found to be preparing to go to a foreign country.

Conclusion

The dropout trend in general programs (BBS, BA, B.Ed.) offered by the campus is higher than that of programs like BBA, BBM, and BALLB. However, the dropout ratio is on a decreasing trend. During the COVID-19 pandemic, the dropout rate had increased due to the unbalanced nature of human life at that time. Economic conditions and lack of job opportunities are the main reasons students drop out of campus. The majority of students who drop out are preparing to move to a foreign country for work.

The findings of the study can assist in the development of campus plans and policies aimed at reducing student dropout rates. Further studies can be expanded by selecting more representative samples and including additional campuses in the sample pool. A comprehensive and cooperative approach is needed to address the problem of student dropout. Specific interventions involving academic, financial, social, and institutional aspects must be developed and put into action. Policymakers, educators, and stakeholders must cooperate to establish an atmosphere that supports student achievement, guarantees fair access to education, and gives people the tools they need to overcome obstacles that raise dropout rates in higher education.

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Management Control System and Organizational Performance of Manufacturing Firms in Kailali District

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Abstract

This study examines the relationship between management control systems and the organizational performance of manufacturing firms in Kailali District. Management control system (MCS) is a crucial tool for strategic planning, budgeting, decision-making and internal auditing for the enhancement of organizational performance. The study looks into the effects of these tools on organizational performance. The study evaluates the significance of MCS components using descriptive statistics, correlation analysis and multiple regression using primary data from 20 manufacturing organizations. The results show that internal audits, strategic planning and decision-making have positively and significantly affected organizational performance. However, budget control has a positive relationship but insignificant effect on organizational performance. Among all the management control system dimensions strategic planning has been found most important dimension to affect the organizational performance of manufacturing firms. The findings of the study will be useful to the managers of manufacturing firms for the implementation of management control dimensions. The study added an area of comparison regarding the management control system.

Keywords: Strategic planning, budget control, business performance, internal audit

Introduction

Understanding the complexities and dynamism of the business world is crucial for competitive success, as it encompasses all essential variables and elements. If Management Control System (MCS) is properly developed and structured, it can be viewed as a sustained competitive advantage for the organization and become very important for decision-making (Barney, 1991). MCS is a management tool that facilitates planning, budgeting, analysis, evaluation and assessment of financial and accounting data. This information is important for making informed decisions (Davila & Foster, 2005). "Management control is the process by which managers influence other members of the organization to implement the organization's strategies" (Anthony, 2007, p. 6). The tool used by management to monitor and regulate an organization's operations is called the management control system. Strategic planning, budget control, decision-making, internal audit, etc. are the general tools in the organizational systems of manufacturing firms. Analysis of the relationship between a company's performance and its use of management control systems (MCS) is becoming more popular (Bisbe & Otley, 2004). By providing vital tools for planning, budgeting, analyzing, measuring and evaluating data for informed decision-making, MCS implementation greatly improves business performance (Cosenza & Noto, 2015; Dávila & Foster, 2005; Duhan, 2007).

Manufacturing businesses in Nepal encompass a diverse range of industries as categorized by the Nepal Association of Manufacturers. These include textiles, tobacco, plastics, rubber, timber goods, healthcare equipment, furniture food and beverage processing, and chemicals (Nepal Association of Manufacturers, 2023). The manufacturing sector in Nepal holds significant potential for both large-scale industries and innovative small-scale enterprises. Recognizing its importance, the government has committed to fostering investment in manufacturing to accelerate industrialization and economic growth (Ministry of Industry, Commerce and Supplies, 2022). Key areas of investment include fast-moving consumer goods, apparel, cement, and pharmaceuticals, which contribute substantially to both employment and GDP (Nepal Rastra Bank, 2023).

Nepal's garment industry has witnessed significant growth over the past decade, driven by factors such as affordable labor, supportive government policies, expanding domestic markets, export opportunities, and attractive investor incentives (Nepal Rastra Bank, 2023; Ministry of Industry, Commerce, and Supplies, 2022). Similarly, manufacturing businesses in the Kailali District consist of firms registered with the Kailali Chamber of Commerce and Industry. These enterprises span various industries, including agro-industries, metal and furniture production, garment manufacturing, brick and tile industries, ice cream production, and concrete-related industries (Kailali Chamber of Commerce and Industry, 2023).

The manufacturing sector is a key pillar of Nepal's economy, contributing significantly to employment generation and GDP. Manufacturing activities are vital for the structural transformation of the economy, helping reduce reliance on agriculture and enhancing industrial output (Nepal Rastra Bank, 2023). In the

Kailali district, where industrial activity is gradually expanding, manufacturing firms contribute to regional economic growth and help balance the rural-urban development divide (Ministry of Industry, Commerce and Supplies, 2022).

The Government of Nepal has introduced policies like the Industrial Enterprises Act 2020, offering tax exemptions, customs duty rebates, and simplified registration procedures to encourage investment in the manufacturing sector (Government of Nepal, 2020). Additionally, the Prime Minister's Employment Program and concessional loans aim to alleviate capital shortages for small and medium enterprises, including those in the Kailali district (MoF, 2023).

Despite its importance, the manufacturing sector in Nepal, particularly in regions like Kailali, faces challenges such as inadequate infrastructure, unreliable electricity supply, and bureaucratic inefficiencies (Asian Development Bank, 2022). Furthermore, political instability and frequent policy changes hinder long-term planning and investment (World Bank, 2023). Local firms also struggle with limited access to skilled labor and advanced technology, which affects their competitiveness.

The manufacturing industry is a vital component of any economy, playing a crucial role in driving economic growth and development (Nepal Rastra Bank, 2023). Within this sector, management control systems (MCS) serve as an indispensable tool for monitoring operations and enhancing organizational performance (Anthony & Govindarajan, 2007). Despite substantial investments in MCS by manufacturing firms, the relationship between MCS implementation and firm performance remains insufficiently understood, particularly in developing economies (Ministry of Industry, Commerce and Supplies, 2022). This research aims to analyze the impact of MCS on the organizational performance of manufacturing firms in Kailali District. A management control system (MCS) is a crucial tool for monitoring and improving organizational performance in manufacturing companies, as well as for facilitating the achievement of organizational goals (Anthony & Govindarajan, 2007). However, poor MCS practices in Nepal often result in lengthy decision-making processes, which significantly hinder the efficiency of manufacturing firms (Ministry of Industry, Commerce and Supplies, 2022).

These delays frequently lead to extended project completion timelines, sometimes spanning years beyond the scheduled completion date. Consequently, manufacturing firms experience higher production costs, a decline in market share and goodwill, and a demotivated workforce due to the absence of timely incentives (Nepal Rastra Bank, 2023). This research seeks to address these challenges by examining the impact of MCS on organizational performance in the context of Nepal's manufacturing firms.

Kailali District provides a unique and significant context for this study due to its evolving industrial landscape and strategic location as a gateway to the far western region of Nepal. The district hosts diverse manufacturing firms, including agro-industries, garment factories, and brick and tile manufacturers, which are registered with the Kailali Chamber of Commerce and Industry (Kailali Chamber of Commerce and Industry, 2023). Moreover, Kailali's proximity to the Indian border facilitates trade and export opportunities, making it an important industrial hub in the region (World Bank, 2022). Despite its industrial potential, the district faces challenges such as inadequate infrastructure, frequent power outages, and inconsistent policy support, which exacerbate inefficiencies in MCS implementation (Asian Development Bank, 2022).

Numerous research studies have examined management control system (MCS) practices in the manufacturing and banking sectors of Nepal and other countries. However, there is a noticeable lack of studies specifically focusing on the relationship between MCS and organizational performance in the context of Kailali District (Ministry of Industry, Commerce and Supplies, 2022; Nepal Rastra Bank, 2023). To address this gap, this study analyze the impact of MCS on the organizational performance of manufacturing firms in Kailali District, contributing valuable insights to both academic research and practical applications in the region.

The objective of this study is to investigate the practice of management control systems and assess their impact on the organizational performance of manufacturing firms in Kailali district. To achieve this, the following research questions were explored:

1. Do the manufacturing firms of Kailali district practise a management control system?
2. How does management control system impact the organizational performance of manufacturing firms in Kailali district?

Literature Review

The study of the literature on MCS and organizational performance in manufacturing firms looks at several research that show how MCS improves business outcomes, especially in situations that are competitive and dynamic. Researchers have explored how MCS influences decision-making and enhances performance in various organizational settings. This section covered a review of theoretical and empirical studies, research gap, and conceptual framework.

Theoretical Perspectives on Management Control System

Management Control Systems (MCS) are crucial for achieving organizational goals by aligning employee behavior with the strategic objectives of the organization. Several theoretical perspectives provide a framework for understanding the role and impact of MCS on organizational performance.

Contingency Theory

The contingency theory posits that the effectiveness of MCS depends on the fit between the system and the organization's context, including its size, strategy, technology, and environment (Otley, 1980). This perspective highlights that no single MCS design is universally effective; instead, it must be adapted to suit specific organizational and environmental conditions. For instance, manufacturing firms in Kailali District may require tailored MCS designs to address local challenges such as limited infrastructure and skilled labor shortages.

Agency Theory

Agency theory addresses the principal-agent relationship, emphasizing the need for MCS to mitigate conflicts of interest and ensure goal alignment between managers (agents) and owners (principals) (Jensen & Meckling, 1976). MCS plays a vital role in reducing information asymmetry and monitoring managerial actions, which is particularly relevant for manufacturing firms facing accountability challenges in decentralized operations.

Resource-Based View (RBV) Theory

The resource-based view suggests that MCS is a strategic resource that can provide a competitive advantage by optimizing the use of organizational resources and capabilities (Barney, 1991). By effectively deploying MCS, manufacturing firms in Kailali can enhance resource efficiency, reduce waste, and improve operational performance.

Levers of Control Framework

Simons' (1995) levers of control framework classified MCS into four categories: belief systems, boundary systems, diagnostic control systems, and interactive control systems. This framework emphasizes the dynamic interplay between these levers, allowing organizations to simultaneously drive innovation and manage risk. Manufacturing firms in rapidly evolving markets, like those in Kailali, may benefit from leveraging this framework to balance flexibility with control.

Institutional Theory

Institutional theory focuses on the influence of external pressures—such as regulations, societal norms, and market expectations—on MCS design and implementation (DiMaggio & Powell, 1983). For manufacturing firms in Kailali, institutional factors such as government policies, local competition, and trade regulations significantly shape MCS practices.

These theoretical perspectives provide a robust foundation for analyzing the impact of MCS on the organizational performance of manufacturing firms in the Kailali District.

Management Control System in Different Sectors

Management Control Systems (MCS) have been extensively studied in the context of various industries to understand their impact on organizational performance. These systems encompass strategies, tools, and techniques that organizations use to ensure that their activities align with the set objectives and goals (Anthony & Govindarajan, 2007). This section reviews the application of MCS across different sectors to provide a comparative framework and establish its relevance to the manufacturing firms in the Kailali district.

Management Control System in Manufacturing Firms

Manufacturing firms often rely heavily on MCS to optimize operations, improve productivity, and ensure quality standards. Chenhall (2003) emphasized that the use of MCS in manufacturing focuses on process control, cost management, and efficiency. The integration of MCS in manufacturing allows firms to monitor production lines, manage inventory levels, and ensure adherence to budgetary constraints. Further, innovative MCS approaches, such as Just-in-Time (JIT) and Total Quality Management (TQM), have proven effective in enhancing organizational performance (Kaplan & Norton, 1996).

Management Control System in Service Sectors

In contrast to manufacturing, the service industry utilizes MCS to manage intangible outputs and customer interactions. Simons (1995) highlighted that service firms often adopt interactive control systems to foster innovation and adaptability. For example, in the hospitality industry, MCS is used to track customer satisfaction and employee performance, leading to improved service delivery and client retention (Merchant & Van der Stede, 2007). Rijal (2006) studied about the use of MCS in Nepalese commercial banks. After studying, the researcher concluded that banks use MCS ideas by comparing actual performances with targets. Upadhyay (2021) examined MCS in Nepal's banking sector, discovered that the mechanisms were appropriately designed and put into practice. All of these research point to the possibility that MCS can greatly enhance organizational performance when used effectively.

Management Control System in Healthcare

Healthcare organizations apply MCS to maintain compliance with regulations and improve patient care. Abernethy and Stoelwinder (1995) argued that MCS in healthcare focuses on cost containment, quality improvement, and operational efficiency. Balanced Scorecard frameworks have been particularly effective in aligning healthcare activities with strategic objectives, ensuring a balance between financial and non-financial metrics.

Management Control System in Non-profit Organizations

Non-profit organizations use MCS to manage scarce resources effectively and achieve their mission objectives. According to Ebrahim (2005), MCS in this sector often includes donor reporting, impact measurement, and resource allocation. The focus on accountability and transparency makes MCS critical for sustaining donor trust and organizational credibility.

The diverse applications of MCS across sectors highlight its adaptability and importance in enhancing organizational performance. While manufacturing firms prioritize efficiency and cost control, service industries and healthcare sectors emphasize customer satisfaction and compliance. This review underscores the need for tailored MCS strategies to address the unique challenges of each sector, providing a foundation for analyzing their impact on manufacturing firms in the Kailali district.

Impact of Management Control System on Organizational Performance

The relationship between Management Control Systems (MCS) and organizational performance has been a subject of extensive research in the fields of accounting, management, and organizational studies. Effective MCS practices are instrumental in aligning organizational objectives, optimizing resource utilization, and achieving strategic goals (Anthony & Govindarajan, 2007). This section reviews the empirical and theoretical literature on the impact of MCS on organizational performance, particularly in manufacturing settings.

MCS have been shown to have a significant impact on financial performance through cost control, budgetary alignment, and performance measurement. Kaplan and Norton (1996) highlighted the importance of frameworks like the Balanced Scorecard, which integrate financial and non-financial measures to provide a comprehensive view of performance. In manufacturing firms, this approach has been linked to improved profitability and operational efficiency.

Chenhall (2003) argued that contingency-based MCS designs, which align control systems with specific organizational contexts, enhance operational outcomes such as quality, productivity, and flexibility. For instance, the adoption of Total

Quality Management (TQM) as part of MCS has been associated with reduced defect rates and enhanced production capabilities. Strategic performance encompasses long-term objectives such as market position, innovation, and sustainability. Simons (1995) emphasized the role of interactive control systems in fostering strategic alignment and adaptability in dynamic environments. By promoting dialogue and feedback, MCS can help organizations navigate market uncertainties and achieve competitive advantages.

Several studies have examined the mediating factors that influence the effectiveness of MCS on organizational performance. Organizational culture, leadership style, and environmental uncertainty are among the factors identified as critical mediators (Merchant & Van der Stede, 2007). For example, a participative leadership style has been found to enhance the effectiveness of MCS by encouraging employee engagement and innovation (Abernethy & Brownell, 1999).

Empirical research in manufacturing firms has consistently demonstrated the positive impact of MCS on performance metrics. A study by Henri (2006) found that diagnostic and interactive control systems significantly improved performance by facilitating strategic decision-making and operational efficiency. Similarly, Otley (1999) argued that the design and implementation of MCS should align with the firm's strategic priorities to maximize performance outcomes. Durendez et al. (2016) indicated that although family businesses employ MCS at a lower rate than non-family organizations, MCS has a favorable impact on business success. Traunt (2017) examined the MCS organization and their effect on performance using data from Italian firms.The findings showed that businesses with modern management tools at their disposal for managing and tracking intellectual capital, along with systems for incentive and assessment, were able to achieve better and more consistent performance.

Ahmad and Mohamed (2018) provided a resource-based view on MCS, concluding that firms in developing countries can achieve a sustained competitive advantage by effectively utilizing MCS in conjunction with tangible and intangible resources. Wall (2021) investigated the relationship between MCS and strategic management in family-owned businesses in Thailand and came to the conclusion that MCS and strategic management had a favorable impact on performance, particularly in family-run enterprises.

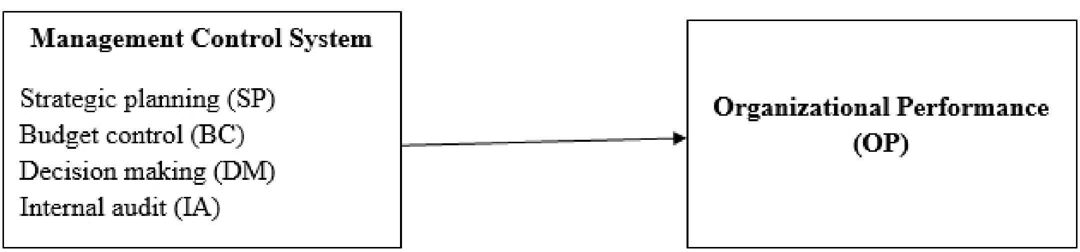
While many studies have explored the role of MCS in manufacturing firms, most of this research is concentrated in developed economies. For instance, Chenhall (2003) focused on contingency-based MCS designs in well-established industrial contexts, but the findings may not be fully applicable to firms in developing regions with different socio-economic conditions. Similarly, Kaplan and Norton (1996) developed the Balanced Scorecard framework in advanced economies, leaving questions about its relevance in resource-constrained environments like Kailali District.

Existing research often generalizes findings across diverse regions, neglecting the unique challenges faced by specific geographic areas. Studies by Abernethy and Stoelwinder (1995) and Simons (1995) do not account for the localized factors that influence the effectiveness of MCS, such as cultural dynamics, infrastructure limitations, and regulatory environments in areas like Kailali District. This gap is particularly evident in the South Asian context, where the interaction between MCS and organizational performance remains underexplored.

The study examined the relationship between the Management Control System and Organizational Performance in a Kailali District manufacturing firm, highlighting the causal relationship between independent and dependent variables and the significant association between these factors. In the conceptual framework, the independent variable is the Management control system (i.e. Strategic planning, budget control, decision making, and internal audit) and the dependent variable organizational performance is taken from the literature review.

Figure 1

Conceptual Framework



(Durendez et al., 2016)

From the conceptual framework it has been conceptualized that strategic planning, budget control, decision-making, internal audit, and organizational performance.

Strategic Planning

Strategic planning is a system that assists firms in setting goals, tracking progress, and identifying key factors that influence their performance (Kaplan & Norton, 1996). Analytical tools such as SWOT analysis and gap analysis enable organizations to select optimal strategies for improvement (Simons, 1995). The process typically results in a strategic plan comprising clear mission and vision statements, timelines, quarterly targets, monitoring mechanisms, and an allocation of responsibilities to specific departments (Anthony & Govindarajan, 2007).

Budget Control

Budgetary control refers to the process of creating financial plans for a firm's estimated activities and managing actions to execute these plans (Anthony & Govindarajan, 2007). Its objectives include establishing processes for estimating revenues and expenses, communicating these plans with management, and serving as a foundation for effective revenue and cost control (Merchant & Van der Stede, 2007). Budgetary control offers several advantages to businesses, such as defining roles, setting operational objectives, and establishing quantitative targets.

Decision Making

Decision-making is a future-oriented process that involves planning, anticipating outcomes, and evaluating alternatives before selecting the best course of action (Simon, 1977). It requires swift decisions on critical matters such as product mix, production techniques, equipment procurement, discontinuing product lines, and pricing strategies. As a fundamental aspect of management, decision-making facilitates both operational efficiency and strategic development (Anthony & Govindarajan, 2007).

Internal Audit

A company's internal audit department is responsible for conducting objective evaluations of its processes, organizational structures, and systems. Its primary role is to provide senior leaders with unbiased information about the organization's risks, control environment, operational efficiency, and compliance with legal and regulatory requirements (Institute of Internal Auditors, 2020). Oversight of the internal audit function is typically carried out by the CEO or Board of Directors through the Audit Committee, ensuring accountability and alignment with organizational goals (Anthony & Govindarajan, 2007).

Organizational Performance

Indicators based on managers' assessments of their company's competitive situation are often used to evaluate organizational performance (Smith & Jones, 2020). In the absence of intangible assets and with a delay between survey data and accounting information, accounting data is utilized in these evaluations (Johnson et al., 2019). Performance, in this context, refers to the outcomes of an organization's activities over time (Williams, 2022). Forecasting the impact of Management Control Systems (MCS) on organizational performance is challenging. However, if the implementation of MCS generates useful information for coordination and learning, a positive relationship between performance and MCS implementation is expected (Greenwood & Turner, 2020).

Research Hypothesis

The research objective is to examine the determination of the management control system and organizational performance of manufacturing firms of Kailali District.The following research hypotheses are developed:

H1: The manufacturing firms of Kailali district are familiar with the management control system.

H2: There is a significant relationship between the management control system and the organizational performance of manufacturing firmsinthe Kailali district.

Methods and Procedures

This study applied the quantitative research approach. Under this approach, descriptive and causal research design is used. The objective of this study is to examine the management control system techniques that are currently in use and how they affect organizational performance. A study surveyed 64 manufacturing firms registered in the Kailali Chamber of Commerce and Industry until 2080, with twenty manufacturing firms selected as samples using convenience sampling. A questionnaire was distributed to 40 managers and account officers and all respondents responded.

The research employs primary data obtained via a structured questionnaire survey, including demographic data and a 5-point Likert scale, in order to compile significant information. The survey questionnaire includes three sections: demographics, management control system factors, and organizational performance. The study collected data on management control systems through strategic planning, budget control, decision-making, and internal audit, with participants rating each item on a 5-point Likert scaleranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

The analysis of the data was done with SPSS version 25. Cronbach's alpha was used in a reliability test. The sample characteristics were described using descriptive statistics such as frequency, percentage, mean, and standard deviation. The study evaluated the impact of management control systems on organizational performance using Pearson correlation and linear regression analysis (Johnson, 2021; Lee & Park, 2020).

Model

$\hat{Y}_i = \alpha + \beta_1 SP_i + \beta_2 BC_i + \beta_3 DM_i + \beta_4 IA_i + ei$

Where,

$\hat{Y}$=Dependent Variable (Organizational Performance)

α =Constant

SP_i= Strategic planning (SP)

BC_i= Budget control (BC)

DM_i = Decision making (DM)

IA_i= Internal audit (IA)

$e_{i=}$ error term

β= (Beta value) Coefficient of slop of regression line

Results

This section presents the empirical results and analysis of all the collected information is attempted according to the objectives and hypothesis framed earlier.

Table 1

Descriptive Analysis of Demographic Information

Classifying the Respondents according to Gender		
Gender	Frequency	Valid Percent
Male	28	70
Female	12	30
Total	40	100
Classifying the Respondents according to Age		
Age Group	Frequency	Valid Percent
Below 23	5	12.50
24-29	11	27.50
30-34	11	27.50
35 & above	13	32.50
Total	40	100
Classifying the Respondents according to Educational Qualification		
Level of Education	Frequency	Valid Percent

Below SLC/SEE	3	7.50
+2 Level	12	30
Bachelors	14	35
Masters & above	11	27.50
Total	40	100
Years of Experience of the Respondents		
Work Experience	Frequency	Valid Percent
Less than 2 years	13	32.50
2 – 5 years	12	30.00
More than 5 years	15	37.50
Total	40	100

Source: Computed from the primary survey

Table 1 indicates that of the 40 respondents surveyed for this study, the majority, 28 (70%), are male, while the remaining 12 (30%) are female. This suggests that most of the participants who provided input for the study were male employees from the firms.

There are 12.5 percent of respondents are under 23 years, 27.5 percent fall within 24-29 age group, another 27.5 percent are in the 30-34 age range, and 32.5 percent are aged 35 and above. The results indicate that most respondents in the manufacturing company are 35 years of age or older.

Out of the 40 respondents, 35 percent of respondents hold bachelor's degrees, followed by 30 percent with a + 2 level degree, 27.50 percent with a Master's degree, and 7.5 percent with a lower level.

There are 32.50 percent of respondents have less than 2 years of experience, 30 percent have 2-5 years, and 37.50 percent have more than 5 years, with those with more than 5 years having the largest group.

Table 2

Mean Ranking for the Most Important Management Control System Dimension

Factors	N	Mean	SD	Rank
Strategic planning	40	3.3437	.38267	I

Budget control	40	3.2300	.38310	II
Decision making	40	3.1625	.45132	III
Internal audit	40	3.1375	.45626	IV

Source: Computed from the primary survey

Table 2 presents the mean ranking of management control system (MCS) factors as evaluated by employees of a manufacturing firm in the Kailali district. The study shows that the mean values lie between 3.1375 and 3.3437, with standard deviations between 0.38267 and 0.45626. Among the MCS factors, strategic planning holds the highest rank with a mean of 3.3437, followed by budget control (3.23), decision-making (3.1625), and internal audit (3.1375).

Table 3

Correlation between Management Control System Dimension and Organizational Performance

		Organizational Performance
Strategic Planning	Pearson Correlation	0.600
Budget Control	Pearson Correlation	0.765
Decision Making	Pearson Correlation	0.617
Internal Audit	Pearson Correlation	0.754
Organizational Performance	Pearson Correlation	1

Source: Computed from the primary survey:

Table 3 presents the correlations between the management control system dimension and organizational performance, using four variables to assess the relationship. The table indicates that the correlation values for strategic planning, budget control, decision-making, and internal audit with organizational performance are 0.600, 0.765, 0.617, and 0.754, respectively. This suggests a moderate positive relationship between management control practices and the organizational performance of the manufacturing firm in the Kailali district.

Table 4

Coefficients of Cronbach's Alpha

Variables	No of items	Cronbach's Alpha
Strategic Planning (SP)	4	0.741
Budget Control (BC)	5	0.735
Decision Making (DM)	4	0.816
Internal Audit (IA)	4	0.789

Organizational Performance (OP)	4	0.878
Overall	5	0.865

Source: Computed from the primary survey

The reliability test was conducted to assess the consistency of responses in the management control system tools questionnaire. The Cronbach's alpha coefficient (α) for strategic planning, budget control, decision making, internal audit, and organizational performance are 0.741, 0.735, 0.816, 0.789, and 0.878, respectively, all exceeding the 0.7 threshold. The overall Cronbach's alpha is 0.865. Since all alpha values are above 70 percent, the scale is considered satisfactory and reliable (Nunnaly, 1978). This suggests that the instruments of the management control system are essential.

Hypothesis 1

H1: The manufacturing firms of Kailali district are familiar with the management control system.

Table 5

One Sample T-test

Management Control System Dimension	N	Mean	SD	t-value	p value
Strategic planning	40	3.3437	.38267	55.264	<0.00**
Budget control	40	3.2300	.38310	53.323	<0.00**
Decision making	40	3.1625	.45132	44.318	<0.00**
Internal audit	40	3.1375	.45626	43.491	<0.00**

Source: Computed from the primary survey

** Represents a 5% level of significance

Table 5 presents the management control system practices among manufacturing firms in Kailali district. The table shows that the mean values lie between3.1375 and 3.3437, with standard deviations between 0.38267 and 0.45626. Since all mean values exceed the test average of 3, this indicates that the manufacturing firms have an adequate level of management control system practices.

A one-sample t-test was conducted to evaluate these practices. The results show that for all management control system factors, the p-values are less than 0.05. It means that the rejection of the null hypothesis and the acceptance of the alternative hypothesis at a 5 percent significance level. This implies that manufacturing firms in the Kailali district are familiar with management control systems. Hence, the study confirms that management control system practices are used among the manufacturing firms in the Kailali district.

Hypothesis 2

H2: There is a significant relationship between the management control system and the organizational performance of manufacturing firmsinthe Kailali district.

Table 6

Multiple Regression Analysis between the MCS Dimensions and Organizational Performance

R	R Square	F value	p-value
0.875	0.765	28.528	0.00**

Source: Computed from the primary survey

***Representsa 5%levelofsignificance*

A multiple regression analysis was conducted to examine the relationship between the dependent variable (organizational performance) and the four independent variables (strategic planning, budget control, decision-making, and internal audit). As shown in Table 6, the multiple correlation coefficient is 0.875, indicating the strength of the relationship between the actual and predicted values. The predicted values are derived as a linear combination of organizational performance and the overall MCS dimensions. The results show that the p-values are less than 0.05 (i.e. 0.000). It means that the null hypothesis is rejected and the acceptance of the alternative hypothesis at a 5 percent significance level. This implies the relationship between the management control system and the organizational performance of manufacturing firms in Kailali district.

The coefficient of determination (R-squared) measures how well the independent variables explain the variation in the dependent variable. In this case, the R-squared value is 0.765, indicating that 76.5 percent of the variation in organizational performance is explained by the independent variables—strategic planning, budget control, decision-making, and internal audit. The remaining 23.5 percent is attributed to other factors. The overall regression model is significant at the 5 percent level (with a p-value of less than 0.05, specifically 0.000), confirming the model's reliability.

