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Ethiopian Journal of Teacher Education and Leadership

Volume 3 Number 1

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Table of Contents

Articles	Pages
Editorial	i
<i>Teachers’ Understanding of Learning Styles: Perspectives on Curriculum Adaptation in Secondary Schools of Mareko Special Woreda, Central Ethiopia Regional State</i> Ethiopia Ergogo Gunjebo and Ambissa Kenea Boru	1 – 25
<i>Primary and Middle School Teachers’