Table 7

Coefficients of MCS Dimensions and Organizational Performance

	Unstandardized Coefficients		Standardized Coefficients	t value	p value
	B	Std. Error	Beta		
(Constant)	0.241	0.366		0.660	0.514
Strategic planning (SP_i)	0.263	0.108	0.234	2.440	0.020
Budget control (BC_i)	0.262	0.151	0.234	1.735	0.092
Decision making (DM_i)	0.274	0.092	0.288	2.986	0.005
Internal audit (IA_i)	0.336	0.117	0.356	2.881	0.007

Source: Computed from the primary survey

***Representsa 5 % level of significance*

Table 7 shows that the coefficient of strategic planning (SP_i) is 0.263, indicating the partial effect of strategic planning while holding organizational performance constant. The positive sign of the coefficient suggests that the effect is positive, meaning the adjustment score increases by 0.263 for every unit increase in strategic planning. At the 5 percent significance level, the relationship is statistically significant ($p = 0.020 < 0.05$).

Maintaining constant organizational performance, the partial impact on budget control is shown by the coefficient of budget control (BCi), which is at 0.262. At the 5 percent level of significance, the association appears insignificant ($p=0.092 > 0.05$), since the projected positive sign suggests that the effect is positive and that the adjustment score would increase by 0.262 for every unit increase in budget control.

The coefficient of decision-making (DMi) is 0.274, showing its partial effect while keeping organizational performance constant. The positive sign means that the effect is positive. For every unit increase in decision-making, the adjustment score increases by 0.274.

At the 5 percent level, the association is statistically significant ($p = 0.005 < 0.05$).

The coefficient of internal audit (IAi) is 0.336, indicating its partial effect while keeping organizational performance constant. The positive value suggests a favorable impact, with the adjustment score increasing by 0.336 for each unit rise in internal audit. Furthermore, At the 5 percent level, the relationship is statistically significant ($p = 0.007 < 0.05$).

The study concludes that MCS and organizational performance have a significant favorable association. Additionally, it demonstrates that the organizational performance of manufacturing firms in the Kailali district will improve with the maximum use of MCS dimension.

Discussion

This study fills a gap in the management control system and organizational performance among the manufacturing firms in Kailali district. The results of this study revealed that MCS is practiced in manufacturing firmsinthe Kailali district. The result of multiple regression analysis depicted that the relationship between only three factors (Strategic planning, decision making, and internal audit) of MCS and organizational performance is significant, but the association of another factor (budget control) of MCS and organizational performance is insignificant.

The result is positively consistent with Rijal (2006), study revealed that commercial banks are implementing the concept of management control systems (MCS) by setting performance targets for both branches and individual employees. These targets are compared with actual performance, with branch targets typically measured in terms of the number of clients, deposit amounts, and lending activities. Management control systems (MCS) are found to have a positive correlation with the design of performance measurement systems and the overall performance of small and medium enterprise (SME) hotels in Malaysia (Jamil and Mohamed, 2013). The result aligns with Upadhyay (2021), who found that all commercial banks have sufficiently developed and implemented mechanisms of management control systems (MCS). The result is comparable to Wall's (2021) findings, which show that family businesses' performance is positively and considerably impacted by their strategic management and management control system. There must be an important connection between performance measurement and MCS since performance is typically understood as achieving corporate goals (Siska, 2015).Ahmad and Mohamed (2018) found that management control systems (MCS) with a focus on planning control can aid in conserving resources through efficient utilization, while also contributing to the achievement of both short-term goals and strategic initiatives. This is consistent with the findings of the present study. Durendez et al. (2016) investigated the impact of family influence on the extent of management control systems (MCS) usage and its relationship with performance. Their study found that family businesses tend to use fewer MCS compared to non-family firms and that MCS usage positively affects business performance. These findings are consistent with the results of the present research. The results of this investigation do not differ from those of earlier studies on the relationship between organizational performance and management control systems.

Conclusion

The present study aimed to assess management control systems and organizational performance using a self-administered questionnaire with a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Respondents indicated their level of agreement or disagreement with the statements. The mean scores for all statements were above 3, indicating that employees in the firms have a strong understanding of the management control system. The study concludes that the manufacturing firms of Kailali district havepractices of MCS through strategic planning, budget control, decision making, and internal audit.The R-squared value of the regression model is 76.5 percent, indicating that a 1 percent change in management control system tools affects organizational performance by 76.5 percent. The study concludes that management control systems have a significant impact on the organizational performance of manufacturing firms in the Kailali district.

The study concludes that the four independent variables—strategic planning, budget control, decision making, and internal audit—have a strong and positive impact on organizational performance. Therefore, each unit increase in these independent variables will positively affect organizational performance among manufacturing firms in the Kailali district. Finally, it can be concluded that manufacturing firms in the Kailali district are in the early stages of adopting modern management control system tools. Therefore, to enhance overall performance, these companies should focus on implementing new management control system practices.

Manufacturing organizations should implement a management control system (MCS) to enhance overall performance. MCS provides key ideas, guidelines, and strategies for management functions. Implementing effective strategies with social, ecological, and economic visions is crucial for achieving perceived performance. Further research will focus on a larger sample size and variables, as the current study only covers twenty manufacturing firms in the Kailali district. Future studies may explore commercial banks, development banks, and trading industries. Future research could explore demographic changes, response to management control systems, relationships between control systems and demographics, impact on investors, and predictability of corporate social responsibility (CSR). This could be a new topic for future researchers.

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Political Governance and Stock Market Performance: An Autoregressive Distributed Lag Analysis of the Nepalese Market

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Abstract

This study examined the relationship between political governance and stock market performance in Nepal from 2002 to 2022, using the Autoregressive Distributed Lag (ARDL) model. Political governance indicators—Voice and Accountability (VA), Political Stability (PS), Government Effectiveness (GE), Regulatory Quality (RQ), Rule of Law (RL), and Control of Corruption (CC)—are analyzed for their short-and long-term impacts on the Nepal Stock Exchange (NEPSE) index. The results revealed significant long-run relationships with PS and GE positively influencing market performance, while CC and RQ show negative effects. RL and VA, however, do not exhibit statistically significant impacts. The short-term dynamics, assessed through an Error Correction Model (ECM), indicated a strong adjustment mechanism, with stock markets quickly reverting to equilibrium after short-term disturbances. Diagnostic tests confirmed the model's reliability, and CUSUM and CUSUMSQ tests verify its stability over time. The study underscored the importance of PS in promoting investor confidence and market growth. Policymakers should carefully balance anti-corruption measures and regulatory improvements to avoid destabilizing the economy. These findings offered valuable insights for investors, policymakers and stakeholders on the role of political factors in shaping stock market performance in developing economies like Nepal.

Keywords: Political instability, stock market, governance, NEPSE

Introduction

The growing concerns over political instability, coupled with the stock market's critical role in driving economic growth, have sparked significant debate about how fluctuations in political stability influence stock market performance. Political volatility often creates uncertainty, which can influence investor sentiment, capital flows and overall market behavior (Alesina & Perotti, 1996; Maghdid et al., 2024). This interplay raises pivotal questions about the extent to which political disturbances disrupt market stability, investor confidence and economic progress. As stock markets serve as key barometers of economic health, understanding how they respond to political turbulence is critical for policymakers, investors and stakeholders.

Political instability can be conceptualized as the uncertainty arising from executive instability, social unrest and political violence (Alesina & Perotti, 1996). This instability often stems from the likelihood of government collapse due to conflicts or intense competition among political parties, resulting in a cycle of frequent changes in governance that perpetuates further instability (Hussain, 2014). The dynamics of corruption control, government effectiveness, political stability or absence of violence, voice and accountability, regulatory quality and the rule of law have been linked to income levels, religious dominations, degrees of press freedom and legal origins to account for stock market performance (Asongu, 2012). Furthermore, Low et al. (2011) observe that nations with poor governance—marked by political instability, inadequate investor protection, ineffective government, weak regulatory frameworks and limited control over corruption—often exhibit higher stock returns. These shifts in leadership, policy direction and administrative continuity frequently disrupt economic activities, deter investment, and create an uncertain environment for both domestic and foreign investors (Mai et al., 2023). Social unrest and political violence—manifested through protests, strikes, or armed conflict—undermine public trust in institutions and significantly impact economic stability by disrupting business operations, supply chains, and overall market confidence (Barrett et al., 2024). Research indicates that political uncertainty generates unstable financial markets and exacerbates stock market cycles (Mnif, 2017). Thus, fostering transparency and establishing a stable political environment through effective governance practices is crucial for attracting foreign investment and promoting sustainable economic development (Asaad & Marane, 2020).

Nepal, with its shifting political environment, provides a valuable context for investigating the association between political governance factors and stock market performance (Adhikari & Phuyal, 2016; Dangol, 2008). The Nepal Stock Exchange (NEPSE), as the main equity market in the country, offers a relevant case for analyzing the influence of political instability on market behavior (Karki et al., 2023). Nepal's political climate is characterized by frequent governance changes, leadership transitions, and ongoing efforts to improve governance and reduce corruption (Mishra, 2007; Shah, 2018; Sharma, 2012; Shrestha, 2019). Nepal's governance transitions and efforts to reform the regulatory environment and reduce corruption, creates an uncertain market environment that directly affects financial performance (Basnett et al., 2014; Khanal et al., 2005). Hence, this study aims to empirically assess the impact of key political governance factors, captured by the World Governance Indicators—such as voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption—on the stock market index (NEPSE). By focusing on Nepal, this research fills a critical gap in the literature, as much of the current research tends to focus on larger economies. As a result, it not only highlights the specific challenges of Nepal's financial markets but also provides broader insights that may be relevant to other emerging markets facing political instability.

The application of the ARDL model ensures rigorous methodology, enabling an in-depth understanding of the short- and long-run relationships between underlying variables (Pesaran et al., 2001). Employing the ARDL model allows this study to discern the short-term and long-term impacts of political instability on market performance. The ARDL approach is particularly suited for this analysis due to its flexibility in handling small sample sizes and its ability to integrate variables of a different order of integration (Haug, 2002; Menegaki, 2019; Ozturk & Acaravci, 2010).

The following sections present the theoretical background and empirical findings from other studies related to this study. Subsequently, methodology presents, including study design and framework, data sources and econometric techniques. The result and discussion section interprets these findings in light of existing theories and empirical evidence, and the conclusion outlines the implications of the study for investors, policymakers, and future research avenues in the context of emerging markets like Nepal.

Literature Review

The theoretical framework underpinning this study synthesizes insights from Political Economy Theory, Behavioral Finance Theory and Institutional Theory. Political Economy Theory examines how political institutions and governance quality influence economic outcomes, suggesting that political stability fosters investor confidence and market growth (Perotti & Alesina, 1992). Institutional Theory emphasizes the importance of strong institutions—such as regulatory frameworks and the rule of law—in shaping economic behavior and ensuring market stability. Conversely, political instability can weaken these institutions, increasing uncertainty and deterring investment (Brammer et al., 2012). Behavioral

Finance Theory explores how psychological factors affect investor decision-making, indicating that political volatility can lead to emotional reactions that disrupt rational market behavior (Ritter, 2003). Together, these theories form a comprehensive theoretical framework that guides the exploration of the intricate relationship between political instability and stock market dynamics in Nepal, offering a multilayered approach to analyzing and interpreting the empirical findings.

The interrelation between political governance and stock market performance has been extensively examined through empirical research, yielding insights that are both diverse and nuanced. This delves into the key findings from previous studies, setting the context for this study.

Hassan et al. (2024) examines the relationship between corruption and financial market indicators across various countries. Focusing on trading volumes, market capitalization, and trading ratios, it explores the effects of corruption while considering GDP and inflation. Using a panel data approach and econometric models, the findings reveal significant differences in how corruption impacts financial markets, highlighting its role as a key determinant of market performance.

Using MSCI indices, Mai et al. (2023) examined the effects of political instability on stock market performance in Pakistan from 1996 to 202. Their regression analysis, including two-way robustness checks via GMM methods, evidenced political stability enhances market performance. While, other governance indicators also had a positive influence, but political instability was found to disrupt economic activities, lower investor confidence, and hinder foreign investment, increasing country-specific risks.

Guenichi et al. (2022) examined the impact of political instability and the COVID-19 pandemic, as indicated by death rates, on sectoral stock market returns in Tunisia. Using a DCC multivariate GARCH model, the study assessed both mean and variance in returns. Results showed that while political instability and the pandemic had minimal negative effects on mean returns, they significantly increased return volatility. The pandemic heightened investor fear, leading to greater conditional volatility during politically unstable periods, thus raising overall risk in the Tunisian stock market.

Similarly, Chuan et al. (2022) investigated how political uncertainty influences the risk of stock price crashes among 9,091 listed companies in China from 2007 to 2020. They found that political uncertainty typically decreases the likelihood of crashes, with this effect becoming more pronounced about a year after a new official assumes office. Officials relocating from other areas notably reduce crash risks, while the abrupt exit of outgoing officials tends to elevate crash risks in their former jurisdictions, indicating a complex relationship between governance changes and market stability.

Hoque et al. (2018) investigated the interconnections between foreign direct investment (FDI), economic growth, and stock market development, emphasizing the moderating effect of political instability. Analyzing macroeconomic data from 1993 to 2016 using the ARDL model, the study found both short- and long-term relationships. While a unidirectional relationship predominates in the long run, a bidirectional link is evident in the short run. Additionally, FDI partially mediates the relations between economic growth and stock market performance, with political instability negatively affecting these dynamics.

However, Balcilar et al. (2018) analyzed how geopolitical uncertainty affects return and volatility in BRICS stock markets using nonparametric causality-in-quantiles tests. Their results indicate that geopolitical risks (GPRs) have varying impacts across these nations, primarily influencing market volatility, especially in adverse conditions. Russia and China are particularly vulnerable to GPRs, while India shows the most resilience. The study emphasizes the need for a robust financial sector and an open economy, enabling investors to diversify and reduce country-specific risks.

Boadi and Amegbe (2017) also investigated how governance quality impacts stock market performance in various international markets. Their research, using a Fixed Effect model, analyzed data from 23 countries between 1996 and 2014. The results revealed that governance quality, assessed through indicators like Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption, plays a significant role in influencing stock market performance.

Similarly, Shrestha and Subedi (2014) analyzed factors affecting the Nepal Stock Exchange (NEPSE) index from mid-August 2000 to mid-July 2014. They found significant correlations between the NEPSE index and macroeconomic variables like inflation and broad money. Their results indicated that investors view equities as a hedge against inflation, with the NEPSE index influenced by political changes and NRB policies.

Using an instrumental variable approach, Asongu (2012) explored the link between government quality and stock market performance in Africa. The study highlighted that factors such as political stability, corruption control, regulatory quality, government effectiveness, voice and accountability, and rule of law significantly impact stock market outcomes.

Dhodiya and Shah (2011) investigated the impact of Indian politics on the stock market through a descriptive research design. Analyzing political news from 2005 to 2007 alongside daily Bombay Stock Exchange (BSE) data, they employed dummy variable analysis and the sequential probability ratio test (SPRT). While overall political news had a limited effect, specific types—especially those related to sectors and finance—significantly influenced investment decisions. Notably, negative political news had a greater impact than positive news, affecting market dynamics through direct and indirect decision-making processes.

Dangol (2008) investigated how political events affect the Nepalese stock market using event analysis. The findings indicated market inefficiency, revealing a strong link between political uncertainty and stock returns. The study showed that stock prices typically adjusted to new political information within 2 to 3 days, with positive news resulting in abnormal gains and negative news leading to losses.

Mei and Guo (2004) investigated how political uncertainty affects financial crises in 22 emerging markets, with a focus on election cycles. Their study found that eight out of nine financial crises occurred during election or transition periods. By employing profit and switching regression methods, they identified a strong correlation between elections and financial crises, highlighting increased market volatility even when accounting for economic factors. Their results suggest that political uncertainty is a key factor in the onset of financial crises.

Methods and Procedures

Study Design and Framework

This research investigates the relationship between political instability and stock market performance in Nepal using a quantitative approach with the ARDL model. This method allows for the analysis of both short and long-run connections between political indicators, including Voice and Accountability, Political Stability, Government Effectiveness, Regulatory Quality, Rule of Law, and Control of Corruption (derived from the World Governance Indicators), and the Nepal Stock Exchange (NEPSE) index.

Data Sources

The analysis utilizes annual time-series data spanning from 2002 to 2022, focusing on the relevant variables. Stock market performance, represented by the NEPSE index, is sourced from the Nepal Rastra Bank database. Meanwhile, data on political indicators come from the World Bank’s World Governance Indicators, which evaluate governance quality and political stability globally. The specifics of the data used in the study are presented in Table 1.

Table 1

Description of the Variables

Variables	Indicators	Data Sources
Dependent Variable	NEPSE Index	Nepal Rastra Bank
Independent Variables	Voice and accountability	World Governance Indicators
	Political stability	
	Government effectiveness	
	Regulatory quality	
	Rule of law	
	Control of corruption	

Econometric Techniques

This study employed the ARDL model. However, before running the ARDL analysis, both formal and informal tests were conducted to assess the time-series characteristics of the data. Previous research (Alammar & Wardeh, 2024; Gwachha & Karmacharya, 2023; Lone et al., 2023; Menegaki, 2019) suggests that stationarity is not a prerequisite for the ARDL model. Nonetheless, the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests were applied to confirm the stationarity of the variables and ensure no variable was integrated of order two I(2) (Arltová & Fedorová, 2016). The ARDL bounds testing approach, originally developed by Pesaran et al. (2001), was then utilized to examine the long-term relationship between stock market performance and political stability indicators. In accordance with the ARDL framework proposed by Pesaran et al. (2001), the Akaike Information Criterion (AIC) was used for lag selection, and the presence of a long-run relationship was tested using equation (1) below.

$$\begin{aligned}\Delta \ln NI_t = \alpha_0 + \sum_{i=1}^{p} \beta_i \Delta PS_{t-i} + \sum_{i=1}^{p} \gamma_i \Delta VA_{t-i} + \sum_{i=1}^{p} \delta_i \Delta GE_{t-i} \\ + \sum_{i=1}^{p} \theta_i \Delta RQ_{t-i} + \sum_{i=1}^{p} \eta_i \Delta RL_{t-i} + \sum_{i=1}^{p} \kappa_i \Delta CC_{t-i} \\ +\lambda_1 PS_{t-1} + \lambda_2 VA_{t-1} + \lambda_3 GE_{t-1} + \lambda_4 RQ_{t-1} + \lambda_5 RL_{t-1} + \lambda_6 CC_{t-1} + \varepsilon_t \qquad (1)\end{aligned}$$

($\Delta \ln NI_t$ is the first difference of the natural log of NEPSE Index (dependent variable), ΔPS_{t-i}, ΔVA_{t-i}, ΔGE_{t-i}, ΔRQ_{t-i}, ΔRL_{t-i}, ΔCC_{t-i} are the first differences of the independent variables, α_0 is the constant term, β_i, γ_i, δ_i, θ_i, η_i, κ_i are the short-run coefficients, λ_1, λ_2, λ_3, λ_4, λ_5, λ_6 are the long-run coefficients, and ε_t is the error term.)

The ARDL method involves a two-step process to evaluate the long-term relationship (Pesaran & Shin, 1995). In the first step, the existence of a long-run relationship among the variables is tested. This is achieved by calculating the F-statistic through the Wald test, where the null hypothesis suggests no co-integration or long-run equilibrium relationship between the variables.

$H_0 : \lambda_1 = \lambda_2 = \lambda_3 = \lambda_4 = \lambda_5 = \lambda_6 = 0$ (no co-integration).

While the alternative hypothesis that there is a co-integration relationship among the variables model:

$H_1 : \lambda_1 \neq \lambda_2 \neq \lambda_3 \neq \lambda_4 \neq \lambda_5 \neq \lambda_6 \neq 0$ (co-integration).

Once cointegration is established, the ARDL model estimates both the long-run coefficients and the short-run dynamics through the Error Correction Model (ECM) representation. The existence of cointegration is confirmed by the significance of the ECM term.

The Error Correction Model (ECM) for the given ARDL model follows:

$$\begin{aligned}\Delta \ln NI_t = \alpha_0 &+ \sum_{i=1}^{p} \beta_i \Delta PS_{t-i} + \sum_{i=1}^{p} \gamma_i \Delta VA_{t-i} + \sum_{i=1}^{p} \delta_i \Delta GE_{t-i} \\ &+ \sum_{i=1}^{p} \theta_i \Delta RQ_{t-i} + \sum_{i=1}^{p} \eta_i \Delta RL_{t-i} + \sum_{i=1}^{p} \kappa_i \Delta CC_{t-i} \\ &+ \phi\, \mathrm{ECM}_{t-1} + \varepsilon_t \end{aligned} \tag{2}$$

($\Delta\ln NI_t$ is the first difference of the natural log of NEPSE Index (dependent variable), ΔPS_{t-i}, ΔVA_{t-i}, ΔGE_{t-i}, ΔRQ_{t-i}, ΔRL_{t-i}, ΔCC_{t-i} are the first differences of the independent variables, α_0 is the constant term, β_i, γ_i, δ_i, θ_i, η_i, κ_i are the short-run coefficients, ϕ is the coefficient of the error correction term (ECM_{t-1}) representing the speed of adjustment back to equilibrium, and ε_t is the error term.)

The ECM coefficient (ϕ) must be statistically significant and negative ($\phi < 0$) for the model to converge toward equilibrium. Additionally, a significant ECM coefficient indicates the presence of a stable long-run relationship and confirms co-integration between the independent and dependent variables. According to Pesaran et al. (2001), a significant negative lagged error term serves as evidence of a stable long-run relationship. A more negative coefficient of the error correction term indicates a faster adjustment from short-run deviations back to long-run equilibrium.

The ARDL model aims to identify the Best Linear Unbiased Estimator (BLUE), making it necessary to perform diagnostic tests. Similar to previous studies (Menegaki, 2019; Pokhrel & Khadka, 2019), this research ensures the statistical robustness of the results by applying several diagnostic tests. These include the Ramsey Regression Specification Error Test for stability (Ramsey, 1969), the Breusch-Godfrey test for serial correlation (Breusch, 1978; Godfrey, 1978), the Breusch-Pagan test for heteroscedasticity (Breusch & Pagan, 1979), and the Jarque-Bera test for normality (Jarque & Bera, 1987) in the residuals. If the model is free from biases and produces reliable results, it can be used for analysis. To assess the stability of both long-run and short-run coefficients, this study also applies the cumulative sum of recursive residuals (CUSUM) and the cumulative sum of squared recursive residuals (CUSUMSQ) tests, as proposed by Brown et al. (1975). In cases of coefficient instability, options such as increasing the sample size or introducing dummy variables may be considered (Greene, 2012; Gujarati, 2009).

Results and Discussion

The first part of this section delineates the summary statistics for the variables under the study and the second part reports the empirical findings for cointegration tests.

Descriptive Statistics

Descriptive statistics serve as the first step in the analysis, aimed at describing and summarizing the data (Bluman, 2014). This method provides insights into the characteristics and nature of the variables, as well as the distribution, interpretation, and behavior of the data series utilized in the study. It includes measurements such as central tendency and dispersion, among others, within the dataset. The descriptive statistics for the variables are displayed in Table 2.

Table 2

Descriptive Statistics of the Variables

Statistics	Ln NI	PS	RL	RQ	VA	CC	GE
Mean	6.5581	15.7419	29.1728	26.9847	32.1976	27.6633	19.0209

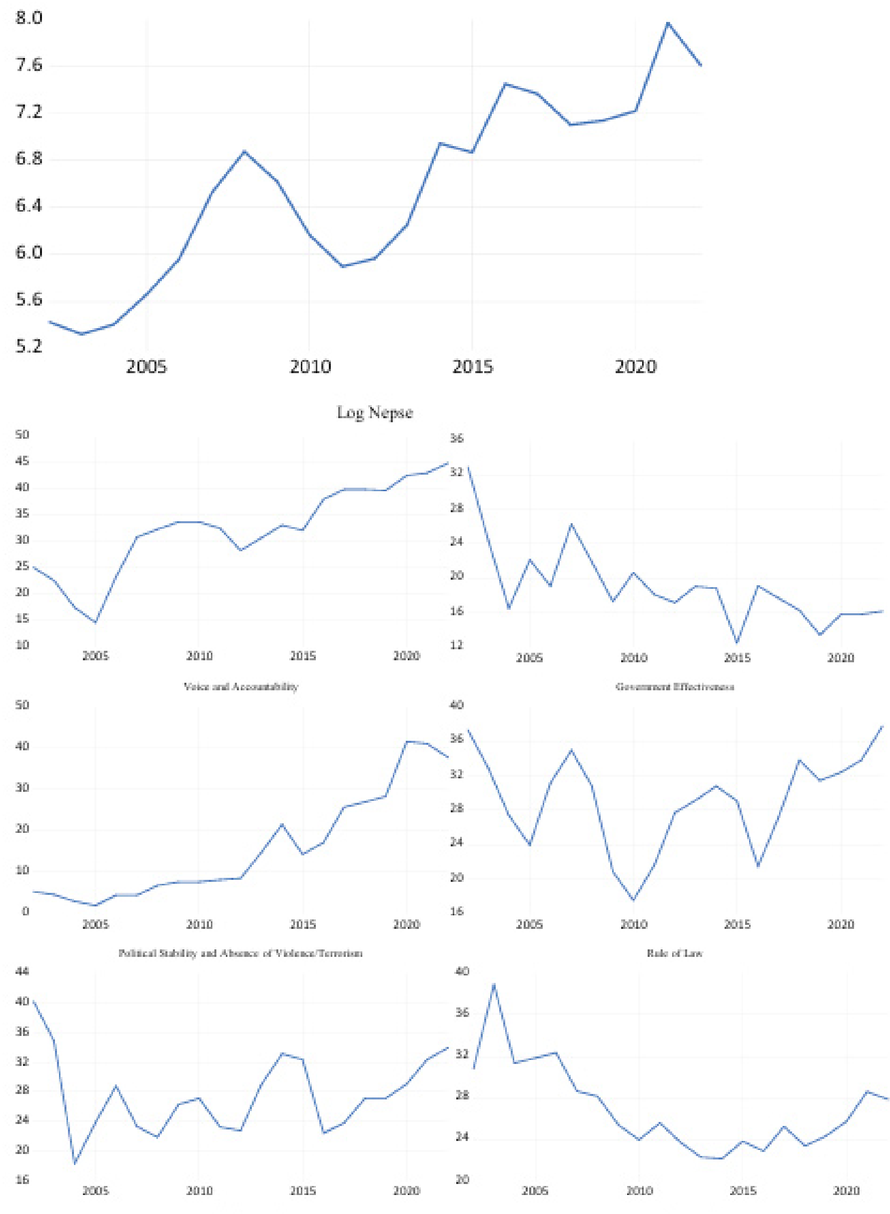
Median	6.6188	8.53	30.77	25.59	32.39	27.14	18.01
Maximum	7.9667	41.51	37.74	38.92	44.93	40.21	32.97
Minimum	5.3223	1.94	17.54	22.12	14.42	18.23	12.38
Standard deviation	0.7838	13.0040	5.5333	4.2367	8.3270	5.3602	4.6160
Skewness	-0.0499	0.8290	-0.4670	1.1121	-0.458	0.4665	1.3829
Kurtosis	1.8788	2.3543	2.4037	3.9398	2.517	2.7124	5.1952

Table 2 provides the descriptive statistics of VA, PS, GE, RQ, RL, CC and Ln NI from 2002 to 2022. The mean value of Ln NI is 6.5581, with a median of 6.6189, and it ranges from 5.3223 to 7.9667, indicating moderate variation. Its standard deviation is 0.7839, with skewness of -0.0499 and kurtosis of 1.8788. For PS, the mean is 15.7419 and the median is 8.53, with a range of 1.94 to 41.51, showing high variability; the standard deviation is 13.0041, skewness is 0.8290, and kurtosis is 2.3544. RL has a mean of 29.1729 and a median of 30.77, with minimum and maximum values of 17.54 and 37.74, reflecting moderate variation; its standard deviation is 5.5333, skewness is -0.4671, and kurtosis is 2.4037. RQ shows a mean of 26.9848 and a median of 25.59, ranging from 22.12 to 38.92, indicating moderate variability; the standard deviation is 4.2367, skewness is 1.1121, and kurtosis is 3.9399. The mean value of VA is 32.1976, with a median of 32.39, and a range of 14.42 to 44.93, showing significant variation; its standard deviation is 8.3270, skewness is -0.4581, and kurtosis is 2.5170. CC has a mean of 27.6633 and a median of 27.14, with minimum and maximum values of 18.23 and 40.21, indicating moderate variability; the standard deviation is 5.3602, skewness is 0.4666, and kurtosis is 2.7124. Finally, GE has a mean value of 19.0209, with a median of 18.01, ranging from 12.38 to 32.97, reflecting considerable variation; the standard deviation is 4.6160, with skewness of 1.3830 and kurtosis of 5.1952.

The progressions of these variables throughout the sample period are depicted in the Figure1.

Figure 1

Progressions of Variables



Econometrics Test

The first step involved the examination of the stationary properties of the data using the Augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP) tests at both levels and first-differences (Dickey & Fuller, 1979; Phillips & Perron, 1988). Table 3 present the results of ADF and PP test at both levels and first difference.

Table 3

Unit Root Test at I(0) and I(1)

Variables	At level I(0)		At level I(1)		Order of Stationarity	
	ADF Test	PP Test	ADF Test	PP Test	ADF Test	PP Test
VA	-0.503376	-0.697702	-3.187757	-3.733692	I(1)	I(1)
	0.8712	0.8255	0.0368	0.0122		
PS	2.617970	1.024362	-4.895528	-5.019066	I(1)	I(1)
	0.9999	0.0100	0.0012	0.0008		
GE	-0.412264	-4.593990	-6.560948	-11.65143	I(1)	I(0)
	0.8850	0.0019	0.0000	0.0000		
RQ	-1.761890	-1.583097	-8.591366	-7.592854	I(1)	I(0)
	0.3871	0.4724	0.0000	0.0000		
RL	-3.225753	-2.378922	-4.797400	-3.268986	I(0)	I(1)
	0.0342	0.1596	0.0015	0.0314		
CC	-0.930135	-3.590570	-8.301570	-4.831670	I(1)	I(0)
	0.7541	0.0158	0.0000	0.0012		
Ln NI	-1.099146	-1.099146	-3.679275	-3.679275	I(1)	I(0)
	0.6950	0.6950	0.0137	0.0137		

Table 3 displays the results of unit root tests for the selected variables, both at their original levels I(0) and after taking the first difference I(1). The ADF and PP test statistics for each variable, along with their significant p-values, provide strong evidence against the presence of a unit root in both I(0) and I(1). This confirms that the variables in the model are stationary, allowing for further cointegration testing. Following the confirmation of stationarity, the appropriate lag order was determined using the Akaike Information Criterion (AIC), Hannan-Quinn Criterion (HQ), Schwarz Criterion (SC), and Final Prediction Error (FPE) criterion (Akaike, 1974; Hannan & Quinn, 1979; Schwarz, 1978), as shown in Table 4.

Table 4

Lag order for the ARDL model

Lag	Log L	LR	FPE	AIC	SC	HQ
0	-350.2392	NA	7720335	35.72392	36.07243	35.79196
1	-252.5100	117.2751*	82202.65*	30.85100*	33.63905*	31.39525*

Table 4 shows the results of lag order selection for the ARDL model, identifying the optimal lag length. The log-likelihood values represent the model's fit, with higher values indicating a better fit. The LR statistic tests whether the current model is significantly better than one with fewer lags, with significant values supporting this. Additionally, the FPE, AIC, SC, and HQ criteria provide measures for selecting the model, with lower values being preferred. The findings suggest that a lag order of 1 is optimal, as indicated by the significant LR statistic and the lowest values for FPE, AIC, SC, and HQ, showing that this configuration effectively captures the data dynamics. Therefore, the optimal lag length for the ARDL model, without serial correlation, is 1.

Model selection criteria, such as the AIC and BIC, are critical tools in statistical analysis, helping researchers choose the most appropriate model by balancing fit and complexity. Figure 2 presents the model selection criterion using the optimal lag length of 1 based on the AIC.

Figure 2

Model Selection Criteria

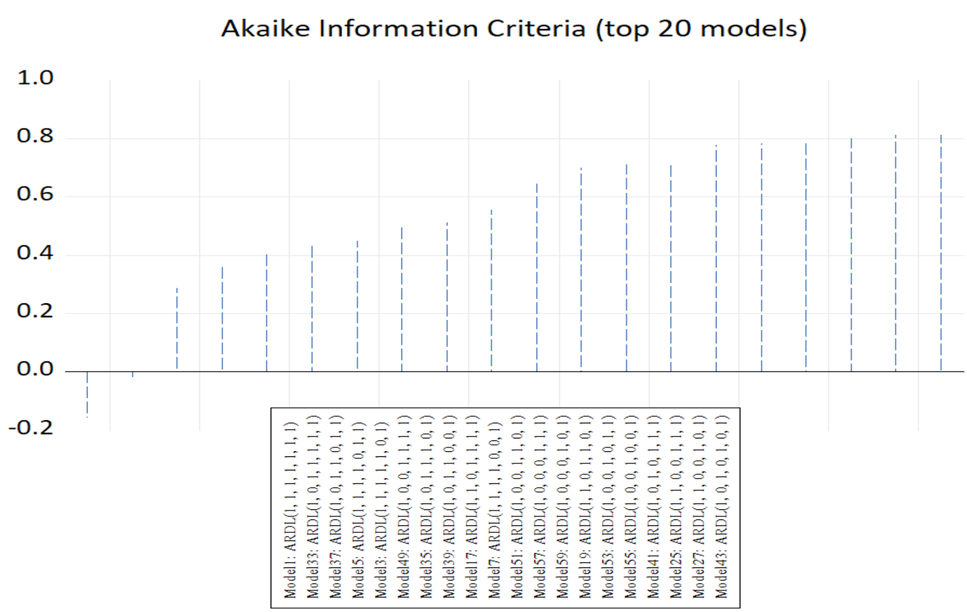


Figure 2 illustrates 20 models estimated using the AIC criterion, showcasing their respective fit and complexity. Among these, the ARDL (1,1,1,1,1,1,1) model stands out as the optimal choice, indicating that it achieves an effective balance between accurately capturing data relationships and preventing overfitting. This configuration suggests that a lag of one for each variable adequately explains the system's dynamics.

To investigate the long- and short-run relationships among the selected variables affecting stock market performance in Nepal, the co-integration relationship was tested using the ARDL model. The bounds test (F-statistics) was applied to assess the existence of co-integration among the model variables (Pesaran et al., 2001). The results of the ARDL bounds test for co-integration are presented in Table 5.

Table 5

ARDL Bounds Test for Cointegration

F-Bound Test			Null Hypothesis: No Levels Relationship	
Test Statistic	Value	Significance	I(0)	I(1)
			Asymptotic: n = 1000	
F-Statistic	5.522988	10%	2.12	3.23
K	6	5%	2.45	3.61
		1%	3.15	4.43
Actual Sample Size	20		Finite Sample: n = 80	
		10%	2.457	3.797
		5%	2.97	4.499
		1%	4.27	6.211

(* significant at 10%, ** significant at 5%, *** significant at 1%, I(0) show lower critical bound value and I(1) represent upper critical bound value, k is the number of independent variables for explained variable in ARDL model)

Table 5 shows that the calculated F-statistic and its associated critical values at 10%, 5% and 1%. The calculated F-statistic is 5.522988 which is above the upper bound, I(1) and is greater than the critical values at all levels of significance. Thus, the null hypothesis of no cointegration is rejected. The results of the ARDL bounds F-test suggest that there exists a long run relationship between NEPSE index with political indicators like CC, PS, GE, RQ, RL and VA in Nepal during the study period.

After establishing a co-integration relationship between the series, the long-run estimates of this relationship are reported in Table 6, shedding further light on the specific contributions of each variable.

Table 6

Long run ARDL model estimates

Dependent Variable: Ln NI				
Selected Model: (1,1,1,1,1,1,1)				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
CC	-0.1288	0.0445	-2.8968	0.0274
GE	0.2327	0.1096	2.1624	0.0780
PS	0.1543	0.0579	2.2641	0.0373
RL	-0.0155	0.0298	-0.5196	0.6220
RQ	-0.1940	0.0830	-2.3375	0.0581
VA	-0.1015	0.0690	-1.4711	0.1917

(* significant at 10%, ** significant at 5%, *** significant at 1%)

Table 6 presents the estimated long-term coefficients for variables influencing the NEPSE Index based on the ARDL model. The coefficient for Corruption Control (CC) is -0.128832 (p = 0.0274), indicating that stronger corruption control is associated with weaker stock market performance. This finding aligns with previous research findings of Lai Cao Mai (2020) and Sobhy Mohamed Hassan et al. (2024), which also reported that corruption control has a significant negative impact on stock market performance, particularly affecting market capitalization, trading volumes, and trading ratios over time. However, other studies (Ahmed et al., 2021; Pham, 2020) have found that corruption control positively impacts stock market performance by fostering economic growth in developing countries over the long term.

The coefficient for Regulatory Quality (RQ) is -0.194033 (p = 0.0861), indicating a marginally significant negative effect. This suggests that while sound regulatory policies are crucial for development, improvements in regulatory quality may reveal underlying issues that negatively affect market performance. For instance, regulatory actions against corporate misconduct can lower stock prices, particularly in cases of serious violations like fraud (Jain, 2022). Regulations aimed at ensuring stability may also limit credit creation, reducing earnings potential and negatively affecting stock returns (Monday, 2023). The Government Effectiveness (GE) coefficient is 0.232660 (p = 0.0780), showing a positive relationship with stock market performance. Similar results were found by Khan et al. (2022) and Maduka et al. (2023), who emphasized that effective governance is essential for attracting investors. The Political Stability (PS) coefficient is 0.154313 (p = 0.0373), indicating a significant positive relationship, as a stable political environment boosts investor confidence. This result is consistent with findings by Abdullah et al. (2022), Maduka et al. (2023), and Mai et al. (2023).

The Rule of Law (RL) coefficient is -0.0154670 (p = 0.6220), indicating no significant relationship with market performance. This suggests that changes in the legal framework do not have a notable impact on investor confidence and may not always lead to better market outcomes. However, Jumaah et al. (2023) highlighted that the effects of the rule of law on stock market performance can vary depending on regional governance and economic conditions. Conversely, Ahmed et al. (2021) reported a positive relationship between the rule of law and stock market development. Lastly, the Voice and Accountability (VA) coefficient is -0.101543 (p = 0.1917), indicating a negative but statistically insignificant relationship, meaning that citizen participation does not significantly impact market dynamics. Nevertheless, Jumaah et al. (2023) and Khan et al. (2022) found that voice and accountability are linked to better stock market performance, suggesting that improved governance enhances investor confidence and market stability.

The ECM regression results from the ARDL model are shown in Table 7, highlighting short-run dynamics and adjustments in response to changes in explanatory variables. The error correction term indicates how quickly the system returns to equilibrium after a disturbance, providing insights into short-term responses and overall model stability.

Table 7

Short-run Model Estimates

Dependent Variable: Ln NI				
ECM Demonstrations of the ARDL (1,1,1,1,1,1,1) Model				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	8.852093	0.998502	8.865371	0.0001
D(CC)	-0.07595	0.010003	-7.58722	0.0003
D(GE)	0.073941	0.0111	6.661801	0.0000
D(PS)	0.060846	0.008269	8.828155	0.0000
D(RL)	-0.07871	0.015824	-4.97503	0.0012
D(RQ)	-0.07986	0.015284	-5.22526	0.0009
D(VA)	-0.09005	0.017383	-5.17297	0.0009
CointEq(-1)*	-0.72086	0.081978	-8.79328	0.0001
R-squared	0.89738	Durbin-Watson Stat.		2.814369
Adjusted R-squared	0.857718	Akaike Info Criterion		-0.75667
S.E. of regression	0.143437	Schwarz Criterion		-0.35838
Sum squared Resid.	0.246889	Hannan-Quinn Criterion		-0.58906
Log Likelihood	15.56718			

(* significant at 10%, ** significant at 5%, *** significant at 1%)

Table 7 depicting the constant term (C) has a coefficient of 0.8253 with a significant t-statistic of 8.3654, suggesting a stable intercept. The first-difference variables (D()) reflect short-run dynamics due to yearly changes: D(GE), representing changes in GE, shows a positive impact with a coefficient of 0.0789 (p = 0.0003). D(CC), likely indicating changes in CC, has a negative impact with a coefficient of -0.8580 (p = 0.0003). D(PS), representing changes in PS, shows a minimal positive effect with a coefficient of 0.0068 (p = 0.4393). D(RL), indicating changes in the RL, negatively affects the dependent variable with a coefficient of -0.0406 (p = 0.0025) and D(RQ), reflecting changes in RQ, also has a negative impact with a coefficient of -0.0799 (p = 0.002). Additionally, D(VA), represent changes in VA, positively impacts the model with a coefficient of 0.0585 (p = 0.0021). The CointEq(-1) coefficient of -0.7209 (p = 0.0001) suggests a strong and rapid adjustment back to long-run equilibrium, correcting approximately 72.09% of the disequilibrium within one period.

The Durbin-Watson (D/W) value of 2.814369 indicates absence of autocorrelation in the model, confirming the statistical integrity of the analysis. R-squared, the coefficient of determination, defines the proportion of total variations in the dependent variable. In the above ECM model, the given value of R-squared is 0.897380 explaining 89.738% goodness of fit it means the model properly explains the stock market performance. Similarly, the value of adjusted R-squared is 0.837518, explains 83.7518% goodness of fit which means 83.7518% of total variation in dependent variable is explained by regression line and the rest is due to the other factor.

Diagnostic Test

A series of diagnostic tests were conducted on the residuals to verify the adequacy of the estimated model. These included tests for normality, serial correlation, and heteroskedasticity. Additionally, the Ramsey RESET test, along with cumulative sum (CUSUM) and cumulative sum of squares (CUSUMSQ) tests, was utilized to evaluate the model's stability. The outcomes of these four key tests are detailed in Table 8.

Table 8

Diagnostic Test Result

Description	Test Statistics	p-Value
Normality Test	Jarque-Bera (0.0968)	0.9527
Serial correlation	F-statistic (2.0153)	0.2481
Heteroskedasticity	F-statistic (2.5276)	0.1311
Ramsey RESET test	F-statistic (0.5958)	0.4751

Table 8 presents the results of Jarque-Bera test, Serial Correlation test, Heteroskedasticity test and Ramsey RESET test. The Jarque-Bera test for normality yields a statistic of 0.0968 with a p-value of 0.9527, indicating that the residuals are normally distributed, as the p-value is high. The Serial Correlation test (Breusch-Godfrey test) shows an F-statistic of 2.0153 with a p-value of 0.2481, suggesting no significant serial correlation in the residuals. The Heteroskedasticity test (Breusch-Pagan test) reports an F-statistic of 2.5276 with a p-value of 0.1311, indicating that the variance of the residuals is constant, or homoscedastic. Lastly, the Ramsey RESET test for model specification shows an F-statistic of 0.5958 with a p-value of 0.4751, implying that there is no evidence of model misspecification. Overall, the results suggest that the model's assumptions are generally satisfied.

Similarly, to assess the stability of the long-run coefficients and short-run dynamics, the Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) tests are utilized. Figure 3 and Figure 4 present the stability of the estimated coefficients in the error correction model, along with graphical representations of the CUSUM and CUSUMSQ statistics, respectively.

Figure 3

Cumulative Sum (CUSUM)

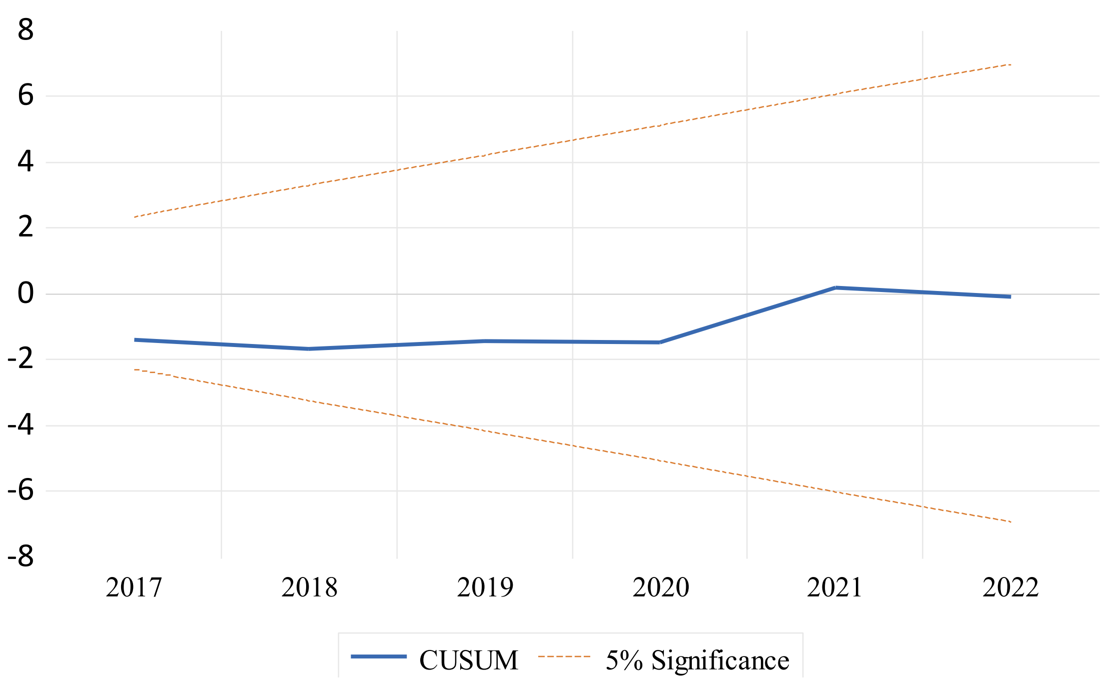


Figure 4

Cumulative Sum of Square (CUSUMSQ)

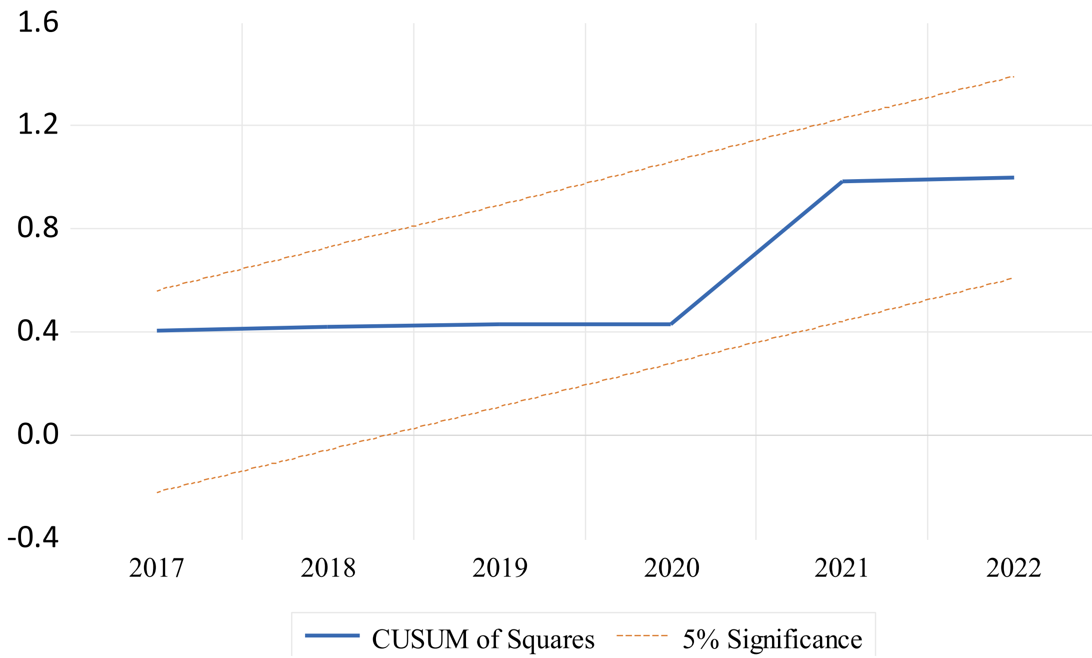


Figure 3 illustrates the plot of the CUSUM test, while Figure 4 presents the CUSUM Square test. Both plots display the CUSUM and CUSUMSQ statistics, which remain within the critical bounds established at a 5% significance level, indicated by two straight lines drawn at this level. Since the statistics do not exceed these critical lines, the null hypothesis asserting that all coefficients in the error correction model are stable cannot be rejected. This finding confirms the stability of the estimated model, indicating that the relationships among the variables remain consistent over the observed period. Overall, the stability indicated by the CUSUM and CUSUMSQ tests enhances the credibility of the findings presented in this study.

Conclusion

This study explores the complex connection between political instability and stock market performance in Nepal from 2002 to 2022, using the ARDL model to analyze both short-term and long-term interactions. The results provide important insights into how various political governance indicators—specifically VA, PS, GE, RQ, RL and CC—impact the Nepal Stock Exchange (NEPSE) index.

The analysis confirms a long-run relationship between political indicators and stock market performance, as shown by the ARDL bounds test. Notably, PS and GE demonstrate a significant positive correlation with NEPSE performance. Conversely, the study identifies a significant negative relationship between CC and RQ and market performance, indicating that while anti-corruption measures are crucial, they may also expose underlying economic weaknesses that increase market volatility. Additionally, the RL and VA show a negative but insignificant relationship with stock market performance.

Furthermore, the study's Error Correction Model (ECM) findings indicate a strong tendency to return to equilibrium after short-term deviations, underscoring the stability of the long-run relationship between the analyzed variables. The robustness of these findings is validated through comprehensive diagnostic tests that check for normality, serial correlation, heteroscedasticity, and model specification.

Policymakers should prioritize strategies that promote political stability and enhance governance effectiveness, achieved through inclusive political dialogue and transparent decision-making. Continuous improvements in government efficiency are vital, to ensure accountability. While combating corruption is necessary, such efforts should avoid destabilizing the economy, striking a balance between reform and market stability. Additionally, refining regulatory frameworks is essential for fostering a supportive business environment that encourages investment without excessive restrictions. Future research should also consider the interactions between various macroeconomic factors and political elements affecting market performance and include comparative analyses with other emerging markets for deeper insights. Overall, this research highlights the importance of political governance in shaping financial markets in Nepal, and by implementing these recommendations, stakeholders can enhance market stability and promote sustainable economic development for both investors and the broader economy.

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Contribution of Income Tax Revenue to Total Tax Revenue of Nepal

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Abstract

The Government is responsible for maintaining peace, security and economic stability, balancing debt management and investing in infrastructure and essential resources to foster development and cover ongoing expenses. These priorities require a robust financial system, with tax revenue as a crucial income source for the government. Therefore, it is essential to understand the dynamics between income tax revenue and total tax revenue for effective policy-making and economic management. This study explored the intricate relationship between income tax revenue and total tax revenue in Nepal, to enhance understanding and inform future research and policymakers. The study comprehensively analyzed time series data from 2009/2010 to 2021/2022 to achieve this objective. The analysis included descriptive analysis to identify the relationship between income tax revenue and total tax revenue. The study revealed a strong positive correlation between income tax and total tax revenue in Nepal. The study's findings underscored the significance of income tax policies in shaping overall tax revenue and provide valuable insights for policymakers and tax authorities in optimizing revenue generation while ensuring tax system stability.

Keywords: Economic development, policymaker, government, gross domestic product

Introduction

The Government has many duties to uphold. Its main responsibility is to ensure peace, security and economic stability while managing the overall economy and debt sustainably. Moreover, the government also puts money into infrastructure and necessary resources to aid in progress and cover continual costs. Governments also take on the role of caregivers and mediators for different aspects of society. The government depends on its financial resources to assign funds for administrative and capital expenditures (Todaro & Smith, 2006). Taxation is the primary method used by the government to raise funds for public services and administration, along with borrowing money through debt (Bhatia, 2009; Jakir, 2011). The main goal of imposing taxes is to create income for the government to support its activities while minimizing negative economic impacts (Gentry & Hubbard, 2000). A tax is a monetary obligation levied by the government on earnings, products, services and property to support public service and administrative tasks (Myles, 2000; Kandel, 2010). Taxation is essential in directing a country's economy towards prosperity and stability. It achieves this by regulating economic activities, promoting growth, ensuring a fair distribution of national income and reducing disparities among regions (Dhakal et al., 2022). Income tax is a crucial component of Nepal's taxation framework, significantly influencing the total tax revenue. Nepal needs a robust taxation system to collect internal funds for advancement as a developing country reliant on agriculture. A direct form of taxation, income tax is imposed on individuals, corporations and other entities based on their earnings, as highlighted by Yadav et al. (2015). Taxes are financial obligations that individuals and businesses must pay to the government based on their income, without receiving any immediate personal benefits in return. Taxation can be categorized into two main types; direct taxation and indirect taxation. Direct taxes are levied on income while indirect taxes are applied on expenditure (Chapagai, 2021; 2024). Gross Domestic Product (GDP) refers to the total monetary value of all goods and services generated within the geographical boundaries over a specified period (Adhikari et al., 2022).

Income tax plays a significant role in Nepal's tax system, substantially affecting the overall tax revenue. Nepal needs a robust taxation system to collect internal funds for advancement as a developing country reliant on agriculture. A direct form of taxation, income tax is imposed on individuals, corporations, and other entities based on their earnings as highlighted (Yadav et al., 2015). Taxes are monetary payments made by both individuals and businesses to the government, determined by their earnings, without guaranteeing any immediate personal benefit exchange (Adhikari, 2020). Taxation can be categorized into direct tax and indirect tax. Direct tax is levied on income, while indirect tax is levied on consumption (Chapagai, 2021; 2024). Gross domestic product (GDP) refers to the comprehensive value of all goods and services that are produced within a nation's borders during a specific period (Adhikari et al., 2022). The study study found a complex relationship between tax revenue and income inequality. The results suggest that tax revenue is essential for funding public services and reducing income inequality in the nation (Sari et al., 2022).

The significance of tax revenue as a crucial financial resource for the Government of Nepal has increased over time, especially in response to increasing government expenditures. As a result, there has been a notable shift in emphasis towards the enhancement of tax revenue. This scenario raises a critical question: is there a correlation between tax revenue and GDP in Nepal? The objective is to provide an in-depth analysis of the complex relationship between income tax revenue and total tax, addressing a gap in the current literature. The paper seeks to improve our knowledge of how income tax revenue relates to total tax within Nepal's economy, providing insights that can guide future research and policy decisions. The primary objective is to assess the impact of income tax revenue on total tax revenue in Nepal and to clarify the relationship between tax revenue and the overall economic growth of the country.

Literature Review

Previous empirical studies investigating the correlation between tax revenue and GDP have predominantly focused on diverse global contexts, including that of Nepal. Gupta (2007) found that counties that rely significantly on taxation of goods and services typically experience lower income levels, while those that prioritize taxation on income, profits, and capital gains frequently attain more favorable financial results. Shrestha and Kautish (2020), Dahal (2020), and Kharel (2021) conducted a study on the correlation between government revenue and economic growth in Nepal. The results reveal a positive correlation between government revenue and economic development. A study conducted by Alowosheble et al. (2017) revealed that the revenue generated from income tax has a considerable impact on overall economic growth. Korkmaz et al. (2019) examined the impact of taxation on economic growth in Turkey. The study revealed that indirect tax has a positive and significant effect on economic development, whereas direct tax revenue has a negative effect on economic growth. There are positive and significant relationships between tax revenue, expenditure GDP and budget deficit.

A comprehensive analysis of the factors contributing to the substantial dependence on direct tax, while also examining the relative proportions of indirect tax and direct tax revenue with the overall tax framework. The investigation revealed that the ineffectiveness of income tax administration is attributed to broader governmental inefficiencies. Moreover, the ratio of income to GDP, alongside total revenue and direct tax revenue, exhibited an upward trajectory. To facilitate a program-oriented fiscal policy, it was recommended that value-added tax should serve as a principal source of indirect tax within a liberalized economic context. For taxpayers operating on a smaller scale, it is suggested that door-to-door services be implemented. The study revealed that the fundamental nature of a clear, transparent, and progressive economic policy is the main factor contributing to the insufficient effectiveness of Nepal's income tax system. Additionally, the existing corporate tax rate has been considered unsuitable, with a recommendation for a standardized rate to be applied across all categories of corporations (Kafle, 2019).

The study discovered that in Nepal, tax revenue significantly and positively influences economic growth (Ghimire, 2019). The study showed that indirect taxes positively and significantly impact economic development while direct tax revenue has a negative effect on economic growth. In addition, there are strongly positive correlations between tax revenue, government expenditure, GDP, and the budget deficit (Anojan, 2018). The study found that direct taxes have a significant negative correlation with economic growth, whereas indirect taxes show a positive but insignificant effect on the dependent variable. Furthermore, it revealed that direct taxes make a significantly greater positive contribution to total tax revenue compared to indirect taxes (Hakim, 2020). The study demonstrated a strong and positive relationship between tax revenue and GDP in Nepal (Dangal et al., 2021). Personal income tax has a significant and positive effect on agriculture, whereas corporate tax has not been shown to have a substantial impact on the sector (Omodero, 2020).

Nguyen and Darsona (2022) study reveals that tax revenue has a negative relationship between tax revenue and GDP. Aden-Dirir Aden (2023) indicated that short-term tax policies and institutional forms do not significantly affect economic growth. However, it suggests that, over the long term, taxation, government efficiency, and institutional quality positively impact economic growth. Abata et al. (2023) examined the influence of both direct and indirect taxes on Nigeria's economic growth. Their findings indicated that direct taxes exert a considerable negative effect on economic growth, while indirect taxes contribute positively and significantly to the country's economic development. Adeyemi (2023) explored the correlation between tax revenue and economic growth in Nigeria, revealing the long-term relationship between the two variables. Furthermore, the study conducted by Irekponor and Ebieji (2023) reveals that tax revenue has a positive significant impact on GDP. Edore (2022) and Jemiluyi and Jeke (2023) reveal in their study that tax revenue positively impacts economic mobilization significantly. The taxation on remuneration plays an important role in the overall fiscal revenue of the government. Over the study periods, remuneration tax has accounted for a contribution ranging from 2 percent to 20 percent of the total tax revenue in Nepal (Basnet, 2024). The results indicate a substantial effect of taxation on the Gross Domestic Product (GDP) and venue of Nepal. Furthermore, the research elucidates the detrimental consequences of tax evasion and avoidance on the generation of revenue (Shakya & Ojha, 2024). The results indicate an affirmative trajectory in revenue mobilization, wherein tax revenue is a crucial function. The results enhance the comprehension of Nepal's endeavors in revenue mobilization and the structure of its revenue sources, thereby offering valuable perspectives on the nation's fiscal policies and financial viability (Nepal et al., 2024). The study revealed that natural resource rents have a significant negative correlation with GDP in Nepal (Dangal et al., 2021). Many studies have demonstrated a significant and positive relationship between tax revenue and a country's gross domestic product (GDP). These research including Okafar (2012), Jalata (2014), Ugwunta and Ugwuanyi (2015), Njindan Iyke and Takumah (2015), Takumah and Ikye (2017), Ali et al. (2018), Odhiambo and Olushola (2018), Oboh et al.(2018), Basher et al.(2019), Oluwatobi et al.(2021), Nguyen et al.(2021), and Zahra et al. (2021) have all supported this finding. Conversely, some studies including those by Marire and Sunde (2012), and Saibu (2015), have reported a negative correlation between tax revenue and GDP. The literature review shows a lack of detailed studies focusing on the impact of income tax revenue on total tax revenue in Nepal. This research aims to address this void by providing a thorough examination of the intricate connection between income tax revenue and total tax revenue in the Nepalese economic system.

Methods and Procedures

This study utilizes a descriptive approach to examine the role of income tax revenue in the total tax revenue of Nepal, employing data from 2009/2010 to 2021/2022. The data, primarily drawn from the economic survey conducted by the Ministry of Finance, were analyzed through ordinary least squares (OLS) regression and correlation coefficients to evaluate the relationship between income tax and overall tax revenue. The analysis was conducted using SPSS version 23, with results presented in percentages and ratios via descriptive statistics, to assess the relationship between income tax and total tax revenue. Data analysis was performed using SPSS version 23, and the findings were presented in percentages and ratios through descriptive statistics. Additionally, independent t-tests and F-test were performed to test the research hypothesis and analyze the results of the (OLS) analysis.

Model Specification

The study examines how income tax revenue and total tax revenue influences Nepal's GDP from 2009/2010 to 2021/2022. To achieve this, a statistical model was created to explain how the variables interact with each other. An examination of real-life research on income tax and overall tax revenue in different countries shows that the connection between the chosen factors adheres to a linear trend. This understanding establishes a link between income tax revenue and total tax revenue. The model presented in this study indicates that total tax revenue is influenced by income tax revenue from both micro and macroeconomic viewpoints. Thus, the definition of the model is:

Total tax revenue = f (Income tax revenue) (1)

The working model of the paper is delineated below, drawing upon the functional relationships previously discussed.

Where;

β_0= Autonomous (Intercept)

β_1= Coefficient of income tax revenue, μ = error term

The total tax revenue is anticipated to be positive, even in the absence of income tax revenue collection. Therefore, the initial expectation is that the model parameter will exhibit a positive sign.

Research Hypothesis

A review of empirical studies shows a consistent positive relationship between income tax revenue and total tax revenue in various countries. Building on this finding, the current research aims to evaluate this relationship quantitatively by proposing the following hypothesis:

H_o = There is no significant statistical relationship between income tax revenue and total tax revenue.

Results and Discussion

Linear Regression Analysis

The R-value is 0.992, this value presents a strong positive relationship between predicted values and the dependent variable, indicating a correlation between the observed and predicted values. The R squared value is 0.984, indicating that a large portion of the variance in the dependent variable can be predicted from the independent variables/ The adjusted R squared value is 0.978, which adjusted R square value based on the number of predictors in the model. A standard error of 40.60 indicates that more precise predictions are obtained with smaller standard errors. The R-squared change is 0.984, indicating that the addition of predictors has significantly improved the model's fit. The F-change is 182.84, which is significant. The D-W value is 2.329, which is slightly above ideal value of 2, indicating weak negative autocorrelation in the residuals. The P-value for the statistic is 0.000, indicating that the change in the model's fit is statistically significant at the 0.05 level. Both income tax and total tax revenue have a significant positive correlation. The regression analysis investigates the influence of income tax revenue on total tax revenue. The regression analysis examines how income tax revenue affects total tax revenue. The model exhibits a strong positive and significant (F-statistic 182.84, P< 0.001) (Table 1). Based on the regression analysis conducted, there exists a robust correlation between the total income tax and the total tax revenue. The standardized coefficient (Beta) value of 0.991 and a significant T-statistic of 25.92 (<0.001) suggest that increases in total tax revenue are directly associated with higher total tax revenue. As a result, the researcher has rejected the null hypothesis, concluding that income tax revenue significantly contributes to total tax revenue relative to GDP. The results are in line with the research studies carried out by Gupta (2007), Shrestha and Kautish (2020), Dahal (2020), Kharel (2021), Alowosheble et al. (2017), Korkmaz et al. (2019), Ghimire (2019), Anojan,(2018), Hakim (2020), Dangal et al. (2021), Omodero (2020), Nguyen and Darsona (2022), Aden-Dirir Aden (2023), Abata et al. (2023), Adeyemi (2023), Irekponor and Ebieji (2023), Edore (2022), Jemiluyi and Jeke (2023), Okafar (2012), Jalata (2014), Ugwunta and Ugwuanyi (2015), Njindan Iyke and Takumah (2015), Takumah and Ikye (2017), Ali et al. (2018), Odhiambo and Olushola (2018), Oboh et al.(2018), Basher et al. (2019), Oluwatobi et al. (2021), Nguyen et al. (2021), and Zahra et al. (2021). Howver, certain research studies, such as by Marire and Sunde (2012), Saibu (2015) and Nguyen and Darsona (2022), do not align with the results.

Based on the research methodology and the regression output presented above, the following estimated model has derived.

Total Tax Revenue = 30.035 + 3.663 (Income Tax) + μ

The regression results indicate that the autonomous component of the model is positive, suggesting that the economy would achieve a baseline total tax revenue of Rs. 30.035 in the presence of income tax revenue during the review period from 2009 to 2022. The positive coefficient of income tax (3.663) aligns with the theoretical expectation of a positive relationship between income tax revenue and total tax revenue. This implies that an increase of Rs. 1 in income tax revenue would lead to an approximate increase of Rs. 3.663 in Nepal's total tax revenue. Additionally, the t-statistic of 22.61 exceeds the critical t-value of 1.812 at a 5% significance level. This confirms that income tax revenue has a statistically significant impact on total tax revenue in Nepal over the study period. To that extent, the researcher therefore rejected the null hypothesis and accepted the alternative hypothesis, assuming income tax revenue makes signification contribution to the total tax revenue in Nepal.

Table 1

Linear Regression Analysis

Model	R	R Square	Adjusted R Square	Standard Errors of the Estimate	Change Statistic			
					R Square Change	F Change	Durbin-Watson	Significant F Change
1	.992[a]	.984	.978	40.60698	.984	182.848	2.329	.000

Model		Unstandardized coefficients		Standardized coefficients	T-test	Significant
		B	Standard error	Bata		
1	Constant	26.32	22.21		1.185	0.259
	Total income tax	3.7	1.43	.0.991	25.92	0

Sources: SPSS Version 23.0 Regression output

a. Dependent Variable: Total Tax Revenue

b. Predictors: (Constant), Investment Income Tax(I), Corporate Income Tax(C), Personal Income Tax(P)

Income Tax Revenue of Nepal

The corporate income tax revenue can vary from a minimum of Rs. 20.22 billion up to a maximum of Rs. 123.16, having a mean value of Rs. 70.47 billion. The coefficient of variation (CV) is 53.49, with a standard deviation of 37.69. Personal income tax revenue can vary from a minimum of Rs. 9.29 billion up to a maximum of Rs. 92.50, having a mean value of Rs. 37.32 billion. The coefficient of variation (CV) is 73.84, with a standard deviation of 27.56. Income tax revenue from investment varies from at least Rs. 4.32 billion up to Rs. Maximum Rs. 36.67 billion on average, at Rs. 18.48 billion. The coefficient of variation (CV) is 60.69 with a standard deviation of Rs. 11.26. The total income tax revenue varies from a minimum of Rs. 33.82 billion up to Rs, 252.19 billion with an average of Rs, 126.27 billion. The standard is 74.75, with a coefficient of variation (CV) of 59.20. The total tax revenue fluctuates from a minimum of Rs. 159.80 billion up to the ceiling of 984.33, at a mean of Rs. 492.61 billion is the sum. The value of the standard deviation is 276.79, with a coefficient of variation of 56.19. The Gross Domestic Product (GDP) varies from the lowest of Rs. 1193 billion up to the maximum Rs. 4933.70 average Rs. 2,853.76. The coefficient of variation is (CV) 41.32, while the standard deviation is 1179.13. The range of the income tax revenue to total tax revenue ratio is 21.16 to 30.46, mean at 25.05. The coefficient of variation (CV) is 8.87, while the standard deviation is 2.20. This indicates a relatively low degree of variability in the proportion of income revenue to total tax revenue across the study periods. The relatively low CV for the ratio of income tax revenue remains relatively stable, despite the variability in individual income tax components and total tax revenue (Table 2).

Table 2

Income Tax Revenue of Nepal

'Rs. in Billion'

Fiscal Year	Corporate Income Tax(C)	Personal Income tax (P)	Investment Income Tax(I)	Total income Tax(T) = C+P+I	Total Tax Revenue	Gross Domestic Product (GDP)	Income tax revenueto Total tax revenue in Nepal	Income tax revenue to GDP in Nepal
2009/010	20.2	9.29	4.32	33.82	159.8	1,193	21.16	2.83
2010/011	23.93	10.92	6.5	41.35	177.2	1,367	23.34	3.02
2011/012	30.49	12.29	8.52	51.3	211.7	1,758.40	24.23	2.92
2012/013	37.07	15.54	11.58	64.18	259.2	1,949.30	24.76	3.29
2013/014	45.42	19.43	10.76	75.61	312.4	2,232.50	24.20	3.39
2014/015	52.04	22.56	11.57	86.16	356	2,423.60	24.20	3.56
2015/016	70.97	29.96	13.2	114.13	421.1	2,608.20	27.10	4.38
2016/017	92.65	34.85	17.34	144.84	553.9	3,077.10	26.15	4.71
2017/018	87.6	41.41	25.79	154.78	659.5	3,455.90	23.47	4.48
2018/019	104.87	55	28.54	188.41	738.6	3,858.90	25.51	4.88
2019/020	123.16	57.93	32.15	213.23	700.1	3,888.70	30.46	5.48
2020/021	104.65	83.49	33.34	221.48	870.1	4352.55	25.45	5.09
2021/022	123.01	92.5	36.67	252.19	984.33	4933.7	25.62	5.11
Minimum	20.20	9.29	4.32	33.82	159.80	1193.00	21.16	2.83
Maximum	123.16	92.50	36.67	252.19	984.33	4933.70	30.46	5.48
Mean	70.47	37.32	18.48	126.27	492.61	2853.76	25.05	4.09
Std. Deviation	37.69	27.56	11.26	74.75	276.79	1179.13	2.20	0.95
CV	53.49	73.84	60.90	59.20	56.19	41.32	8.78	23.13

Source: GON, MOF, Economic Survey 2012/2013, 2022/2023

Conclusion

The study identified considerable variability in corporate, personal and investment income tax revenue as well as in total tax revenue, as reflected by the corresponding standard deviation and coefficients of variation. Nonetheless, despite this variability, the ratio of income tax revenue to total tax revenue has remained relatively stable throughout the study period, indicating consistent proportions. Furthermore, the regression analysis has underscored a strong positive correlation between income tax revenue and total tax revenue as evidenced by high R, R-squared, and adjusted R-squared values, alongside low standard errors of estimate and significant F-change statistic. This suggests that changes in income tax revenue have a substantial impact on total tax revenue with an increase in income tax positively associated with higher total tax revenue. Reject the null hypothesis and conclude that income tax revenue significantly contributes to both total tax revenue and GDP. The finding has significant implications for policymakers and tax authorities, highlighting the importance of income tax policies in shaping overall tax revenue. It emphasized the end of strategic adjustments to income rates to optimize revenue generation while maintaining stability in the tax system. Furthermore, the paper recommends that the Nepal government make a full-fledged effort to efficiently collect and effectively utilize such tax revenue by closing the door to corruption issues, which can be possible by making the income tax administrations more fashionable than ever.

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Social Support Systems and their Impact on the Psychosocial Well-Being of Elderly People

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Abstract

With the physical descent and loneliness that come with aging, strong social networks are critical to preserving an older person's well-being. The study focuses on the impact on the psychological well-being of people. The study took place at Lamki Chuha Municipality, Kailali district in Nepal. In this study, 249 elderly people aged 60 years and above were systematically selected through random sampling, and data were collected through a descriptive survey using a cross-sectional design. Data were generated using face-to-face interviews administered by developing a questionnaire. Descriptive statistics and analysis of variance (ANOVA) were used to analyze how social support affects the emotional well-being of respondents using SPSS (version 20). The findings indicate that more than one-third of the elderly feel that their families do not support them adequately, 42.6 percent indicated rejection as an issue, and 38.2 percent stated communication barriers as a reason for lack of support. This study showed that structural support was very important since it had connections to both financial resources and knowledge, but it was a friendship that was perceived to be most valuable, and it influenced older people to a very great extent. As a result of the findings of this study, specific measures should be implemented frequently for these unique groups.

Keywords: Elderly, emotional support, functional support, loneliness

Introduction

Social support systems are the collective of family members, friends and community resources that offer encouragement, information and tangible help, and enhance psychological well-being and coping capabilities (Teshale et al., 2023). These are critical means through which stress can be managed and the overall well-being of the elderly improved. Social support systems are vital factors for the psychological well-being of elderly people. They give emotional support, social interaction, and practical help so that there is less loneliness and psychological distress. General well-being is also enhanced in older adults as these networks promote feelings of belongingness and safety.

In Nepal, the number of elderly people is growing quickly; 2.97 million were counted in the 2021 census, up 38.2 percent from 2011. Now, they make up 10.21 percent of the total population. The overall population is rising at a speed of 0.92 percent annually, while the older population is growing at a rate of 3.29 percent annually. Today, the aging society faces a critical change. The government is obliged to consider issues concerning elderly care because of decreasing birth rates and lengthened life spans (Chalise, 2023).

There are some challenges that arise from changes in population such as the burden on health care, social security, and family connection systems, and the absence of effective legal structures for addressing elderly requirements. To adapt to these changes, diverse stakeholders develop strategies and policies that benefit them (Parker et al., 2014). Because society is contending with the aging population's move from large, extended families to smaller, intimate ones, families are increasingly difficult to provide support for the elderly. As a result, novel policies and support networks to improve elderly adults' well-being are badly needed (Foley & Luz, 2021).

Quality of life is a broader term that, unlike other quality of life, is psychosocial, including social and mental qualities, particularly for the elderly. These include the ability to maintain emotional self-control, an overall level of satisfaction with one's life, a desire or will to live, and the ability to maintain major interpersonal relationships such as marriage, employment, friendships and so on (Girme et al., 2023). They serve as a way of providing for the elderly psychological and physical needs. A few of these assets include friends and family, authorities, institutions, organizations, and social groups. Social support takes on several forms that include emotional cues of positivity such as empathy, enthusiasm, and trust; tangible support through assistance; while official forms are counseling and information gathering (Chen et al., 2022). According to studies, it reduces stress, depression, and anxiety among older people while improving their coping strategies and resilience (Liu et al., 2023).

There are large social resources that serve as social support in assisting elderly people in overcoming the obstacles associated with aging, thereby improving the quality of life (Zhang et al., 2012). The elders are particularly affected by psychosocial well-being since it impacts their physical and mental health as well as life experiences and longevity. As a result, dealing with age-related changes, managing potential losses, and being engaged on social networks are all required components of psychosocial well-being, making this field vital to gerontology.

Everyone has a particularly significant decline in physical functioning around late adulthood. One of many examples is that diseases experienced by persons with extreme body conditions most times cause them not to move or touch for some seconds or minutes. One more side of this stage is cognitive impairment. There's dementia, one of its common disorders in the elderly. In this way, it leads to dependency on caregivers and the healthcare system (Grob et al., 2022). Although friends and complement holders from the community can also support elderly people, families are more appropriate for care because they understand individual's requirements better, and to meet the family's needs, the well-being of elder people and their caretakers improves (Wang et al., 2018).

As the world population is getting older rapidly, it is very important to determine the factors that affect their mental health. For several years, research has been focused on examining physical health issues for the elderly; however, little is known about the psychological effects of social support networks on the elderly. Some of the key elements of quality of life for the elderly are psychological health and psychosocial well-being (Pristavec, 2019).

These studies suggest building and improving policies and programs for elderly people related to career facilities. With enhanced awareness of the elderly in every nation, persons involved in policy formulation and practice might utilize the findings of this study to suggest methods that will be of considerable importance to all old people. As such, this line of thought suggests how healthy social ties should be implemented into a balanced, aged-friendly program to improve not just lifespan but also meaningful lives for the elderly (Djundeva et al., 2019).

The previous research found that the provision of care in such locations relies mostly on personnel qualifications and education, demonstrating a crucial requirement for integrative plans geared towards raising the life circumstances and cognitive wellness of the inhabitants (Bickenbach et al., 2023). Thus, it is widely recognized that psychosocial well-being is especially essential for older persons since it influences not only their physical and mental health but also their life experience and lifespan. As a result, dealing with age-related changes, managing potential losses, and being engaged on social networks are all required components of psychosocial well-being, making this field vital to gerontology.

There are many types of social support in question that can help to meet the emotional and social needs of elders such as relatives, friends, power, organizations, and groups. Social support can be classified into affectionate or emotional, tangible or practical and directive or informational (Carter, 2023; Liang et al., 2024). These systems have therefore in the past served to improve the psychosocial functioning of older people by decreasing loneliness and increasing life fulfillment. Given this increasing population of older adults, knowledge of different types of social support is crucial for policymaking that will enhance the quality of life of the elderly (Kiani & Ehsan, 2024; Beard et al., 2016).

This indicates that social support has a role not only in decreasing the challenges associated with aging but also in giving the individual an important component of belonging to society, which is critical in the development of well-being in later life. As a result, there are large social resources that serve as social support in assisting elderly people in overcoming the obstacles associated with aging, improving the quality of life (Zhang et al., 2012). Previous research suggests the importance of these social networks in the daily lives of the elderly population.

It is important to consider the effect of social networks on the mental health of older people because today there are a higher number of older persons. This study aims to investigate the extent to which social support, as perceived by older people, affects their subjective well-being. This research contributes to an understanding of social capital and mental health that are relevant to both policy and community actions.

Methods and Procedures

Research Design

The self-reported psychological well-being of elderly citizens was evaluated by using descriptive research design. This design enabled examination of correlations between systems of support, particularly, financial and physical, and the psychological well-being of the elderly.

Study Area and Population

This research was carried out in Lamki Chuha Municipality, Kailali district, Nepal particularly Wards 1 and 4. These wards were targeted since they have diverse population, and many people, especially elders, with relatively less social support, and less social capital. These factors make it easier to get a sample of the elderly persons within the region. The number of elderly people recorded by census at ward level is 1540 in Ward 1 and 1035 in Ward 4.

Sample Size and Sampling Method

A sample of 249 elderly people was estimated to have proportional reporting from both wards by the use of systematic random sampling. In detail, 149 respondents were chosen from Ward 1 while 100 were from Ward 4. These wards were selected because the socio-economic and ethnic characteristics of the residents had to be compared and contrasted to determine their impact on social support and psychological health.

Data Collection

A structured questionnaire was used to collect data which comprised four major sections namely socio-demographic characteristics, social networks and resources, mental health status as well as life satisfaction with social functioning. The questionnaire aimed at gathering comprehensive information on the demographic profiles, support systems, and psychological well-being of respondents. It has also explored how they relate within their various social networks. Additionally, Likert scales were used to measure companionship preferences and emotional support levels hence giving a nuanced way of assessing experiences and perceptions among participants.

Data Analysis

The data was analyzed using SPSS (Version 20). This cross-sectional survey employed descriptive statistics to describe the demographic data of the respondents as well as the nature of the support received about companionship preferences for gender, frequency, intensity, duration and type of emotional support provided. The self-reported nature of perceived social support was measured using the usual five Likert scale items addressing the sufficiency and access to emotional support from family, friends, and community sources. In the present study, a statistical test that was used was the Analysis of Variance (ANOVA) to determine the mean difference between social support and psychological well-being and to identify groups that were significantly different. In addition, regression analyses tested the moderation of various types of support giving to mental health status. Coefficients of regression and their p-values offered rich insight about the roles of family and community assets in improving the quality of life of elderly people. The results obtained from the paper support the need to enhance proper care provisions and social structures that enhance the psychological well-being of people in their old age.

Results

The research results are based on a sample size of 249 participants. As indicated in Table 1, the respondents' age categories and social class have a crucial role to play. The findings from this research show that most people involved in the sampling frame were aged either 71-75 years (38.2%) or between 76 - 84 years (23.7%); hence, it was focused on elderly people.

Table 1

Socio-Economic Profile of Respondents

Description	N	%
Age group		
60-65 years	10	4
66-70 years	43	17.3
71-75 years	95	38.2
76-84 years	59	23.7
85 years and above	42	16.9
Sex		
Male	92	36.9
Female	157	63.1
Religion		
Hindu	224	84.9
Non-Hindu	25	16.1
Marital Status		
Married	157	63.1
Unmarried/widowed/divorced	92	36.9
Caste and ethnicity		
Brahmin/Chhetri	125	50.2
Tharu	74	29.7
Dalit	35	14.1
Other	15	6
Current occupation		
Agriculture	123	49.4
Nonagricultural	90	36.1
No occupation	36	14.5
Total	**249**	**100**

The results indicated that females made up 63.1 percent of the sample, meaning probably more females than men took part in this research. Furthermore, the majority of respondents (63.1%) were married couples, with the Hindu religion accounting for 84.9 percent of respondents. The Brahmin/Chhetri people comprised the largest ethnic group in the sample (50.2%).

In terms of occupational classification, 49.4 percent worked in agriculture, 36.1 percent were non-agricultural workers, and 14.5 percent were jobless**.** You should grasp the essence of these demographic characteristics to adequately satisfy the needs of old people and also encourage multi-generational equity through a consultation approach that incorporates their perspectives into policy creation. If not, the distributions will be skewed, with youth receiving large sums and seniors receiving none.

Table 2

Companionship Preferences and Experiences of Respondents

	SA		A		SD		D		Mean	F-cal	P-value
Statement	N	%	N	%	N	%	N	%			
I love chatting with my friends at home.	45	18.1	86	34.5	47	18.90	71	28.5	2.58	64.821	0.001
I love staying with my children.	49	19.7	145	58.2	29	11.60	26	10.4	2.13	-	-
I love having group discussions with friends at home.	67	26.9	124	49.8	16	6.40	42	16.9	2.58	-	-
I wish I could still have my old friends.	65	26.2	88	35.3	18	7.20	78	31.4	2.13	-	-
I love going out to parties and meetings.	39	15.7	73	29.3	24	9.60	113	45.4	2.12	-	-
I love going on excursions.	59	23.8	130	52.2	59	23.80	1	0.40	2.43	-	-
I love meeting new friends.	124	49.8	51	20.5	29	11.60	45	18.1	1.97	-	-

Notes: SA: Strongly agree, A: agree, SD: strongly disagree, D: Disagree

Of the participants, a total of table 2 demonstrates how the friendship variable analysis provides insights into respondents' social preferences. 34.5 percent preferred to communicate with friends in their homes, while 28.5 percent did not. Even if other people favor their children, only 58.2 percent do so, with 49.8 percent participating in group talks. Although 35.3 percent hoped to see their childhood friends again, 45.4 percent disliked being in crowded areas. 52.2 percent went on excursions, and 49.8 percent established new acquaintances. The facts provided show that while it is useful to reflect on past connections, developing new ones as one matures might be difficult.

The main finding of this study demonstrates the challenge that respondents confront as they strive to retain family relationships and previous friendships while finding it difficult to make new ones at a later age.

Table 3

Emotional Support among Respondents

Statement	SA		A		SD		D		Mean	f-cal	p-value
	N	%	N	%	N	%	N	%			
I am rejected and abandoned by family members.	106	42.6	57	22.9	14	5.6	72	28.9	2.21	128.058	0.001
I am uncomfortable with the home's condition.	49	19.7	37	14.9	33	13.3	130	52.2	2.98		
I feel unsafe in the home environment.	51	20.5	86	34.5	47	18.9	65	26.1	2.51		
I cannot discuss my problem with people in the home.	14	5.6	71	28.5	69	27.7	95	38.2	2.98		
I feel disturbed about children’s welfare.	37	14.9	77	30.9	39	15.7	96	38.6	2.78		
I find it difficult to sleep conveniently in the home.	37	14.9	96	38.6	58	23.3	59	23.7	2.56		

Notes: SA: Strongly agree, A: agree, SD: strongly disagree, D: Disagree

According to emotional support studies, the concern tendencies are illustrated in Table 3. This means that family support is insufficient since 42.6 percent of people claimed to have felt abandoned and unloved by their family members. Also, 52.2 percent of respondents were dissatisfied with their living conditions, while 34.5 percent thought that some homes were dangerous. The reason behind poor communication between individuals is that, as a result, 38.2 percent of them had no one to whom they could talk about their issues. Although 30.9 percent of respondents expressed worries about children's welfare, 38.6 percent reported having difficulty sleeping well at night or being alert during the daytime hours.

The primary finding indicates that numerous elders perceive themselves to be deserted, are not content with their dwelling placements, and face troubles in conversations and slumbering conditions, which suggest they require amplified affection assistance.

Table 4

Analysis of Variance (ANOVA) for the Model

Source of Variation	Sum of Squares	df	Mean Square	F	P-value	Remark
Regression	249.335	4	62.334	21.234	<0.05	Significant
Residual	731.517	244	2.998			
Total	980.852	248				

Table 4 holds the ANOVA test result in relation to the model that estimated various social support variables to have impact on the psychological well-being outcomes. These were emotional support, financial help, company and information; to which the dependent variable included self-reported psychological well-being based on standard scales. The final model yield a total of 980.85 with regression sum to 249.3350 and residuals sum of 731.5170. For the regression analysis, the mean square value was obtained as 62.334 and the residual mean square value was obtained after evaluation as 2.998. With a conclusion to this series of examinations of the F-statistic that finally establishes the relevance of the regression analysis from the ratio of the regression mean square to the residual one, the criterion of an F-statistic that is significant at least at the 0.05 level affirms the result achieved.

Results from this investigation show that the model has statistical significance and is a good fit for the data, with predictors explaining a large proportion of variation in outcome variables.

Table 5

Regression Coefficients and Statistical Significance

Predictors	Unstandardized Coefficients (ß)	Standard Error	Standardize d Coefficients (Beta)	t	P-value
(Constant)	13.853	1.023		13.537	0.002

Emotional Support	0.876	0.946	0.137	5.15	<0.05
Financial Support	0.21	0.613	0.239	2.3	<0.05
Companionship	0.289	0.997	0.798	8.685	<0.05
Information Access	0.402	0.592	0.609	6.788	<0.05

Note: Model Summary, R = 0.597, R Square = 0.356, Adjusted R Square = 0.334, Std. Error of the Estimate = 1.7332, Dependent variable = psychological well-being

The coefficient table depicts the regression analysis outcome for every independent and dependent variable. In doing so, the ß constant was identified as 13.853 (SE =1.023), statistically significant at t =13.537 (p =0.002). For emotional support, its coefficients included: 0.876 (SE =0.946, beta = 0.137, t =5.15, p<0.05), signifying that it has a moderate yet significant effect on the dependent variable. Financial assistance is 0.210 (SE =0.613, beta =0.239, t =2.30, p<0.05). This shows that it is less successful than emotional support and has a lower impact on people's lives.

Companionship was the most prominent predictor, with coefficients of 0.289 (SE = 0.997, beta = 0.798, t = 8.685, p<0.05). The correlation coefficient between information accessing it had a value of 0.402 (SE =0.592; Beta = 0.609; t= 6.788; p< 0.05), suggesting that this has some good influence compared to the influence of friendship.

The overall finding is that all causes of changes in psychological well-being are significant, and companionship and the availability of information are the foremost generators.

Discussion

The output raises the issue of absolutely minimal emotional and social support indicated for the respondents, which originated from the family members, as was seen in other aging population groups as well. This is evidenced by factors such as loneness, poor basic infrastructure and structural facilities in form of houses, language barrier among others; all these depict that; much more is socially afoot among the older people as far as isolation is concerned. The next segment examines associations of these issues outlined above with appropriate literature elaborating on the need for improved emotional supportive systems. The problems outlined would help in improving especially the mental health outcome along with welfare of elderly individuals; it is thus important to deal with them.

The present study shows the elderly population has definitively lack of love and affection along with social isolation that also involves disgraceful rejection of their families. An analysis of the field notes revealed that isolation among the elderly is sever especially due improper housing and lack of communication tools. This is in agreement with other research studies whereby the author notes that low social relations as well as low family contact have negative compulsory impacts on mental health (Savari & Naseri, 2023; Czaja et al., 2021). Majority of the respondents were aged between 71-84, majority of whom were women (63.1%) which is typical seen in most demographic areas around the world given women's higher life expectancy than men (WHO,2022). This justifies gender sensitive approaches as older women experience higher social and economic risks according to James and Buffel (2023).

Therefore, the results we presented on psychological well-being confirmed that companionship has a significant impact on quality of life dependency of elderly people. This is in conformity with reports that have suggested that inter and intra-personal communications can substantially lower levels of isolation and depression among elderly people. For example, Vahia et al. (2020) pointed that the higher frequency of companionship leads to the reduction of loneliness and increases of resilience. Likewise, Salerno et al. (2021) stressed on sustenance of social connection during aging transition era. In this regard, a number of components have received additional importance, including the component that helps overcome negative emotions in elderly people due to rejection and dissatisfaction. The literature reveals that people who enjoy high SS have better mental health status. Lu et al. (2021) it is salient to point out the gender presence in our study, as preponderantly female. Some studies published in the last decade suggest that older female may have different social support patterns than men. Wu et al. (2022) revealed that social support derived from friends exercised greater influence on the psychological fortunes of the older women than men implying that gender sensitive support systems should be implemented.

Psychological well-being was most significantly predicted by Companionship (beta = 0.798*p< 0.05). Emotional connection was important, and respondents chose relatives or close friends to help them cope in newly changed social environment. This supports what Vahia et al. (2020) and Fanning et al. (2021) have postulated that companionship time daily decreases loneliness and improves protective resilience. Besides, support regarding emotion alleviated the rejection feeling (M=42.6 %) and dissatisfaction (M=52.2 %); The feelings are supported by research showing that people with strong social networks have better mental health results (Hu et al., 2021; Thompson et al., 2024).

Although the figure of the caregivers is missing in the earlier parts, there are indications of how economies may attend to both the clients' emotions and their financial bottom line. Hence, the academic-logistic support constitutes being significant though not as influential as the emotional support standardized beta=0.239, $P<0.05$. Lee and Yu (2022) noted that the level of financial pressure minimizes, but financial security does not affect the overall mental well-being as favorably as relationships and emotional connections to other people as Valls et al. (2021) research mentioned.

Among them, access to information was found to have significant effect on self rated well being (beta = 0.609, t = 2.045, $p < 0.05$). Specifically, the older people who had knowledge of the healthcare services and social services showed higher levels of self-empowerment and control as life, which was in tandem with the study by Lee and Oh (2020). Expanding availability of information using CBP or through Information Technology may remove barriers in social emotional support system.

In this regard it becomes the prerogative of the policymakers as well as the social workers to support efforts that foster emotional and social relations. The upshot is that, there are a number of possibilities for making some massive improvement in the chief domains of gerontological attention: cohort-based treatments, financial literacy and inclusive information-focused interventions can bring a positive change in the ''quality of life of older people' and get the better of 'growing old' as defined by the UK Cabinet Office (Chun & Ryu, 2023).

Conclusion

This study underscores the importance of supporters to ensure the psychosocial well-being of the elderly persons in Lamki Chuha Municipality, Kailali District, Nepal. The results also suggest that the nature of the received support, and specifically, emotional support in the form of companionship is the strongest correlate of psychological well-being. A large number of elderly people said they lacked family care; more than half of those surveyed expressed the desire to be adopted by a family and rejected by their own family. Besides, perception of exclusion stemmed, in part, from communication breakdowns as well as dissatisfaction with the physical environment.

The findings of the study also underlined how structural intervention, especially in form of financial and information resources greatly influence elderly people. However, friendly and companionate support stands out most as the decision makers and significantly helps in overcoming loneliness and influencing an improved mental health. The analysis of variance showed that elderly people of both genders and of all age groups need emotional support and companionship; financial aid is not as important.

These results underscore the importance of targeting policy action on growing effective avenues that can boost not only supportive structures for the elderly. Programs aimed at enhancing social integration, enhancing access to health related information, and at asserting financial security are critical to enhancing the standard of living and mental well-being of elderly population. Future works could consider the utilization of longitudinal data to examine the impact of these support systems for a longer-term period.

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Menstrual Health: Family Support and Household Practices among Bachelor Level Female Students

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Abstract

Menstrual health is an important part of women's well-being, and family support plays a key role during menstruation. This study aims to identify the situation of family support and household practices. A quantitative research approach with descriptive method was employed to survey 340 out of 2,294 randomly selected female students at Surkhet Multiple Campus. The findings highlight that families play a crucial role in helping ease menstrual discomfort by showing empathy, providing practical support and maintaining open communication. In that time, providing nutritious food, ensuring access to sanitary products and offering emotional support can significantly enhance the quality of life during menstruation. The study also revealed that traditional and cultural practices still influence household behavior towards menstruation. Ninety-four percent of respondents reported being restricted from activities such as attending religious ceremonies, entering prayer rooms and visiting temples. Additionally, sixty-nine percent of respondents faced restrictions from cooking food during their periods. Furthermore, eighty-two percent of respondents mentioned that menstruation is often viewed through the lens of social and cultural traditions, requiring them to follow customs like avoiding physical contact with men and staying out of the kitchen during menstruation. These findings underline the continued influence of cultural beliefs on menstrual practices and highlight the importance of education and family support to promote a more positive and supportive environment during menstruation.

Keywords**:** Supportive environment, empathy, religious ceremonies, menstruation

Introduction

Menstruation is a natural monthly process experienced by women and girls of reproductive age, involving the shedding of the uterine lining. Despite being a normal part of life, it is often accompanied by stigma and misinformation. Adequate support and access to hygiene products are crucial for managing menstruation effectively. Addressing these issues can improve menstrual health and well-being. Promoting understanding and eliminating stigma around menstruation are essential for gender equality and health (Sood et al., 2020).

Family perspectives on menstrual care encompass the knowledge, restrictions and supportive measures provided during menstruation. Safe and supportive families, schools and positive peer relationships are crucial in helping menstruate girls reach their full potential and achieve the best health as they transition to adulthood (Santina et al., 2013). Mothers are the primary providers of information about menstruation and related hygiene management (Upadhya, 2024; Viner et al., 2012). When parents are supportive and understanding, children tend to handle problems better. However, if parents are too lenient, children might struggle more with coping. Supportive environment includes raising open communication with daughters, providing comprehensive menstrual health education and ensuring access to sanitary products. Open communication helps reduce stigma and empowers girls to discuss their concerns confidently.

Household practices during menstruation vary across cultures, religions and castes, often shaped by traditional beliefs. In some cultures, menstruating women face restrictions on activities like cooking or participating in religious rituals, reflecting views of impurity. McLaren and Padhee (2021) believed that to address cultural stigma surrounding menstruation, a holistic menstrual health approach should consider factors like tension, fatigue, stress and menstrual pain. Ensuring each girl and woman lives a dignified life involves recognizing menstruation as a human rights issue, encompassing freedom, health education, housing, environment, employment and non-discrimination. Similarly, Anant and Kamiya (2011) explored many customs surrounding menstruation negatively impact teenage girls. Menstrual practices are still surrounded in taboos and cultural restrictions, leading to a lack of proper knowledge about menstrual hygiene and the science behind menstruation among many girls. This can lead to health problems because myths and false beliefs take the place of accurate information. To solve this, it is important to include menstrual education in health lessons so that girls can learn how to take care of their menstrual health and overcome the stigma (Charan, 2017).

Girls and women often follow different visible and hidden restrictions during menstruation. However, it is difficult to report on these practices accurately. This makes it hard to understand and address their impact (Gyawali, 2017). Menstruating women are often prohibited from preparing food, cleaning their homes, or touching children, clothing and certain plants; they are similarly restricted from entering temples, and from attending religious festivals and ceremonies (Healy, 2012).

Literature Review

Poor water, sanitation and hygiene facilities in school, inadequate puberty education and lack of Menstrual Hygiene Management (MHM) items (absorbents) cause girls to experience menstruation as shameful and uncomfortable (Eijk et al., 2016). The causes of poor menstrual hygiene are illiteracy, superstitions, poor sanitation and limited access to hygienic menstrual products. These situations weaken the education and health opportunities as well as the overall socio-economic status of women and girls around the world. As a result, millions of girls and women are lagging in their potential better first theoretical literature than empirical literature.

The stigma surrounding menstruation significantly impacts the human rights of women and girls by limiting their access to education, health care and participation in social and cultural activities. This stigma reinforces gender inequality, perpetuating discrimination and marginalization (Rapporteur, 2019). In Nepal, menstruation is often seen as a temporary state of ritual impurity, leading to practices aimed at preventing the perceived ritual pollution of others. This belief influences social behavior and cultural practices, with restrictions placed on menstruating women and girls (Lotter & Parker, 2022).

Managing menstruation appropriately is important for women and girls to live with dignity and comfort. This means having clean materials to absorb the flow, a private place to change or dispose of them and access to soap and water for cleaning. When these needs are met, women and girls can manage their periods safely and confidently (Hennegan & Montgomery, 2016).

It is important to take extra care during menstruation by incorporating additional nutritious foods, ensuring to take plenty of rest and using hot water to soothe cramps. A balanced diet rich in fruits, vegetables and lean proteins supports overall health, while adequate rest and warmth can help alleviate discomfort and promote well-being (Upadhya, 2024). Personal hygiene during menstruation includes using sterile pads during the early, heavy flow period, bathing daily for comfort and freshness, keeping the perinatal area clean by wiping from front to back, and wearing cotton undergarments for better hygiene (Charan, 2017). Proper menstrual hygiene is crucial for the health and dignity of girls and women, preventing infections and promoting overall well-being. It also supports their education by reducing absenteeism and improving concentration in school. According to Mahapatra (2024) claimed that The health and education of girls and women rely on proper menstrual hygiene, which is influenced by family economic conditions, cultural norms, and educational background. Good parenting styles play a crucial role in shaping children's coping behaviors. Supportive and understanding parents help children develop healthier coping mechanisms, enabling them to handle stress and challenges more effectively (Sahu & Wani, 2022)

Farage et al. (2014) believed that, many schools do not have proper toilet facilities. So, girls who have started their periods face a lot of problems. After puberty, it is hard for them to go to school because there is no private space, water, or a place to change their pads. In addition, there is no place to clean up or throw away used materials. This lack of good toilet facilities often stops girls from going to school. Sultan and Sahu (2017) revealed that many teenage girls lack accurate and complete knowledge about menstruation and hygiene. They usually get information from their mothers, TV, friends, teachers, and relatives. Proper hygiene during menstruation is crucial because it affects health and can increase the risk of reproductive tract infections (RTI). The above discussion clearly shows that there is lack of accurate knowledge and information regarding menstruation, as well as inadequate toilet facilities in school and campus, which adversely affect the carrier of girl's students. So family support play valuable role. The aim of this study is to identify the situation of family support and household practices of bachelor level girl students of Surkhet Multiple Campus.

Methods and Procedures

This study used a quantitative, descriptive research design conducted at Surkhet Multiple Campus. The records of Surkhet campus in academic year 2078/079 found that there were 2,294 female students at the bachelor's level, among them, 340 girl students were selected using random sampling. Cross and Belli (2004) stated that in quantitative survey studies, the main concern is to select respondents so that their responses represent the defined population of interest (p. 291. The researcher collected data using a self-constructed, closed-ended questionnaire, which was distributed in the classroom for primary data collection with assistance from some students. The sample size was determined based on the formula of N. The researcher personally visited the respondents on campus, and then collected primary data through face-to-face interviews. After the time of data collection, the gathered information was initially entered into Epi Data 3.1 software, and later transferred to SPSS software version 20.0 for analysis. Descriptive analysis was conducted, and the results were presented in tables (Adhikari, 2024). As a researcher, I ensure that all research ethics carefully followed before, during and after the study.

Results

Results and discussion are based on different titles. These are presented below.

Backgrounds of the Respondents

The respondents' characteristics include a range of ages, with varying ages at menarche that reflect different stages of pubertal development. Their caste, ethnicity and religion shape their cultural practices and beliefs regarding menstruation, while marital status may influence their access to resources and support for menstrual hygiene management.

Table 1

Characteristic of Respondent

Respondent Characteristic	Age	Number	Percentage
Age of the respondent	Below 20	110	32
	20-22	170	50
	23-24	60	18
	Total	340	100
Age at Menarche	10-13	199	59
	14-17	141	41
	Total	340	100
Caste/ethnicity of the respondent	Brahmin	124	36
	Chhetri	109	32
	Janajati	75	22
	Newar	7	2
	Dalit	25	7
	Total	340	100
The religion of the respondent	Hindu	318	94
	Buddhist	5	1
	Christian	17	5
	Total	340	100
Marital Status	Married	155	46
	Unmarried	185	54
	Total	340	100

Table 1 shows that thirty-two percent of the respondents are below twenty years, fifty percent are between twenty and twenty-two years, and eighteen percent are between twenty-three and twenty-four years. Regarding the age at menarche, fifty-nine percent of the respondents experienced menarche between ten and thirteen years, while forty-one percent experienced it between fourteen and seventeen years.

In terms of caste/ethnicity, thirty-six percent of the respondents are Brahmin, thirty-two percent are Chhetri, twenty-two percent are Janajati, two percent are Newar, and seven percent are Dalit. Regarding religion, ninety-four percent of the respondents identify as Hindu, one percent as Buddhist, and five percent as Christian.

Lastly, marital status data reveals that forty-six percent of the respondents are married, while fifty-four percent are unmarried. Overall, the data provides a comprehensive overview of the respondents' demographic profile, summing up to three hundred and forty respondents.

Family Background of Respondents

The respondents' family backgrounds reveal diverse socio-economic and educational contexts. Fathers' occupations range widely, potentially influencing household resources and support for menstrual hygiene. Mothers' occupations similarly impact the family's financial and emotional support systems. Educational levels of both parents are crucial, with the education of the father and mother potentially shaping their awareness and attitudes towards menstrual hygiene. Mothers' education, in particular, plays a significant role in providing informed guidance and support regarding menstrual health practices.

Table 2

Family Characteristics of the Respondents

Category	Sub-category	Number	Percentage
Occupation of father	Farmer	271	80
	Business	38	11
	Job Holder	17	5
	Other	14	4
	Total	340	100
Occupation of mother	Farmer	261	77
	Business	14	4
	Housewife	65	19
	Total	340	100
Education of father	Basic level (1-8)	130	38
	Secondary Level (9-12)	136	40
	Above class 12	74	22
	Total	340	100

Education of mother	Basic level (1-8)	161	47
	Secondary Level (9-12)	122	36
	Above class 12	57	17
	Total	340	100

Table 2 provides information about the occupation and education levels of the respondents' parents. Eighty percent of respondent's father occupation are farmers, which was eighty percent whereas only eleven percent involved in business. Similarly, father of respondents only five percent involved in job employed in jobs.

Similarly, in the case mother of respondents occupation of farmer occupied seventy seven percent, like wise business in only four percent and engages in the housewife was nineteen percent. In terms of education, the fathers' education levels are as follows: basic education (grades 1-8) is completed by thirty eight percent, secondary education (grades 9-12) by forty percent, and above grade 12 by twenty two percent. For the case of mothers, forty seven percent have completed basic education (grades 1-8), thirty six percent have completed secondary education (grades 9-12), and seventeen percent have education above grade 12.

This data provides clear insight into the socioeconomic background of the respondents, highlighting the predominance of farming as an occupation for both fathers and mothers and showing varying levels of educational attainment among the parents.

Family Behavior, Support and Households Practices towards Menstruation

Family behavior, support and households Practices towards menstruation varies significantly among respondents (Upadhya, 2024). Some families enforce strict separation, requiring menstruating individuals to stay in a designated room and avoid contact with males and sunlight. Others may confine them to a separate room within the household, with similar restrictions on contact and visibility. In some cases, menstruating individuals are provided with separate sleeping arrangements and restricted from entering the kitchen or interacting with males, though they may not be kept in a locked room. Likewise supportive role of parents also different in terms of their culture, religion and family background (Adhikari & Adhikari, 2023). These practices reflect diverse cultural norms and levels of adherence to traditional menstrual taboos.

Table 3

Family Behavior during Menstruation

Family Behave during Menstruation	Yes		No	
	Number	Percent	Number	Percent
Keep separate from Chhaugoth	42	12	298	88
Keep to neighbor's house and not allowed to see male and sun to keep in lock room	286	84	54	16
Keep own house of lock room and not allowed to see male and sun	158	46	182	54
Keep own house not lock room and provide separate cloth to sleep and restrict entering kitchen and touching male	288	85	52	15

Table 3 illustrates various family behaviors and restrictions imposed on respondents during menstruation. Twelve percentage of respondents are kept separate from the Chaugoth, while the majority of respondents such as eighty-eight percent are not subjected to this practice. A significant eighty-four percent respondents are sent to a neighbor's house, where they are not allowed to see males or the sun and are kept in a locked room, whereas sixteen percent did not experience this. Similarly, forty-six percent respondents are kept in a locked room in their own house with the same restrictions, while fifty four percent did not. Additionally, eighty-five percent of respondents were kept in their own house but not in a locked room, provided with separate cloths to sleep, and restricted from entering the kitchen or touching males, compared to fifteen percent who were not subjected to these specific practices. This data highlighted the prevalence of various restrictive cultural practices surrounding menstruation among the respondents.

Family Support and Household Practices

Family support during menstruation varies, with some families offering enhanced care beyond the usual. This support may include providing medicine for menstrual cramps and headaches, ensuring access to additional nutritious food, and allowing extra resting time. Additionally, hot water might be offered to help alleviate discomfort, demonstrating a comprehensive approach to managing menstrual health and providing comfort.

Table 4

Support Provided During Menstruation by the Family Member

Support during Menstruation by providing	Yes		No	
	Number	Percentage	Number	Percentage
More than usual take care	232	68	108	32
Medicine during cramp	208	61	132	39
Medicine during headache	59	17	281	83
Additional nutritious food	288	85	52	15
Resting time	272	80	68	20
Hot water	155	46	185	54

Table 4 provides that an overview of the received support respondents during menstruation. It reveals that sixty eight percent of respondents received more than usual care, while thirty-two percent did not. Medicine for menstrual cramps is provided to sixty one percent of respondents, whereas thirty-nine did not receive this support. Only seventeen percent of respondents received medicine for headaches, leaving eighty three percent without this assistance. A significant eighty five percent were given additional nutritious food, while fifteen percent did not. Resting time is afforded to eighty percent of respondents, but twenty percent did not receive this accommodation. Lastly, forty-six percent of respondents are provided with hot water, while fifty four percent did not. This data indicated that while many respondents receive considerable support during menstruation in terms of care, nutritious food, and rest, there are notable gaps in the provision of headache medication and hot water.

Household Restrictions during Menstruation

Household restrictions during menstruation imposed by families vary widely. Common restrictions include prohibitions on preparing food, entering the kitchen, and touching males, which are often based on cultural or religious beliefs. Additional restrictions may involve not sleeping in common areas, avoiding religious activities such as vratbandha, puja, or temple visits, and refraining from consuming milk and dairy products. Some families also restrict touching kitchen materials or handling plants and fruits, reflecting diverse practices and beliefs regarding menstrual hygiene and religious observances.

Table 5

Restriction in Household Work during Menstruation by the Family

Restriction during menstruation	Yes		No	
	Number	Percentage	Number	Percentage
Restriction on preparing food	236	69	104	31
Restriction on entering the kitchen	155	46	185	54
Restriction on touching male	95	28	245	72
Restriction on sleeping commonly	295	87	45	13
Restriction on vratbandha, puja room and temple	320	94	20	6
Restriction on taking milk and milk product	33	10	307	90
Restriction on touching material used in the kitchen	110	32	230	68
Restrict to touch male, cooking food and touching plants and fruits	70	21	270	79

The data reveals various restrictions imposed on respondents during menstruation. A significant majority of respondents, sixty nine percent, were restricted from preparing food, while thirty-one did not face this kind of restriction. Similarly, forty six percent were restricted from entering the kitchen, whereas fifty-four were not. Restrictions on touching males affected twenty- eight percent of respondents, leaving seventy two percent without this limitation. The most common restriction is on sleeping arrangements, with eighty-seven percent being restricted from sleeping commonly, while only thirteen percent were not. Religious restrictions are also prevalent, with ninety-four percent of respondents were restricted from entering vratbandha, puja rooms, and temples, and only six percent were not. A smaller proportion, ten percent, were restricted from consuming milk and milk products, compared to ninety percent respondents who were not. Additionally, thirty-two faced restrictions on touching kitchen materials, while sixty-eight percent did not. Lastly, twenty-one percent responds were restricted from touching males, cooking food, and touching plants and fruits, whereas seventy nine percent of respondents did not face these combined restrictions. This data highlights the various cultural and social limitations experienced by respondents during menstruation, with a notable emphasis on food preparation, kitchen access, sleeping arrangements, and religious activities.

Information Providers for Menstrual Health

Sources of information about menstruation for individuals often include a range of family members and external resources. Mothers and elder sisters typically provide personal guidance and support, while fathers and brothers may offer additional perspectives. Grandmothers and friends also contribute knowledge and advice. Teachers play a significant role in educational settings, and media sources such as TV can provide general information. Reading materials, including books and articles, are also valuable resources for gaining a comprehensive understanding of menstruation.

Table 6

Person Providing Information about Menstruation

Information provider	Yes Number	Percent	No Number	Percent
Mother	265	78	75	22
Father	95	28	245	72
Grand mother	55	16	285	84
Elder sister	230	68	110	32
Brother	50	15	290	85
Friends	215	63	125	37
Teacher	65	19	275	81
T.V.	70	21	270	79
By Reading material	60	18	280	82

Table 6 presents that the sources of information provided to respondents regarding menstruation. The majority of respondents such as seventy eight percent received information from their mothers, while twenty-two percent respondents did not. Likewise father also play crucial role to provide information their daughter. Seventy-two percent respondents received information from their fathers. Whereas seventy-two percent respondents did not receive information from their father Twenty-eight percent of respondent received information to their father. Similarly, sixty-eight percent respondents said that their source of information of menstruation was elder sister. While thirty-two percent did not receive information from their elder sister. Additionally sixteen percent respondents took menstrual information their grandmothers were as eighty-four percent did not. Likewise fifteen percent respondents received menstruation from their brothers whereas eight five percent did not. Friends were a significant source of information, such as sixty-three percent of respondents got information while thirty seven percent did not receive information from friends. Nineteen percent of respondents received information from their teacher. Whereas eighty-one percent did not get. Television was a source for twenty one percent of respondents, whereas seventy nine percent did not get information from TV. Lastly, reading materials informed eighteen percent of respondents, while eighty two percent did not receive information from this source. This data highlights the varied sources from which respondents receive information about menstruation, with mothers, elder sisters, and friends being the most common sources.

Perceptions of the Menstrual Cycle Respondent

Respondents' understanding of the menstrual cycle reflects a mix of biological awareness and cultural beliefs. While recognizing menstruation as a natural biological process, many still adhere to cultural taboos and myths that impose restrictions, such as avoiding contact with males and not entering the kitchen. These practices are often rooted in long-standing social and cultural traditions. However, there is a growing awareness that such restrictions and discrimination are not beneficial and should be challenged. Some respondents believe that while traditions have been followed for generations, it is essential to question and adapt these practices, noting that changes in attitudes are already occurring.

Table 7

Understanding of Menstruation Cycle by the Respondent

Understanding of menstruation	Yes Number	Percentage	No Number	Percentage
Menstruation is natural, biological process but there is cultural taboo and myths so we face restrict and discriminate some activities.	340	100	0	0
This is a long-term social and cultural belief, so we need to follow and restrict touching male and entering kitchen for cook food.	280	82	60	18

It is natural so no need to restrict any kind of activities expect entering puja room	80	24	260	76
It will bad if this is not done because it is tradition that has been passed down from generation to generation.	45	13	295	87
Restriction and discrimination is not good practice. So it has to necessary to change it. We can see it has changed more than before.	290	85	50	15

Table 7 provides a comprehensive view of respondents' perspectives on menstruation and associated cultural beliefs. All respondents hundred percent recognized menstruation as a natural biological process, yet acknowledge the presence of cultural taboos and myths that lead to restrictions and discrimination in various activities. A significant majority of respondents, eighty-two percent feel that these beliefs are deeply rooted in long-standing social and cultural norms, which necessitates adhering to practices like avoiding touching males and entering the kitchen for cooking during menstruation. In contrast, a minority twenty-four percent of respondents believed that menstruation should not restrict any activities except entering the puja room, emphasizing a more liberal view towards menstrual practices. A smaller group only thirteen percent of respondents thirteen percent of respondents views adherence to these traditions as important, considering them integral to their cultural heritage and identity. Encouragingly, a substantial majority eighty-five percent of respondents perceive restrictions and discrimination related to menstruation as outdated practices that need to evolve, indicating a growing acceptance of change compared to previous generations. This data highlights the complex interplay between traditional beliefs and evolving attitudes towards menstruation within the cultural context of the respondents.

Discussion

The present study reveals that a significant majority of respondents seventy-eight percent of respondents received their information about menstruation from their mothers. This finding is consistent with research by (Upadhya, 2024) identified that mothers as the primary source of menstrual health education for many individuals. The study also found that ninety four percent of the respondents identified as Hindu, and as a result, they are subject to cultural restrictions such as not entering vratbandha, puja rooms, or temples during their menstrual periods. Anant and Kamiya (2011) noted that in Hindu culture, menstruation is frequently associated with various restrictions, including exclusion from religious rituals and temple visits. These practices are deeply rooted in traditional beliefs about purity and impurity, although the extent to which they are observed can differ among various communities.

Furthermore, the study highlights that pervasive myths and taboos about menstruation persist in Nepalese society, which have adverse effects on the health and well-being of adolescents. For instance, eighty-four percent of the respondents reported that during their menstrual periods, they were confined to a neighbor's house and were not allowed to be seen by men or the sun. This seclusion reflects longstanding cultural taboos that can impact menstrual hygiene and overall health. Scholar like (Farage et al., 2014) have similarly noted that cultural beliefs create numerous restrictions for menstruating women, with specific taboos varying from one culture to another. These beliefs not only reinforce stigma but also contribute to the social isolation and restricted access to resources that menstruating individuals often face. Addressing these issues requires a nuanced understanding of cultural practices and their impact on menstrual health. Efforts to challenge and revise restrictive norms, combined with enhanced education and support, are essential to improving menstrual health and breaking down the stigma associated with menstruation.

Conclusion

Family support is essential for all menstruating girls. Supportive family members always want to help their daughter during the time of menstruation, which alleviate menstrual discomfort by providing essential support and care, such as nutrition food, sanitary products and medication. Likewise Positive household practices, such as open communication and empathy, reduce stigma and create a safe environment for discussing menstrual health. By providing accurate information and fostering open discussions about menstruation, societies can begin to dismantle harmful taboos and promote a more supportive environment for menstruating individuals. The majority of respondents received information from their mothers, this kind of support not only reduces menstrual discomfort but also helps in reducing stigma and improving the overall well-being of menstruating women. Initiatives should focus on integrating cultural sensitivity with health education to create solutions that respect cultural contexts while addressing the negative consequences of restrictive practices.

Ultimately, breaking down the stigma associated with menstruation and improving access to resources will contribute to better menstrual health and well-being. This multifaceted approach will help ensure that menstruation is recognized as a natural and manageable aspect of life, rather than a source of social exclusion and health challenges.

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Post-pandemic Pedagogy: Practices as/with Parents for Performances

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Abstract

Reflecting on this time makes us think more than usual pedagogy and andragogy since over all pass percentage of the students and the quality education especially in Madhesh Province, Nepal seem deteriorating in spite of the huge investment from dynamic facets. However, some specific students from school and campus levels were/are found having better performances in their previous year(s) following the pandemic disruption, and this enforced me to explore the impacting factors behind their better performances. This study is a survey research having quan-qual design conducted using a semi-structured interview with 10 parents of elementary level students performing better. The collected data were analyzed statistically and descriptively. It was found that the parents' involvement in the students' academic activities especially for managing them for their schools, arranging the requirements morning and evening for homework/self-study at home, placing them with nearby tutors and after all having more curiosity about whether they could do any more for better performances of their children's quality education remained its core indicators. Thus, this is the time for education stakeholders to adopt the collaborative actions with the parents for better performance of the students in all levels.

Keywords: Pedagogy and andragogy, parents, outreach programmes, performance

Introduction

COVID-19 has entered into almost all the facets upon the earth leaving intolerable impacts forever, as for the consecutive two years, nothing was seen on their normal pace from out and within. The global pandemic affected almost all aspects of life (Saud, 2021) and the entire system remained paralyzed with the due closure of academic institutions and other foundations. It overturned the natural settings to suffocate inside the enclosed homes being separated even between couples/cousins/siblings, no matter between teachers and learners. That untrodden volcano drastically changed patterns and practices of our mind-set performances and learning was being a far desire especially for educators and related stakeholders. Meeting the academic grade-level was quite difficult for all concerned as entire two years witnessed the loss of learning as well as the zeal and zest of motivation causing lots of uncertainties and learning challenges in all walks of education system. Since the dark clouds have silver lines, I believe that we can realize some positive impact on education from the current situations and circumstances (Yaseen et al., 2021).

Every hard time dies of lots of innovations and new ideas that we never thought and realized before. Along with the fading power of pandemic, even undeveloped countries tried their best to overcome the losses and they all directed their focus on reviving their education imparting activities to a great extent. As a result, different movements came into practices soon creating new pedagogical/andragogical paradigms for the fast recovery of the losses on the one hand and searching quality education on the other. Zhang and Gillespie (2023) claims that the pandemic has certainly flipped our education system with some innovative privileges. Across the globe, the fastest groups who adopted the new remote work style were students, teachers and education organizations as they worked hard and came up with innovative learning solutions for the problems they faced during the pandemic. Now, the education system has been fully/partially directed towards the quest for quality even in our contexts as well.

However, the most challenging profession is ‘sharing the knowledge and/or involving in enriching the learners’ experiences’ as it has been collaborative in its real sense, i.e., if it is to be oriented towards what the outcomes should be for the betterment and enhancement of the communities. There should be the equally involvement of learners, teachers and parents. If any one of them has a little bit indifference for proper steps, the job gets badly affected and the desire goal remains only our imagination, as it is the case being observed in Madhesh Province of Nepal where politics has rooted with every individual converting them from a good care taker to bad politician. However, as I experience the parents about two/three decades back were very interested in caring their children especially for managing them for their schools, arranging the requirements morning and evening for home works at homes, placing them with nearby tutors and after all having curiosity about whether they could do any more for better performances of their children. But, later this tendency or parents’ involvement faded out due to many reasons including male outing for earning and female remaining in for handling mobiles during the times their children needed their hands for education. So, in most of the communities, especially marginalized ones, it was observed that the female remained dominant and escaped from their involvement in caring of their children. On the other side, the teachers were also packed with the traditional ways of rendering their knowledge only inside the schools without being a responsible resourceful professional, causing learners being careless for their academic activities that resulted huge damages for the quality education in the society. Similarly, the Nepalese political arrangement applied since 2074 BS (2017 AD) created another local government as acting parent for managing all aspects of society from the society has also resulted the diversity. Even this government could not address the burning problems; ranging from lack of internet and human connection, unavailability of resources and personalized teaching, to lack of guidance and collaboration. As we experience here in our education system, the government of Nepal in spite of providing free education in school level has the education policies solely aims at increasing enrolment and mostly fails to address deeper issues, i.e., ways of improving the quality of education, imparting the practical soft-skills, reducing the inequalities between rural and urban schools, bringing together parents and teachers, collaborating schools with societies, and so on.

During the pandemic, new pedagogical paradigms emerged to innovate to create creativity in the educational institutions. Different types of techno-friendly strategies were brought into the practices that not only compensated the closure losses for the learners but also brought a different move to build the character education in the learners as there remained more involvement of the parents in their children educational activities. Trisiana (2020) in her study analyzed the new paradigm of character education during a pandemic, as part of a comparative analysis towards the digital revolution. 'The strategy of strengthening character education becomes a new challenge' Trisiana (2020, p. 17). The character education is a need of human being and it is more plausible with the family environment if the parents are sensitive about their children and spend more time with them. Similarly, the pandemic period remained fruitful as it forced the learners to be self-dependent on the one hand and on the other they happened to get opportunities to share their problems with their parents. 'Autonomy was forced during the pandemic disruption and due to it, most of the learners are reported to have been autonomous onwards' Yadav (2022, p. 2). Similarly, Trisiana (2020, p. 27) found that the role of parents is getting bigger in the process of teaching children (home-schooling). Moreover, Pareek (2023) states 'During the COVID-19 pandemic, the traditional classroom paradigm experienced a significant shift from teacher-centered, physically interactive instruction to learner-cantered, online learning methods.' Dhami (2022, p.20) also supported 'Indeed, autonomous learning is a part of learners' hard work in both formal and informal settings.' Aryal and Hamal (2022, p. 78) identified that majority students believe that online classes are more effective due to time flexibility and were positive about learning online. The students found online classes to have contributed positively to their performance due to higher interaction with teachers and inclusion of digital learning materials like videos and audio. During this period, the responsibility of the teachers was a little bit higher as they were involved in guiding the parents to prepare different types of activities for the students within the families. Similarly, Kunwar et al. (2022, p. 13) states 'The repeated onset of the COVID-19 pandemic enforced the HEIs, teachers, students and parents to adapt the online teaching and learning forcefully and has become an emerging practice in Nepalese higher education'. Bhandari (2020, p. 77) concluded 'The COVID-19 pandemic crisis made us speculate some alternatives of teaching and learning where we personally experienced that there is a good future of online or web-based education which includes both synchronous and asynchronous teaching and learning activities.' Jena (2020) states 'Though the outbreak of COVID-19 has created many negative impacts on education, Indian education system got the opportunity for transformation from traditional system to a new era.'

The COVID has left some remarkable opportunities especially for managing the learning activities for the students as the family stayed with them during it working together and guiding them for better performance. Tye (2023, p. 1) found 'Some schools found families to be a valued partner in student learning where other districts chose to use COVID as a reason for shutting the doors to family involvement'. He provides key aspects to include in creating a plan for engaging with families and creating strong reciprocal relationships. He meant to say that the family could be viewed as an equal partner for the learning process. It is observed that the COVID taught the family to be alert for involving in their children learning as the parents are supposed to engage them emotionally for their subject matters and others as well. Tye (2023) further claims that it is because of putting more values for the family involvement encouraging their culture and their experiences that involvement has transformed into engagement. It is very important for meaningful education that there is the family inclusion and parents' participation along with the continuous interaction with their children in and out the home/school setting. Phyak et al. (2022, p. 4) states that the ecological approach to teacher agency can be viewed as an interplay between institutional conditions and individual efforts to act for an equitable learning environment. Overnight, families became the bridge between home and school, delivering and supporting instruction, communicating with teachers, and assisting students in homework completion, being labelled as critical to alternative methods to instructional learning (Rivera-Vargas, 2021, as cited in Tye, 2023, p. 64)). After COVID, researches have revealed an increase in family involvement and overall communication between parents and teachers during the pandemic (Klein, 2021). Our experience in Nepalese context shows there is no tendency or policy for parents' involvements fairly as engaging parents was/is a very difficult problem because they are less educated themselves and do not see a role for themselves beyond enrolling a child and ensuring attendance, having lack of time for their children/students, lacking the materials for teaching and after all not realizing their importance for it. But during the COVID and post-COVID, it was/is observed that parents care about their children's education and now even at the cost of their busy lifestyle, they are willing to pay for it that has added something more for creating a quality culture even within a marginalized community. Thus, the COVID has intensified the involvement of the parents giving a role, i.e., taking more interest about their students progress and encouraging them to be systematic for their study at home, a role for the learning process. Balakrishanan (2021) claims that both as a child and a parent confirms my belief that the academic outcomes of a child is directly proportional to the engagement of parents in the process of education. It is obvious that the parental involvement has been a very important element as its benefits for students range from increased school attendance to improved behavior, more positive perceptions of the school and classroom, increased self-regulation skills and greater educational aspirations; greater involvement better performance.

As I have been involved in teaching profession for two decades in the higher institution and is visiting my own village during pandemic and post-pandemic period, I happened to have two striking experiences, i.e., the school level students around my home were/are found to be more interested in their study and the passing rate at JS Murarka Multiple Campus Lahan was/is also found to have increased comparatively in the Bachelor level. Such experiences arouse my curiosity to explore the causes behind their good performances, in spite of the intolerable impacts of the pandemic over the teaching and learning systems in both levels: school and campus. What actually are/were the indicators behind fast compensation of academic losses? How do/did the students develop their learning strategies that they did not apply/adopt before the pandemic? Teachers are still the same persons in both settings (school and campus) who were actively sharing their knowledge to their related students for a long time but there seemed still lacking good outcomes before the pandemic, and conversely the students started performing better later, why/how? Beside e-learning and technological innovations, what reinforced and motivated the students for being better? All these created some rooms for me to find out the affecting factors for such a scenario which could be helpful to improve the current trends in teaching-learning activities.

Madhesh province has been listed as the least educated one in Nepal and the scenario at present shows it is going down more rapidly as the academic institutions are found to have involved in earning the benefits rather than creating learning settings for the meaningful education for the students and this tendency is vivid almost in all types of institutions including higher ones as well. Policy and practices are in the place for them to cater the required quality of the education but the desired outcomes are being far away. However, there are some cases after the COVID impacts that the parents are showing more engaged for their children education. This seems even with the female members of the families for the school level on the one hand and for the higher level on the other. So, the paper aimed at exploring the impacting factors for the students' better performances in the school of a particular community of Rajgadh Municipality, Saptari, Madhesh Province, Nepal.

Methods and Procedures

This is a survey research with a combination of quan-qual design carried out using semi-structured interview and a questionnaire to the participants of two different places and different professions: farming/housewife of a marginalized community (Manadal, Paswan and Chamar/Ram), Purwari Tole, Nargho, Wada No. 3, Rajgadh Rural Municipality, Saptari, Nepal. A set of interview for the parents was developed having the provision of collecting the information about how the students have improved their performances including the involvement of the parents for their supports inside the family settings for the academic performances. Altogether 10 parents whose children are the students of Elementary School of Rajgadh Rural Municipality. Similarly, the secondary sources including the previous works were also used. Besides the pandemic disruption and being irregular class attendees, these students have been found as good performers in their classes/levels. The collected data have been analyzed using inferential statistics and descriptive language to understand the participants' practices for the academic performance.

Results and Discussion

In the context of Elementary school children, the responses of the selected 10 parents regarding the ways they acted for their children during and after the pandemic period, how they paid attention for them, what they actually they did, how worried they were about their children' education, whether or not education was/is important for living healthy life, etc. are presented in the table 1 below.

Table 1

Responses of the Parents about their Children during the Pandemic

SN	Indicators	Parents' responses			
		A	S	O	N
1.	How long did you spend with your children during pandemic?	8	2		
2.	How often did they stay out?			9	1
3.	How often did they watch TV/Mobile?	6	2	3	
4.	How often did they remember their school and teachers?	1	5	3	1
5.	How often did you set them for their study?	7	2	1	
6.	How often were they sent for tuition?	9			1
7.	How often did they do their works themselves?	5	5		
8.	How often did they talk to their friends?	6	4		
9.	How often did they ask for your help?	4	2	2	2
10.	How often did you compel them for their study?	7	2	1	

A (always), S (sometimes), O (occasionally), N (never)

The questionnaire applied for collecting information from the elementary level children' parents consisted of only ten items having four options; always, sometimes, occasionally and never. All these items were set with the purpose of gaining the information about the family engagement for the children during the pandemic period and how that responsibility has come in practice even after that period, i.e., post-pandemic. The selected parents were found that they were very interested in their children even after the pandemic period and they also realized the value of the quality education for which their role has been very important. Regarding the item no. 1, 8 parents replied that they always took care of their children including their study and 2 of them selected sometimes that indicated the fact that they cared of their children' study sometimes only. In the regard of this question item, one of the parents replied, "I did not go myself anywhere during the pandemic and also not let my son go out of home. We all family members remained together for whole day and night and I especially used to manage my son for doing study mostly in morning and evening regularly as I thought he would be poor with his study because of the long closure of the school. I always wanted him stay at home and manage his own study as he is the student of grade eight." As my observation and experience suggested me that such parents were not taking any notice to their children' education at all before the pandemic but they changed themselves due the outbreak of such a pandemic worldwide. Similarly, 9 parents responded that their children occasionally stayed out and only one replied with never. This also shows that the Pandemic situation forced all parents and children stay at home together and consequently brought a change for children' care by their parents. During the pandemic, many children were causing troubles to the parents as they were more interested in watching the TS/mobiles most of the times. In this regard, when they were asked how often their children watched TVs/Mobiles, 6 replied with always, 2 with sometimes and 3 with occasionally. In this regard, one of the parents (out of six) responded, 'Yes, my children always liked watching the mobiles whenever they were not found their mother working the mobile but later they started solving some problems of their books using mobiles as the sister was advising him to do different activities from the mobile'. Similarly, when asked whether they remembered their teachers, 5 parents selected the option sometimes, 3 with occasionally, and 1-1 ticked with always and never respectively. Here too, a parent said, 'My child was not talking about his teacher but after one month of the COVID he set himself for doing most of the works from the book and developed his habbit for doing his study timely as I was always supporting him to set for the study'.

Very remarkably, 7 parents replied that they always set their children for study, 2 set sometimes and only one never set them for this very purpose. This suggests that there developed a close engagement atmosphere for the family to be involved in their children' study. What I experienced from my village three decades back is that every parent forced their children to sit for their study at every morning and evening that supported their school assignments well and also developed self-study tendency. But this scenario disappeared later due to many factors including male outing for earning and female mobile attachment.

From the table 1, 9 parents replied that they always sent their children for tuition with the nearby tutors and only one of them never sent for this provision. Even during the pandemic, in the rural areas, the people did not need to maintain physical distances as tightly as it was with the urban context. The school teachers were requested to teach the students as tutors by forming small groups, hence the tuition system once again appeared for the small children in the rural areas. The children were found to have been doing their works themselves under the guidance of their parents as they were interested much in their children education. From 9 parents responding very positively for sending their children for tuition, one of them uttered, ‘I have set my child for the tuition at nearby home where some of his friends gather and take tuition regularly for three hours’. It was found that 5 parents responded that their children did the works always and 5 others replied with occasionally. In the time of solving the works of their books, 6 parents told that they always talked to their friends and four with occasionally. That is to say, the children kept on taking helps from their friends as well for doing their book works. Similarly, regarding the help from their parents, 4 parents told that they always helped them as they are educated to some extent, 2 replied with occasionally, 2 with sometimes and again other 2 with never. This suggests that the parents played important roles for creating the study environment for their children study within the family during the pandemic period. Finally, most of them were found to force the children for their study as they (parents) always stayed at home and there grew their interest for quality education.

The results regarding the parents’ engagement for their children education during the pandemic period indicates that there developed natural homely environment for them in which the parents started taking more interest for it and that brought a good impact on the parents to involve in learning activities of their children at home even after the pandemic. My observation about the selected students also shows that some of their school teachers visiting them at their homes and caring them as their parents in some contexts on the one hand and on the other they suggested the related parents for taking care of the children especially for their education. Based on what happened during the pandemic, the parents have remained more involved in educating the children including sending them to school, setting for their home-works, checking their performances in the school, comparing them with boarding school children performances, engaging themselves more in school activities related to the parents, interacting with the teachers about their children problems, etc. All these indicate that parents’ roles along with the teachers’ supports are key indicators for better performances of the selected students and at present the teachers do not need to teach them in the school only but move to the society and start caring of them as parents in stead of sharing the knowledge/information. As I selected these 10 students’ parents, they all responded that they started caring of them more after the pandemic, and therefore their performance is being better. Previously these parents were not taking more interest in their children education thinking that the school was everything for their quality education and also there was not any tendency on the part of the teachers to move to the society for caring their students, rather their duty was only confined with the school compound. But as the teachers mobilize themselves from school to society, there has been homeschooling environment that reinforced the children for quality education after all.

Whether the parents were/are well educated or not was not the matter of this research concern but how actively they were/are involved in caring their children remained the core centre for the pedagogical/andragogical reformation in the days to come.

Conclusion

As the study aimed at exploring the impacting factors behind the better performances of the school level students, the researcher selected 10 parents of the elementary school level of Rajgadh 3, Saptari who were asked using semi-structure interview that intended to gain the information about their children's better performances after the pandemic, in spite of the drastic disturbances for consecutive two years. Altogether the interview consisted of 10 question items having four options; always, sometimes, occasionally, and never. The data shows that the parents grew their interest in their children's education activities more during the pandemic as they spent more time with them. They (parents) also managed the tuition as the school opening was uncertain, started forcing them to sit for their study at every morning and evening, realized the value of quality education to survive the healthy life, etc. Due to the growing interest in their students during the affected years of pandemic, the parents later also were/are found having similar interest in the students on the one hand and on the other some teachers still have kept giving them the home tuition: caring them as parents. All these indicate that parents' roles along with the teachers' supports were/are key indicators for better performances of the selected students and at present the teachers do not need to teach them in the school only but move to the society and start caring of them as parents instead of sharing the knowledge/information. Thus, the students should not only be in the school, teachers should also be in students' communities.

More importantly, they are found staying with their parents who took more notices for their academic activities. The students got inspired more from their parents and started working independently. This suggests that they found better environment at their home as there is more caring by their parents than sharing by them. They also learnt a very moral lesson from the Pandemic during which they were forced to work themselves under their homely environment, i.e., the pandemic created the forced provision of being independent during the two consecutive affected years that has also caused them being so later on. Whether their parents were/are well educated or not was not the matter of this research concern but how actively they were/are involved in caring their children was a key point for the pedagogical/andragogical reformation. Thus, those students whose parents took care of them more performed better, even irregular students who were/are found under the good guidance of their parents are better performers in the school level. So, in a nut shell, caring is more important than sharing at present time for quality and quantity education.

This is the time for the education stakeholders to adopt some society-oriented activities in which the direct involvement should be of the teachers for inspiring the parents to care of their children for their academic activities. We education stakeholders do not only share the information in the classes but need to care the students as their parents by taking responsibility of the individual students and organizing different types of community outreach/extension programs at least every week in surrounding/catchment areas. Thus, we need to adopt parental pedagogy/andragogy for sharing our courses with the students. This is the time to move from the academic institutions to the society and share our knowledge with the students in the collaboration with their parents under the homely environment along with creating learning and earning together for higher level. Makovec (2018) found that 'the role of a teacher is defined by cultural and social events and the environment, and they influence the differences that occur in the concept of teacher roles within different cultures, societies, including the geographic environment.'

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Emoji Usage among Scholars in Messenger Group Interaction

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Abstract

This study explores the use of emojis and abbreviations in scholars' daily communication regarding social media conversation, particularly focusing on their perceived professionalism and impact on users' reputations. The objective is to assess how these digital communication features are viewed within academic contexts. To achieve this, the research employed archival and survey methods over 22 days, documenting 501 emoji usages across 113 interactions or posts by MPhil-PhD scholars. Data were collected through three closed-ended questions to evaluate participants' attitudes and perceptions. Findings reveal that the beating heart emoji is the most frequently used among academics in group discussions (51.8%), suggesting that it conveys strong emotional responses. The study highlights significant considerations regarding gender, religious and cultural biases in emoji usage, indicating that while emojis can enhance communication, their overuse may lead to negative consequences. It suggests that effective use of emojis in communication requires an understanding of context, audience and cultural sensitivity to avoid misunderstandings and maintain effective communication. This study underscores the importance of emojis in academic settings, enhancing emotional expression and influencing social dynamics as digital communication continues to evolve.

Keywords: MPhil-PhD scholars, casual exchanges, body language, open dialogue

Introduction

Emojis enhance communication by conveying emotions and information between people and artificial entities visually. Emojis, similar to emoticons, enhance the conveyance of emotions in text-based communication by substituting for nonverbal signals and shaping the intended meaning and tone of messages (Kelly & Watts, 2015). Emoji usage has revolutionized nonverbal communication, fostering unprecedented dynamics and enhancing interconnections. Some academics have proposed that, in order to reduce linguistic and cultural disparities, online graphic symbols could develop into a universal symbolic language (Azuma & Ebner, 2008). Though their universality is up for debate, emojis are commonly used in business communication in Asia. Research has looked into why people use emojis. Derks et al. (2008) identified the considerable influence of emoticons on communication dynamics. Their research indicated that emoticons have the capacity to modify the overall tone of messages, which may result in ambiguity. Emojis serve as a means for individuals to express emotions and provide supplementary context to their messages. Their introduction to Facebook occurred around 2010, followed by their availability on the web platform in the subsequent year. In 2013, emojis were also integrated into Messenger (Flynn, 2014). Emojis are ideograms naturally combined with plain text to visually complement or condense the meaning of a message (Barbieri et al., 2017). On digital platforms and other alternative media, emojis are increasingly popular because their effective use facilitates effortless and natural nonverbal communication.

Montoya et al. (2017) highlighted the multifaceted roles of emojis in text-based communication, noting that they function as content words and enhance sentences by infusing them with emotional nuances and attitudes. For instance, emojis depicting laughter or smiles express positivity, whereas those representing anger or frowns suggest a negative sentiment.

The prevalence of emojis has markedly risen in recent years, enhancing both the clarity and precision of communication while streamlining the overall process. Emojis have become essential for facilitating effective and easy communication, particularly among individuals aged 18 to 25, who frequently use them to convey their emotions and situations on social media platforms. These visual symbols make it easy to convey meaning, lessening the need for exact language in spoken communication. In today's society, people of all ages see social media as essential for enabling communication within groups. Emojis are now commonly used in messaging platforms and social networks. However, it is crucial to understand that misuse of emojis can result in serious repercussions. A recent study carried out by MPhil-PhD students revealed that emojis are clear in conveying timely information among friends or starting discussions on specific topics.

In her January 2017 report "Emoji as a Universal Language," Maria Tenggren noted that 93% of emojis share similarities across different mobile operating systems. While their use in group communication is growing, misuse is increasing due to limited vocabulary knowledge. The discussion regarding the role of emojis in relation to written language is significant, particularly in the context of what has been identified as the fastest-growing language globally (Cioletti, 2016). The word "emoji" originates from Japanese, where "e" translates to image, "mo" signifies writing, and "ji" denotes a word or character (Davis & Edberg, 2016). This type of digital communication was chosen as the Word of the Year in 2015 by The Oxford Dictionary. The use of cartoons for hilarious writing dates back to the nineteenth century, when it first emerged. Smileys were created in 1964 to enhance work morale, and the first emoticon was used in an internet forum by Carnegie Mellon academics in 1982. Emoticons became increasingly popular in emails and websites by 1992, while emojis, established in 1998, greatly expanded this type of communication, becoming globally widespread by 2010.

From this moment, the use of emoji has gained a lot of momentum, even achieving that the word namely "Face with Tears of Joy". Emojis have highlighted the significance of emotions and conveyed meanings that would be unattainable in the absence of such expressions within digital communication, thereby illustrating a more universal perspective on language. Consequently, emojis are regarded as nonverbal cues in online interactions (Azuma, 2012).

Emojis have significantly altered the landscape of digital communication, facilitating effortless interactions among diverse age demographics. The nature of our social and professional exchanges is in a state of continuous transformation. As of now, more than 92% of global internet users utilize emoticons in their everyday communications (Daniel, 2021). Annually, World Emoji Day is observed to celebrate these symbols, which were recognized in 2015 as "the fastest growing language in history" (Nield, 2015). The participants of this study highlighted that emojis are commonly used to enhance textual messages, which are more self-contained in their expression. The primary motive for sending emojis is to convey emotion, with emojis being particularly effective in doing so. The use of emojis serves various purposes, such as making messages more fun and colorful, strengthening verbal communication, softening the tone to convey humor, and adding a touch of cuteness to a message. Emojis are essentially used to alter the text message itself. Emoji are a distinct expressive modality from text and images due to its visual characteristics and Unicode foundation (Cappallo et al., 2019).

A noteworthy aspect of this study involved the participation of 21 scholars from the MPhil-PhD program at Tribhuvan University's Central Department of Mass Communication and Journalism in an open platform debate. This investigation began on April 16 at 12:55 PM within a Messenger Group, with the aim of fostering constructive dialogue and the sharing of diverse subjective insights related to the topic until May 5 at 10:08 AM. The research aimed to explore the ways in which scholars employ emojis to articulate their emotions, the effectiveness of emojis in conveying students' moods or intentions, and the specific emojis that are most frequently utilized in Messenger conversations. The results indicate that these academics utilize a wide array of emojis within their Messenger groups. Over the span of 22-days group interactions, 14 distinct varieties of emojis were employed across 113 conversations. The use of emojis typically occurs in moderation, with their frequency varying according to the context of the communication. It is important to highlight that both male and female students incorporated emojis within the messaging group.

This study primarily examines the quantitative parts of emoji usage in messenger group chats, considering as a semiotic tool that enhances persuasive communication. A range of inquiries was employed to assess the effectiveness of emojis as a semiotic resource for persuasion within corporate and educational contexts. The study aimed to answer these research questions:

1. Why do the scholars use emojis?
2. How well does the use of emojis convey the mood or intention of users?
3. Which emojis do they prefer to use most in group conversations?

Literature Review

Younger people have embraced emojis in digital discussions for their user-friendliness, which minimizes language errors and enables faster, more effective communication. Emojis are graphical symbols that are prevalent in online interactions, serving to convey emotions and facial expressions. By employing emojis, individuals can articulate their feelings more effectively, thereby enhancing communication and fostering connections. Emojis have become essential in digital communication, effectively conveying emotions and ideas. A survey by Brand Watch, cited by Agnew (2018), reveals that emojis are used in over 50 per cent of all digital messages, highlighting their significant role in enhancing communication. In an investigation, Wang et al. (2016) developed a hybrid sentimental entity recognition model (HSERM) aimed at classifying emojis and emotional information. Additionally, several scholars have formulated an irony detection model specifically for tweets (Reyes et al., 2013; Prasad et al., 2017; Singh et al., 2019). Emojis have gained widespread popularity as a means of natural nonverbal communication across digital platforms. Given this, the present study aimed to include 21 scholars pursuing MPhil-PhD at the Central Department of Journalism and Mass Communication at Tribhuvan University engaged in group messenger activities using emojis, guided by three specific questions. According to Adobe's 2022 U.S. Emoji Trend Survey, a significant 92% of American respondents consider emojis to be an effective means of overcoming language barriers, and 91% assert that these symbols improve their capacity for self-expression. Individuals with high levels of academic attainment need to be cautious when using emojis due to the possibility of various interpretations.

Additionally, the role of emojis is examined within the field of linguistic pragmatics, where the situational context of communication is crucial. Linguist H.P. Grice's Theory of Communication posits that effective exchanges should be clear, accurate, and meaningful. While emojis can aid in achieving this clarity, it is essential to recognize the risks of misinterpretation that may arise from varying contexts. The incorporation of emojis profoundly influences social and cultural frameworks. Esteemed theorists such as Roland Barthes and Michel Foucault interpret linguistic symbols as manifestations of societal authority and interpersonal dynamics. Emojis possess the capacity to transform cultural understandings, thereby establishing novel structures within digital discourse. Emojis may not exert the same behavioral influence as authentic facial expressions due to their perceived inadequacy. Walther et al. (2001) illustrate that these symbols are widely recognized and routinely utilized among users of computer-mediated communication (CMC), with many observers noting that they serve as substitutes for the nonverbal signals that are absent in CMC compared to in-person interactions. The indiscriminate use of emojis can lead to significant consequences for gender, sexual, cultural, social, and professional dimensions of human communication. As contextual cues, emojis can aid users in conveying emotional nuances, mitigating semantic ambiguity, and improving contextual appropriateness (Kaye et al., 2016). Previous studies of emoji effects on text sentiment demonstrate mixed findings. Despite the advent of social media as the primary tool for communication in social and business settings, research on its effectiveness is limited. However, some researchers studied the use of emojis within internal virtual communication within organizations. For instance, Molina et al. (2019) argue that the use of emojis for corporate communication is a form that tests the formality and the public perception of the organizations. This research explores the corporate use of emojis for official functions. The same case is argued by Yokio and Jordan (2022), who argue that using emojis for corporate functions is an enticing undertaking that cannot be fully explored and used now because organizations are unaware of the target audience's interpretational differences. Another study shows that social media has created new "language modes" (emojis and animated stickers). Hence, social media rhetoric transcends the limits of traditional marketing rhetoric. Significantly, these language moods intertwine with social media users. This study seeks to bridge the gap in understanding the effectiveness of the use of emojis in group communication.

Theoretical Framework

Piaget's cognitive theory of language acquisition served as the main theoretical basis for the current study's examination. The study employed cognitivist viewpoints on language learning to analyze how respondents used emojis to convey meaning. Language is made up of educational, social, and cultural aspects of knowledge and understanding, which emphasizes the role that formal operational stages play in promoting communication, language use, and shared experiences in the exchange of concepts, values, and knowledge (Schunk, 2012). Cultural attachments are shaped by social systems that facilitate the evolution of knowledge. People get meaning from social behaviours that are shaped by institutional culture. "It is a facet of interpersonal communication" (Pritchard, 2009). This process is characterised by the dynamic sharing and exchange of experiential ideas rather than following a predefined route. Piaget's theoretical framework sought to foster novel aspects of cognitive capacity, encompassing the basic abilities the brain uses for reasoning, thinking, reading, learning, remembering, and maintaining focus. Early research indicates that emojis could serve as a direct method for assessing emotional connections to food and beverages. Findings suggest that emojis featuring facial expressions are more effective than those lacking such features (Jaeger et al., 2019).

Methods and Procedures

This study employs a quantitative research framework, utilizing a descriptive design to investigate emoji usage among MPhil -PhD scholars in messaging group interactions. The research setting consists of various academic groups on well-known messaging platforms, such as Meta Messenger, WhatsApp, WeChat, and others, where scholars participate in discussions regarding their areas of expertise. The participants encompass a varied sample of 21 scholars from journalism and mass communication fields, ensuring a wide representation of viewpoints. Data collection methods include archival research and surveys within these groups, enhanced by surveys to record participants' self-reported emoji usage behaviors and opinions. Data collection procedures consist of obtaining informed consent from participants and maintaining confidentiality throughout the research. Data analysis procedures include thematic analysis to uncover recurring themes and trends in emoji usage, in addition to quantitative analysis of survey results to measure emoji frequency and context. This quantitative methodology facilitates a thorough understanding of the role of emoji in academic communication, emphasizing both qualitative insights and quantitative patterns. A comparative semiotic analysis elucidates further insights regarding the communicative messages conveyed by emojis within group conversations for educational objectives. Three questionnaires incorporating five dependent variables were constructed to evaluate the participants' comprehension and attitudes concerning the pertinent topic or context. Participants for this survey were selected based on their habitual use of emojis during interactions on the official Messenger platform. The selection criteria included native speakers affiliated to the Central Department of Journalism and Mass Communication at Tribhuvan University. Individuals who identified themselves as users of emojis in messaging applications were uniformly assessed across all dimensions of the questionnaire. All participants underwent a consistent evaluation across the different scales of the questionnaire. Among the 21 individuals, 7 identified as female and 14 as male scholars, from whom I obtained valid responses. The main objective of this research is to address the knowledge gap concerning the effectiveness of emoji usage in group conversations.

Results and Discussion

This section deals with three key themes. Every theme emphasizes important discoveries backed by data related to appropriate literature and enhanced with insights.

Patterns of Emoji Usage

The research examined 113 posts during 22 days, recording the use of 501 emojis within group discussions involving 21 academics. In total, 14 distinct emojis were recognized, with the most commonly utilized ones being the beating heart emoji (134 occurrences), thumbs-up emoji (90 occurrences), and smiling face emojis (34 occurrences). Interestingly, one participant used the beating heart emoji 43 times. These findings underscore emojis' role in conveying enthusiasm and fostering supportive interactions in academic settings. This aligns with existing literature suggesting that emojis enhance non-verbal communication by reinforcing emotional undertones (Walther & D'Addario, 2001).

Variations in Emoji Choices Based on Gender

Table1

Differences in Emoji Usage Patterns between Male and Female Participants

Gender	Emoji Usage Purpose	Percentage
Female Scholars	Soften criticism or foster rapport	70%
Male Scholars	Soften criticism or foster rapport	40%

Female scholars soften criticism or foster rapport 70% while male scholars soften criticism or foster rapport 40%. Female academics tended to utilize emojis to convey empathy and support, indicating a greater propensity for emotional labor. This backs sociological theories that highlight communication styles influenced by gender (Hochschild, 1983). The results indicate that women may use emojis purposefully to preserve group cohesion, a behavior that is less common among men.

Consequences and Difficulties of Emoji Utilization

Though emojis improve communication by expressing intense emotions, they also carry the risk of being misunderstood. For example, the winking face emoji was interpreted as sarcasm during an earnest conversation. This emphasizes the significance of using emojis thoughtfully and in a contextually suitable manner. The findings emphasize that while emojis can bridge communication gaps, their meanings can vary significantly across cultural and professional contexts, potentially leading to negative outcomes. Careful consideration is essential to ensure that emojis are both relevant and widely understood, as suggested by Derks et al. (2008). This study reinforces the value of emojis in academic communication while highlighting the complexities of their use. It contributes to the growing body of literature on digital communication tools by providing empirical insights into how gender and context influence emoji usage. Future research should explore strategies to mitigate risks of misinterpretation and promote inclusivity in emoji usage across diverse academic environments.

Table 2

Participants and Frequencies of Using Emojis during their Facebook Messenger Conversation

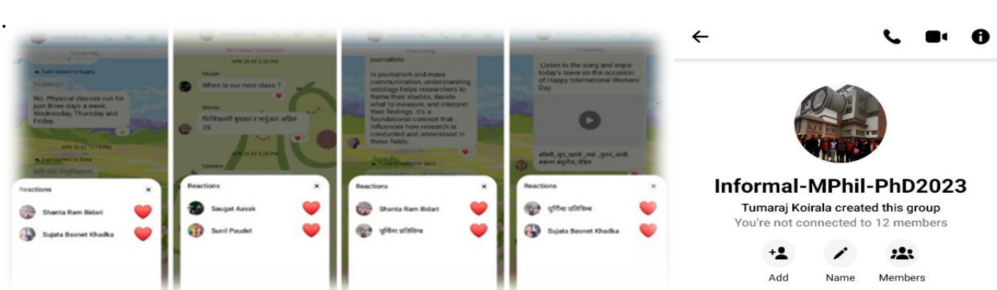
Participants	Gender	Frequencies of Total Emojis	Frequency of a single Emoji used during 22 day conversations
P1	Male	298	Beating Heart emoji 43 times ❤️
P2	Male	28	Beating Heart emoji 26 times ❤️
P3	Female	25	Beating Heart emoji 16 times ❤️
P4	Female	21	Thumbs up emoji 10 times👍
P5	Female	20	Rolling on the floor laughing emoji 10 times 🤣
P6	Male	18	Thumbs up emoji 12 times👍
P7	Male	17	Beating Heart emoji 16 times ❤️
P8	Female	14	Thumbs up emoji 8 times 👍
P9	Male	8	Beating Heart 5 times ❤️
P10	Female	12	Beating Heart emoji 5 times ❤️
P11	Female	12	Grinning squinting face emoji 5 times 😆

P12	Female	5	Thumbs up emoji 3 times 👍
P13	Male	3	wow emoji 2 times 😮
P14	Female	3	Grinning squinting face emoji 2 times 😆
P15	Male	3	Beating Heart 3 times ❤️
P16	Male	4	Thumbs up emoji 3 times 👍
P17	Male	3	Beating Heart 3 times ❤️
P18	Male	4	Beating Heart 2 times ❤️
P19	Male	2	Thumbs up emoji 2 times 👍
P20	Male	1	Beating Heart single ❤️
P21	Male	1	Victory hand emoji single ✌️
	Total Emojis used= 501		

Table 2 represents the engagement of 21 scholars in a Messenger conversation from April 16 to May 5, focusing on emoji usage across 113 posts. Emojis play a crucial role in modern communication, quickly conveying emotions and thoughts. The bar graph representation of emojis in the table illustrates their distribution and importance in enhancing interaction. Participants used 501 emojis during the discussion.

Figure 1

Screenshots of Using Emojis Expressing Emoticons according to the Phenomenon

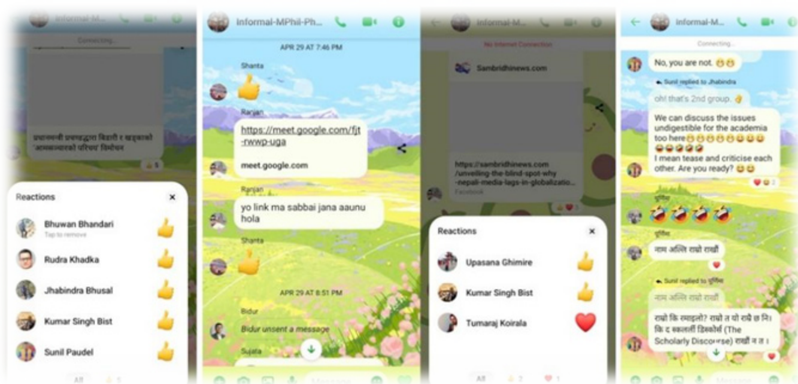


Source: Screenshot of MPhil-PhD 2023 Group, CDJMC, TU.

Based on this analysis of posts, the results show that members of messaging groups use emoticons extensively. With 134 appearances—or 67 per cent of all emoji usage—the "beating heart" emoji is the most commonly used. After that, the "thumbs up" emoji comes in second place with 90 occurrences or 44.8 per cent of the 501 total. Remarkably, eight of the twenty-one individuals never used the "thumbs up" emoji. Furthermore, 34 times, or 16.9 per cent of all usages, the “grinning squinting face” emoji was used to convey emotional intent.

Figure 2

Thumbs up Emoji Fascinating to the Issues

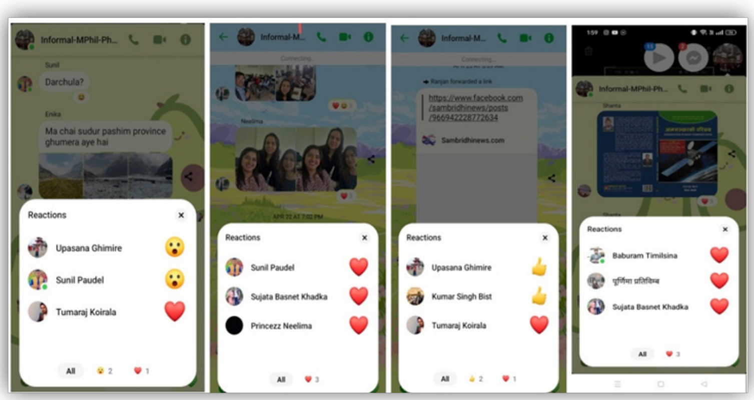


Source: Screenshot of MPhil-PhD 2023 Group, CDJMC, TU

Figure 2 demonstrates that many scholars inconsistently use the thumbs-up emoji in productive conversations. The rise of instant messaging apps has blurred the lines between public and private spheres, allowing communication beyond the classroom. This change gives young users essential privacy for building relationships and self-expression. Research indicates that many academics prefer the pounding heart emoji to express their feelings with peers.

Figure 3

Male and Female Scholars Employing the Heartbeat Emojis



The research adjusted the frequency of emoji use to assess their relative representation in 113 discussions. The beating heart emoji represented 26.8% of all discussions (134 occurrences), the thumbs-up emoji captured 17.9% (90 occurrences), and the grinning squinting face emoji made up 6.8% (34 occurrences). These ratios demonstrate how specific emojis prevail in communication and highlight their contextual importance in group interactions.

Figure 4

Overall Number of Instances for Each Emoji

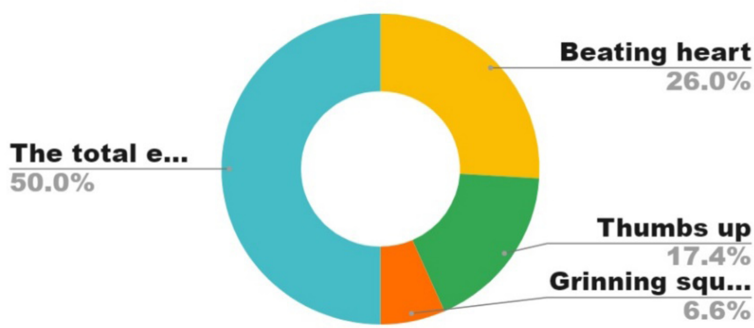
Beating heart: 134, Thumbs up: 90, Grinning squinting face: 34

The total emoji count is: 134+90+34=258

The proportions for each emoji are recalculated.

Beating Heart: 134÷501×100=26.0%, Thumbs Up: 90÷501×100=17.4% and Grinning Squinting Face:

34÷501×100=6.6%



The combined dataset is displayed in Figure 4 above, and Figure 5 (below) clearly shows that Scholars in their group interactions predominantly used three primary emojis, with a percentage indicating their frequency of use. This visualization will help understand the relative popularity of each emoji used by respondents out of 50 per cent.

Mostly used emoji: The beating heart emoji is the most frequently used (26.0%), showing it might represent the strongest sentiment or reaction among the users.

Moderately used emoji: The thumbs up emoji (17.4%) suggests approval or agreement but with lesser enthusiasm compared to the beating heart.

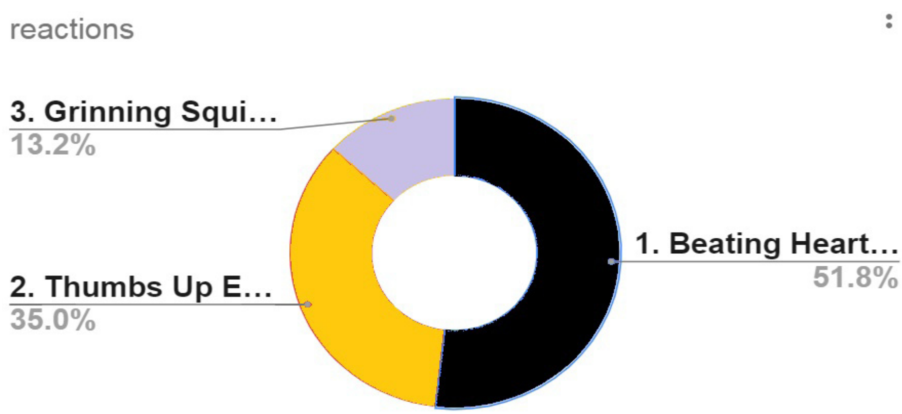
Least used emoji: The grinning squinting face (6.6%) is the least used, which might indicate it's less relevant or has a specific context in the data.

Figure 5

Total Proportions of Emoji used

Beating Heart: 134÷258×100=51.9%, Thumbs Up: 90÷258×100=34.9% and Grinning Squinting Face:

34÷258×100=13.2%



These proportions reflect how often each emoji was used relative to the total number of emoji occurrences. This visualization will help understand the relative popularity of each emoji.

Mostly used emoji: The beating heart emoji is the most frequently used (51. 8%), showing it might represent the strongest sentiment or reaction among the users.

Moderately used emoji: The thumbs up emoji (35. 0%) suggests approval or agreement but with lesser enthusiasm compared to the beating heart.

Least used emoji: The grinning squinting face (13. 2%) is the least used, which might indicate its less relevant or has a specific context in the data.

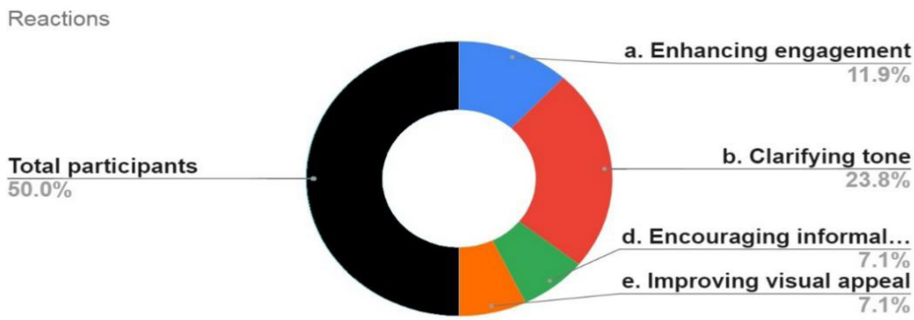
The examination of the available data involves analyzing how emojis are used in group chats and their relationship to the content being reacted to. Data from Meta Messenger conversations revealed the most frequently used emojis by Scholars, with the "Beating heart" emoji ranking highest at 134, followed by "Thumbs up" at 90, and "Grinning squinting face" at 34, totaling 501 emojis as shown in Figure 5.

The research revealed that younger people utilize emojis more often than their older peers, influencing the development of written communication. Emojis fill the gap left by the lack of nonverbal signals, like facial expressions, in text interactions, making them essential for digital communication. Information from 21 MPhil-PhD students participating in group messaging activities showed preferences and trends in emoji usage. Answers to a closed-ended survey offered insights into the impact of emojis on communication methods, with results explored in the subsequent themes.

Figure 6

Tabulation of Data and Analysis

Reason of Using Emoji	Reactions
a. Enhancing engagement	5
b. Clarifying tone	10
c. Simplifying complex ideas	0
d. Encouraging informal dialogue	3
e. Improving visual appeal	3
Total participants	21



Examining responses from 21 participants showed that the majority chose option “b” to signify their understanding of phrases used in group discussions, accounting for 23.8% of all responses. Although half of the participants opted for related choices, the others picked “a,” “d,” and “e” to demonstrate their comprehension. This underscores the significance of effective communication and the favoring of straightforward language, which encourages interaction and assures their improved understanding.

Figure 7

Tabulation of Data and Analysis

Reason	Reactions
a. Accurately conveys the user’s emotions.	6
b. Adds tone to text and subtle emotions.	3
c. Reduces misinterpretation and misunderstandings.	11
d. Enhances empathy between communicators.	1
e. Culturally dependent	0
Total participants	21

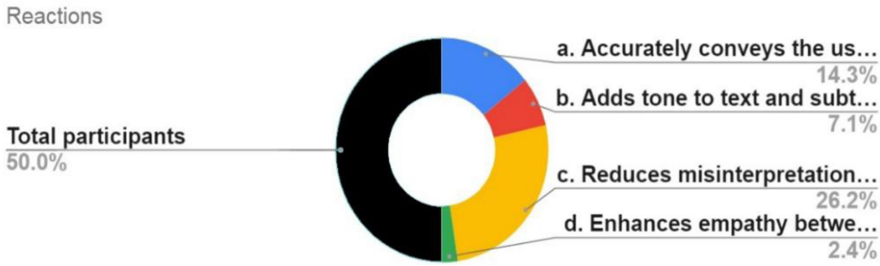


Figure 7 above highlights the significance of collecting reactions to grasp the engagement of respondents and the clarity of communication. The data indicates that 26.2% of participants utilized emojis to enhance message clarity, accounting for half of all respondents. Eleven out of the 21 participants chose option "c," indicating better understanding and fewer errors in interpretation when utilizing emojis. On the other hand, certain participants selected "a," "b," or "d," showing recognition of rarer symbols. These results highlight the importance of effective communication in enhancing teamwork, preventing disagreements, and encouraging unity in group dynamics.

Figure 8

Tabulation of Data and Analysis

Reason	Reactions
a. Face with tears of joy for something funny.	0
b. Thumbs-up to show agreement or approval.	7
c. Beating Heart is often used to convey strong feelings.	11
d. Smiley face enhances empathy between communicators.	0
e. Grinning squinting face to express extreme laughter.	3
Total participants	21

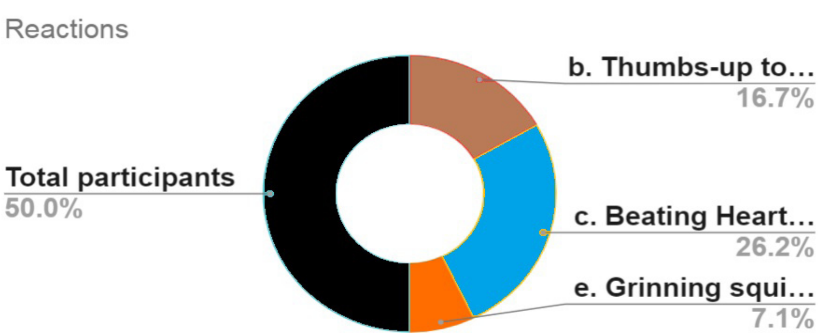


Table 8 provides insight into respondents' reactions and engagement, with the "beating heart" emoji representing 26.2% of the participants. This emoji reflects love, affection, and positive emotions. Most respondents, specifically 11 out of 21 (26.2%), selected option “c,” indicating deep sentiments. This equates to 50% of the responses for this inquiry. The data suggests that the information resonated more emotionally with the participants than verbal responses did.

Analyzing question 1 shows that 50% of respondents chose option “b,” reflecting their comprehension of using expressions in group discussions for context clarification. Out of 21 participants, 10 responses matched option “b,” accounting for 23.8% of all responses. At the same time, the other respondents chose options “a, d, and e” to show different degrees of comprehension. A notable percentage (26.2%) utilized emojis for conveying meaning, matching the cognitive levels of 11 individuals, thereby ensuring clear understanding of the message. This research offers individual perspectives on the intricate dynamics of emoji utilization in online communication. It emphasizes that emojis function as instruments for conveying emotions and providing context, enhancing empathy and shared understanding in online settings. Nonetheless, it also highlights the significance of cultural and contextual understanding to prevent misunderstandings. The results enhance the overall comprehension of digital communication by examining how emojis affect interpersonal relationships, particularly in educational and work environments. They correspond with concepts of emotional labor and non-verbal communication, including Hochschild’s (1983) theory of emotional effort and Walther’s (1996) theory of social information processing.

Conclusion

This study analyzed the emoji usage among research scholars. Researchers, educators and practitioners can utilize emojis thoughtfully to improve clarity and emotional engagement while preserving professionalism. The results indicate that utilizing inclusive and context-sensitive emojis can enhance collaboration and minimize miscommunication in varied environments. Additional study ought to explore the dialectical values and limitations of emoji use in relation to social, cultural, and gender-related viewpoints. This entails examining how emojis influence the tone and communication abilities of younger generations. Promote the creation of uniform interpretations of emoji to reduce confusion. Encourage understanding of cultural and gender differences in emoji usage to enhance inclusivity. Offer guidance on appropriate emoji usage in professional and academic settings to achieve a balance between warmth and clarity. This research highlights the impactful role of emojis in contemporary communication while acknowledging their intricacies. By improving comprehension of emoji usage trends and consequences, it provides important insights for both individuals and organizations operating in digital communication environments.

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Calotropis Procera Plant Extract: Phytochemical Analysis, Antimicrobial Activity, and Coumarin Compound Identification

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Abstract

Phytochemical screening of *Calotropis procera* (Aakh, Milkweed) leaf and stem extracts was performed using solvents: hexane, benzene, dichloromethane, methanol and distilled water. zAlkaloids, carbohydrates, reducing sugar, tannins, phenolic compounds, gum and mucilage, flavonoids, quinines, and coumarin were all present. At a concentration of 20 g/mL, the methanolic extract of *Calotropis procera* demonstrated good antibacterial action against two bacteria: the gram-positive *Bacillus subtilis* and the gram-negative *Escherichia coli*, as well as fungi, *Candida albicans*. The therapeutic value of *Calotropis procera* is positively impacted by the zone of inhibition of bacteria and fungi. The extraction of coumarin from the plant extract was done using the Soxhlet extraction method. Preliminary tests were conducted to identify coumarin in plant extract. The tests include FTIR data collection and melting point determination concerning commercial coumarin. The melting point measurement was found to be 68±2˚C. The stretching band at 1702 cm^{-1} was attributed to >C=O functional group of coumarin. The plant extracts themselves can be applied in therapeutic use, and the pure form of coumarin can be utilized to create various derivatives, including acetyl coumarin, thiosemicarbazones, and metal complexes, which can be used to investigate antifungal, antibacterial, and anticancer properties.

***Keywords**:* Antibacterial study*,* Calotropis procera, Coumarin, FTIR, Phytochemical

Introduction

Nepal, having a wide variety of biodiversity and geographical distribution, comprises a rich tradition of using medicinal plants. Aloe vera (*Aloe barbadensis miller*), Neem (*Azadirachta indica*), Turmeric (*Curcuma longa*), Ashwagandha (*Withania somnifera*), Kutki (*Picrorhiza kurrooa*), Satuwa (*Paris polyphylla*), Chiraito (*Swertia chirayita*), Sarpagandha (*Rauvolfia serpentina*), Gokshura (*Tribulus terrestris*), Aak (*Calotropis procera*), Timur (*Zanthoxylum piperitum*), Tulshi (*Ocimum tenuiflorum*) etc. for treating various diseases. These plants are used to treat a wide range of ailments, including skin diseases, digestive disorders, cancer treatment, liver diseases, kidney problems, hypertension, insomnia, etc.

The evergreen, perennial shrub Calotropis procera is found throughout the tropics, as seen in Figure 1. Native to Africa, South Asia, and Nepal, the plant is erect, up to 5 meters tall, big, branching, and has large waxy leaves with milky latex throughout (Mansurat et al., 2020). It is commonly known as the Apple of Sodom, a name derived from the Hebrew tapuah Sodom (Adebayo et al*.,* 2015.). They are commonly known as Aakh in Nepal and are used in dyspepsia, paralysis, swelling, spraining, skin diseases, fever, diarrhea, etc. However, it is important to note that the plant is toxic and can cause skin irritation, vomiting, and even death if ingested in large volumes.

A widely accessible herb, *Calotropis procera* is typically used to treat infections of the external body. According to WHO, around 80% of the population depends on traditional medicine, especially in developing countries (Amini et al., 2021). However, only 50% of Western drugs contain plant bioactive compounds or their analogs as their active ingredients. The latex of *Calotropis procera* contains most hydrocarbon contents (Doshi et al*.,* 2012). Since ancient times, *Calotropis procera has been used for fiber, fuel, fodder, and other purposes* (Kaur et al., 2021). It has been used as a conventional bio-pesticide.

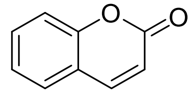
Figure 1

Calotropis Procera: (a) Growing Plants, (b) Flowers and Fruit

Phytochemical screening is a process that involves the extraction of different chemical compounds from a plant and the identification of the classes of compounds present. The different classes of bioactive compounds that can be detected include alkaloids, flavonoids, terpenoids, saponins, tannins, glucosides, coumarin, anthraquinones, gum mucilage, etc. The phytochemicals are of different classes; some are nitrogen-containing compounds, polyphenolic compounds, isoprene units, benzene ring compressed compounds, etc., with a wide range of biological activities *viz.* analgesic, anti-inflammatory, antitumor effects, antioxidant, anticancer properties, antimicrobial activities, etc. Phytochemical screening can be done using various methods, including TLC, Infusion, Ultrasonic, HPLC, GC-MS, Soxhlet extraction, etc.

An antimicrobial is a substance that can destroy or hamper the growth of microbes/germs. Now, there are more classes of antimicrobial/antibacterial against which are numerous and effective. The purpose of antibiotics is to treat bacteria, while the purpose of antifungals is to treat fungi. They can also be categorized based on their function. Currently, the majority of pharmaceuticals used in medicine are synthetic. The rise of drug-resistant bacteria has generated a concerning clinical situation regarding microbial disease therapy. Multiple drug resistance has hindered the development of new synthetic antimicrobial medications, necessitating the quest for revolutionary antimicrobials from natural plant sources. In light of these factors, recent studies have concentrated on identifying natural chemicals found in plants that are vital for medicine to create innovative and potent drugs to treat microbial infections and illnesses (Hassan & Kazmi, 2015). Methanolic extract of *Calotropis procera* flavonoids showed significant antimicrobial activity against microorganisms *viz.* gram-positive bacteria (Staphylococcus aureus and Bacillus subtilis) and gram-negative bacteria (*Pseudomonas aeruginosa and Salmonella enteritidis*) ranging the diameter of inhibition between 15.5 and 28.5 mm and *Candida albicans* with 30 mm.

Coumarin is a class of organic compounds that is found in many plants, such as tonka beans (*Dipteryx odorata*), sweet clover (*Melilotus*), *Calotropis procera*, turmeric (*Curcuma longa*), ginger (*Zingiber officinale*), etc. Coumarin is a benzene ring fused to a pyrone ring (Luchini et al., 2008). Coumarin and its derivatives have a distinctive sweet scent and are used in producing perfumes, cosmetics, and flavorings. They are also used in medicine as anticoagulants, which means they help to prevent blood clots from forming. Some coumarin derivatives have been found to have anti-inflammatory and antitumor properties as well. However, coumarin can also be toxic in large amounts, so it is important to use it in moderation (Jain & Joshi, 2012).



Coumarin

Coumarin can be extracted or isolated from plants using various methods, including steam distillation, Soxhlet extraction, and liquid-liquid extraction. To isolate coumarin from plant extracts, a process called liquid-liquid extraction is typically used. This involves dissolving the plant material in a solvent, which is then separated from the extract using a separating funnel. The solvent is then evaporated to leave behind the coumarin compound (Niaz et al., 2020).

Soxhlet extraction is another best method that can be used to isolate coumarin from plant extracts. The plant material is placed in a thimble and inserted into a Soxhlet extractor during this process. The extractor is filled with a solvent, which is heated and allowed to evaporate and condense repeatedly, causing the solvent to circulate through the thimble and extract the coumarin. The solvent is then evaporated to leave behind the coumarin compound (Redfern et al., 2014). The coumarin can then be purified using column chromatography and recrystallization techniques. The specific extraction method will depend on the type of plant materials used and the properties of the extracted coumarin.

The difficulty of isolating bioactive chemicals from plant extracts is a research gap in plant extraction and compound isolation. Plant extracts frequently contain a variety of phytochemicals, or bioactive substances, with varying polarity. The separation of the pure form of the compound needs an advanced laboratory with various instrumentation facilities like FTIR, UV, NMR, TGA, EPR, CHNS, and ESI-MS spectrometry. The coumarin itself contains stable rings and acid amide group. To synthesize Schiff's base (thiosemicarbazones), a free carbonyl group needs to be synthesized by the acetylation process.

The continuation of this research work to introduce it in pharmacology needs purchasing additional chemicals, characterization by various spectroscopical techniques, and anticancer studies in other countries. These works may take time and a substantial budget. Therefore, it will be the best work only to the researchers who are planning to do their research for higher study and get grants from funding agencies like UGC, NAST, RECAST, etc.

The study aims to make extracts of *Calotropis procera* stems and leaves for antimicrobial study and coumarin identification using phytochemical screening and characterization of the compound by melting point determination and FTIR spectral studies.

Methods and Procedures

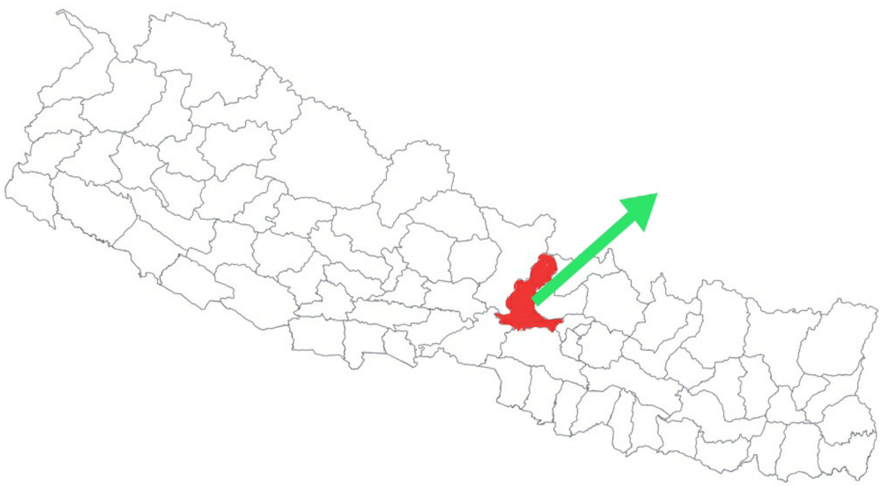
Sample Collection

Calotropis procera stems and leaves, as in Figure 2, were collected from

Khalte, Koshikhola, Neelkantha-5, Dhading, Nepal (Height-603 M, Latitute-27.84818˚ N, and longitude-84.98168˚ E).

Figure 2

Dhading District, Nepal, 45100, Where Samples were Collected



Rainwater and deionized water were used to clean the plant sample. After that, it was dried, grinded into tiny pieces, and crushed into powder with the help of a grinding machine. A variety of organic and aqueous solvents were used to dissolve the powdered materials. The sample extracts were diluted in organic solvents and water for phytochemical screening, and coumarin was extracted from the chloroform extract. All these steps involved in antimicrobial study, phytochemical screening, and the isolation of coumarin have been represented in Scheme 1.

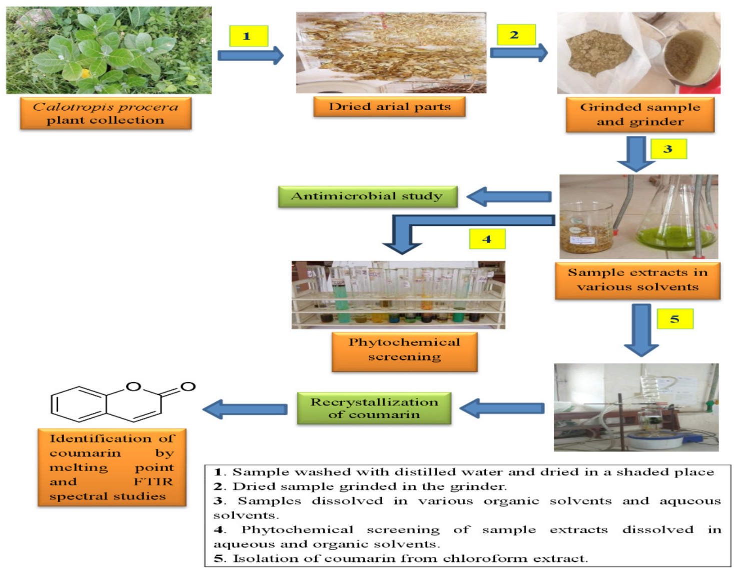
Materials

Distilled water, methanol, hexane, chloroform, benzene, DCM, (Fisher Scientific India Pvt. Ltd.) conc. H_2SO_4, conc. HNO_3, conc. HCl (35% extra pure, LABO CHEMIE Pvt. Ltd.), NaOH, KOH, ethyl acetate, acetone, Hager's reagent, Benedict solution, Fehling's solution, Mayer's reagent, Dregendroff's reagent, Wagner's reagent, etc. were used for the phytochemical screening of different solvent extracts of the plant.

Instruments

The melting point of isolated coumarin was determined using the Philip Harris melting point apparatus in the Central Department of Chemistry, Tribhuvan University (T.U.) Kirtipur, Nepal. Infrared spectra were measured from wave number 4000 to 400 cm^{-1} using PerkinElmer Spectrum IR Version 10.6.2 in the Department of Chemistry, Amrit Campus, T. U., Nepal.

Methodology



Scheme 1. Methodology involved in preparing plant extract for antimicrobial studies, phytochemical screening, and isolation of coumarin

Preparation of *Calotropis procera* leaf and stem extract

Hexane extract: 10 g powder of stem/leaves was mixed with 80 mL of hexane. The solution was left for 1 day and filtered to get the extract.

Methanol/benzene extract: 10 g powder was mixed with 80 mL of methanol and benzene separately, left for 1 week, and filtered to get the respective extract.

Aqueous extract: 10 g powder was mixed with 130 mL of distilled water, left for 1 day, and filtered to get the extract.

DCM extract: 10 g of powder was mixed with 80 mL of DCM, left for 5 days, and filtered to get the extract.

The dissolved solution was filtered using Whatman's no 1 filter paper, and the filtrate was taken to study different phytochemical constituents.

Shaikh and Patil (2020) have documented the various techniques of preparing reagents, including Million's reagent, Mayer's reagent, Hager's reagent, Fehling's solutions, Benedict's reagent, and Dragendroff's reagent.

Tests for Alkaloids

Dragendroff's test: Two drops of the reagent were applied to a test tube containing one millilitre of plant extract.

Mayer's test: Two drops of the Mayer's reagent were carefully placed along the side of a clean test tube containing one millilitre of aqueous extract.

Wagner's Test: A few drops of Wagner's reagents were applied to a test tube containing 1 millilitre of plant extract.

Tests for Carbohydrates

Molish's test: Two drops of alcoholic α-naphthol were added to two milliliters of plant extract. After giving the mixture a good shake, a few drops of concentrated sulphuric acid were gradually added along the test tube's sides.

Test for Starch

To 2 mL of filtrate plant extract, 5 mL of 5% potassium hydroxide solution was added.

Test for Reducing Sugar

Benedict's test: 1 mL of plant extract and 1 mL of Benedict's solution were taken in a test tube and placed for boiling in a water bath for 2 minutes.

Fehling's test: 2 mL of a mixture of Fehling's solutions 'A' & 'B' was mixed with 1 mL of plant extract and placed in a water bath for boil.

Test for Fixed Oils and Fats

Spot test: A small quantity of plant extract was pressed between two filter papers.

Saponification test: A drop of phenolphthalein and a few drops of 0.5 N alcoholic KOH solutions were added to a tiny extract. A water bath was used to heat the mixture for two hours.

Tests for Glycosides

Legal's test: 1 mL plant extract was dissolved in pyridine, 1-2 mL sodium nitroprusside was added, and 10% NaOH solution was added.

10% NaOH test: The mixture of 1 mL of plant extract and 1 mL of dilute H_2SO_4 was boiled for 15 minutes. The boiled solution was allowed to cold and neutralize (concentration) by adding 10% NaOH solution, and 1 mL of Fehling's solutions 'A' and 'B' were added.

Borntrager's test: 2 mL of plant extract and 3 mL of the chloroform mixed and agitated well, the separated chloroform layer was envisioned, and then 10% of ammonium solution was mixed.

Test for Cardiac Glucosides

Bromine water test: To 1 mL of plant extract, a few mL of bromine water was added.

Test for Cardenolides

A 20% NaOH solution, pyridine, and sodium nitroprusside were added to 1 millilitre of plant extract.

Tests for Phenolic Compounds

Ferric chloride: A few drops of a neutral 5% ferric chloride solution were added to 3 milliliters of plant extract.

Lead acetate test: 3 millilitres of a 10% lead acetate solution were combined with plant extract.

Iodine test: A few drops of diluted iodine solution were added to 1 mL of plant extract.

Tests for Gum and Mucilage

3 mL of plant extract was mixed with 2 mL of absolute alcohol, carried out on constant stirring.

Tests for Tannins

Braymer's test: 1 mL of plant extract, 3 mL of distilled water, and 3 drops of ferric chloride were mixed.

10% NaOH test: 10 mL of 10% NaOH was combined with 1 mL of plant extract and thoroughly shaken.

Bromine water test: To 5 mL of bromine water, 2-3 drops of plant extracts were mixed.

Tests for Proteins

Biuret test: 2 mL of the extract was mixed with 1 drop of 2% copper sulphate solution, 1 mL of 95% ethanol, and potassium hydroxide pellets.

Test of Coumarins

10% NaOH test: 1 mL of plant extract was taken in a test tube, 1 mL of 10% NaOH was mixed with it, and a little chloroform was added.

Test for Anthraquinones

Borntrager's test: The mixture of plant extract and 10 mL of 10% ammonia solution was shaken vigorously for a minute.

NH_4OH test: The plant extract was dissolved in isopropyl alcohol and then 1 drop of conc. Ammonium hydroxide was added.

Tests for Flavonoids

Shinoda's test: Three milliliters of plant extract, magnesium turning, and a few drops of concentrated hydrochloric acid were put into a test tube.
Lead acetate test: 1-2 drops of 10% $Pb(C_2H_3O_2)_2$ were added to 1 milliliter of plant extract.

Ferric chloride test: A few drops of ferric chloride were added to a plant extract.

Conc. H_2SO_4 test: A few drops of conc. H_2SO_4 was put into a test tube containing 1 milliliter of plant extract.

Tests for Saponins

Foam test: 5 mL of extract was mixed with 10 mL of distilled water and shaken well.

Froath test: 0.5g of plant extract was mixed with 2 mL of distilled water.

$NaHCO_3$ test: 2 mL of plant extract, 2-3 mL of $NaHCO_{3,}$ and some volumes of distilled water were added and then shaken vigorously.

Tests for quinines

Sulphuric acid test: 1 mL of plant extract (isopropyl alcohol extract) was mixed with 1 mL of conc. $H_2SO_{4.}$

Conc. HCl test: One milliliter of concentrated hydrochloric acid was applied to one milliliter of plant extract.

Alc. KOH test: A few milliliters of Alc. KOH solution was combined with one milliliter of plant extract.

Isolation of Coumarin from *Calotropis procera* Extract

The powder sample of plants was weighed and placed in a thimble without any leakage and put inside the cleaned and dried Soxhlet extractor. The chloroform solvent was added to the RB flask, which was connected to a water condenser, and the flask was placed at a temperature of 40-50˚C. The solvent was evaporated and condensed with the condenser. The condensed solvent was dripped back into the thimble about 9-10 times to rotation, and the extracted sample was collected in a beaker (Apu et al., 2018).

Isolation Process

The plant extract in the RB flask was dried, and the dried extract was dissolved with 1N NaOH solution for refluxing at about 50˚C for 3 hours. The refluxed solution was placed for cooling for about half an hour and filtered by Watman's No. 1 filter paper. The yellow filtrate was taken in a beaker, and 1N HCl was added to it till acidic medium. The acidic solution was placed in a refrigerator for 24 hours to get coumarin crystals. The isolated solution was recrystallized to get a pure form of coumarin (Mustafa et al., 2018).

Recrystallization

There were two types of coumarin compounds: polar and non-polar. Non-polar compounds are highly soluble in organic solvents like ethanol and methanol but slightly soluble in water. Polar coumarin compounds are highly soluble in acetonitrile. Isolated coumarin compound was found to be non-polar and soluble in methanol. The solid sample was dissolved in 40% of aqueous methanol solvent, partially dissolved at room temperature but completely dissolved in a water bath at 40-50˚C. The dissolved hot solution was cooled at room temperature at 28˚C to get a crystalline form of the coumarin. Preliminary identification of coumarin was carried out by measuring the melting point (Figure 3) with reference to commercial coumarin.

Figure 3

Measuring the Melting Point

Antimicrobial Activity

Three microbial strains' active cultures were used in the investigation. Himalayan Research Institute of Biotechnology Pvt. Ltd. Radhe Radhe Bhaktapur supplied the microbial strains. Two bacteria and one fungus were included in the investigation. Gram-negative bacteria Escherichia coli ATCC 8739 and gram-positive bacteria Bacillus subtilis ATCC 6051 were among the microorganisms. It was

Candida albicans ATCC 2091, a fungal organism.

With reference to the Kanamycin A standard zone, the Bauer Agar Disc Diffusion method (Shandil et al., 2007) was used to screen the compound for antimicrobials using one species of gram-positive bacteria (Bacillus subtilis ATCC 6051), one species of gram-negative bacteria (Escherichia coli ATCC 8739), and one species of fungi (Candida albicans 2091). The antibacterial activity of the plant extract was estimated by measuring the average diameter of the zone of inhibition (ZOI) that plant extracts formed on the agar surface against specific pathogenic bacteria.

Microbes are cultivated on nutritional agar, a general-purpose nutrient medium. Because it includes many nutrients necessary for bacterial growth, it promotes the growth of various non-fastidious organisms.

In a conical flask of the proper size, nutrient agar was added to distilled water in a ratio of 28 g/L. The flask was then boiled while continuously shaken and autoclaved for 15 minutes at 121°C and 15 pounds of pressure. The sterilized media were allowed to cool to roughly 50°C. Aseptically, they were divided into 25 mL portions, with each plate on sterile Petri dishes having a 90 mm diameter and appropriately labeled. Plates were allowed to solidify in their current state.

The nutrient agar without the solidifying component, agar powder, is called nutrient broth. Microbial stocks are commonly preserved using liquid-form media that remain liquid at room temperature. The conical flask mixed 1.3 g of nutrient broth powder with 100 mL of distilled water. They were added and dissolved completely. It was autoclaved for 15 minutes at 121°C and 15 lb pressure to sterilize it. After letting it cool, 10 mL of it was transferred into a screwed bottle and sterilized once again.

Mueller Hinton Media (MHA) contains beef extract, acid hydrolysate for casein, starch, and agar. MHA was widely used to justify the regular testing of undemanding microorganisms using the Kirby-Bauer disk diffusion technique. To prepare the media, 3.8 g of the medium was suspended in 100 mL of distilled water and heated with frequent agitation. The mixture was boiled for a minute to ensure complete dissolution of the medium (Tille & Forbes, 2014). Then the medium was autoclaved at 15 lb. pressure and 121℃ for 15 minutes and cooled to room temperature. Thus prepared Mueller Hinton Agar was poured into sterile Petri dishes in the ratio of 10 mL per plate on a level, horizontal surface to give uniform depth (Wang *et al.,* 2023*)* and allowed to cool to room temperature.

Potato Dextrose Agar was used for the cultivation of fungi. It was a general-purpose medium for yeasts and molds that could be supplemented with acid or antibiotics to inhibit bacterial growth. Fungi were cultivated on potato dextrose agar.

It was an all-purpose medium for molds and yeasts that could be enhanced with antibiotics or acid to prevent the growth of bacteria. Agar is added as the solidifying agent. 3.9g of commercial PDA powder was added to 100 mL of distilled water and boiled while mixing to dissolve. To sterilize the media, they were autoclaved for 15 minutes at 121°C and 15 lb of pressure. It was then chilled to roughly 50°C before being transferred onto 10 mL Petri dishes. For solidification, the plates were let to stand at room temperature.

The primary culture plates used to create it were described above, along with 5 µL of Kanamycin A, a common antibiotic was employed. Aseptically, the isolated bacterial colony was sub-cultured on nutritional agar plates using the inoculating loop, and it was then incubated for 12 hours at 37°C.

Results and Discussion

Phytochemical Analysis

To find the phytoconstituents, a phytochemical screening of Calotropis procera leaf and stem extract was carried out in various organic solvents. The phytochemical findings are reported in Tables 1 and 2, referencing Shaikh and Patil (2020).

Table 1

Phytochemicals Present in the Calotropis procera Leaf Extract in four Different Solvents: benzene, hexane, methanol, and water

S.N.	Phytochemicals.	Benzene Extract	Hexane Extract	Methanol Extract	Aqueous Extract
1.	Alkaloids	-	-	+++	+++
2.	Flavonoids	+	-	+	-
3.	Reducing Sugar	+	-	+	+
4.	Carbohydrates	+	+	-	+
5.	Tannins	+++	-	+++	+
6.	Quinines	++	+	++	-
7.	Saponins	-	-	++	++
8.	Glycosides	-	++	-	+
9.	Cardiac Glycoside	+	+	+	+
10.	Phenolic Compounds,	+	++	-	++
11.	Proteins and Amino Acids	-	+	-	-
12.	Anthraquinone	-	-	-	-
13.	Coumarin	+	+	+	+
14.	Gum and Mucilage	+	+	+	+
15.	Fixed Oils and Fats	-	-	-	-
-(Absence), + (presence), ++ (Presence in two test), +++ (Presence in three test)					

Table 2

Phytochemicals Present in the Calotropis Procera Stem Extract in four Different Solvents: hexane, DCM, methanol, and water

S.N.	Phytochemicals	Hexane Extract	DCM Extract	Methanol Extract	Aqueous Extract
1.	Alkaloids	-	++	+++	-
2	Tannins	+++	+++	++	+
3.	Carbohydrates	++	-	+	++
4	Flavonoids	-	+	-	-
5.	Reducing Sugar	-	-	+	-
6.	Cardiac Glycosides	-	-	+	-
7.	Glycosides	+	+	-	-
8.	Protein and Amino Acids	+	-	-	-
9.	Phenolic Compounds	-	+	++	-
10.	Saponins	++	-	-	++
11.	Quinines	-	++	++	-
12.	Anthraquinone	-	-	-	-
13.	Coumarin	+	+	++	+
14.	Gum and Mucilage	+	+	+	+
15.	Fixed Oils and Fats	+	-	-	+
-(Absence), + (presence), ++ (Presence in two test), +++ (Presence in three test)					

Antimicrobial results of methanol extract of plant

Agar Well diffusion methods were used to mount the antibacterial activity of the Calotropis procera plant extract in a methanolic solution against two American Type Culture Collection (ATCC) and a fungus. The zone of inhabitation (ZOI) by various bacteria and fungi was mentioned in Figure 4, and the results are presented in Table 3.

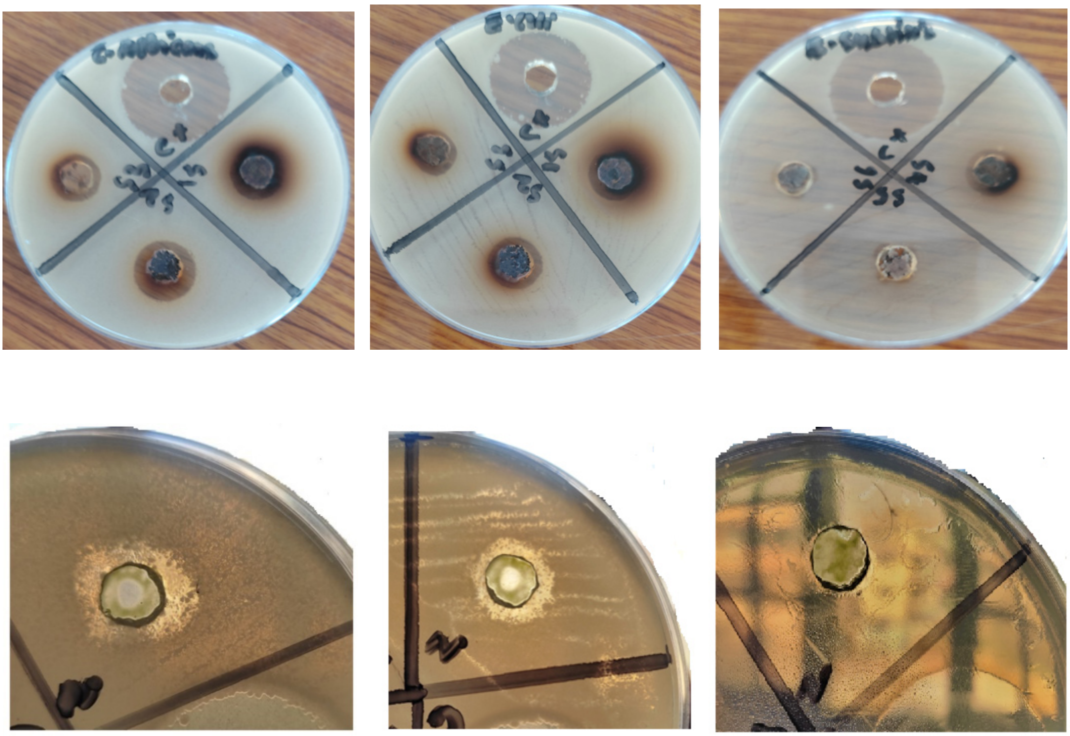
Table 3

Antimicrobial Study of Methanol Extract of C. procera

Microorganisms test organism (ATCC)	Reference culture	Type	Methanolic extract zone of inhibition (mm)	The standard value of zone Kanamycin A (mm)
Candida albicans (Fungus)	ATCC 2091	-	4	10
Bacillus subtilis (Bacteria)	ATCC 6051	Gram-positive	2	10
Escherichia coli (Bacteria)	ATCC 8739	Gram-negative	3	10

Figure 4

Antimicrobial Study against (a) Candida albicans, (b) E. coli, and (c) Bacillus subtilis



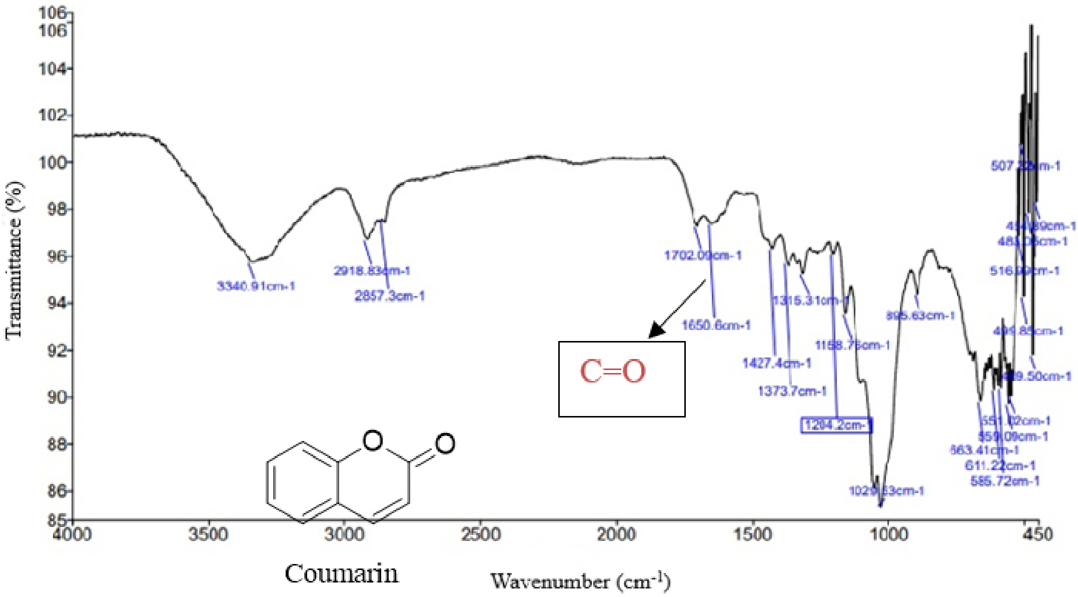
(a) **(b)** **(c)**

Identification of Coumarin

Compared with commercial coumarin, the melting point, 68±2˚C, and stretching vibration due to >C=O functional group present at 1702 cm^{-1} show the identification of coumarin in the extract, as shown in Figure 5. Thiosemicarbazones of heterocyclic compounds and their copper (II) complexes have been found to exhibit significant anticancer potency, so a pure form of isolated coumarin may be used to form its thiosemicarbazones and copper complexes for their test in biological assay (Singh & Yadav, 2021; Singh et al., 2022).

Figure 5

FTIR Spectra of Coumarin



Conclusion

The screening of *Calotropis procera* stem and leaf extracts for phytochemicals revealed the presence of phenolic compounds, alkaloids, carbohydrates, reducing sugar, flavonoids, quinines, coumarin, gum and mucilage, tannins, and saponins. The antimicrobial studies of the methanol extract using the ATCC technique revealed antimicrobial activity hostile to two bacteria, *viz.* gram-positive bacteria *Bacillus subtilis*, which can inhibit 2 mm of diameter, and gram-negative bacteria *Escherichia coli*, which can inhibit 3 mm, and fungi *Candida albicans* can inhibit 4 mm on the concentration 20 g/mL. The extracts exhibited good antimicrobial activities. The organic compound coumarin, isolated using the Soxhlet extraction of chloroform extract, was identified by determining its melting point and FTIR spectral analysis.

The pure form of coumarin can be isolated using column chromatography, and its derivatives, such as acetyl coumarin, acetyl coumarin thiosemicarbazones, and their metal complexes can be synthesized for their biological studies like antimicrobial, anticancer, etc.

Abbreviations

ATCC (American Type Culture Collection), DCM (Dichloromethane), g/L (grams per liter), lb (pound), VF (Volumetric flask)

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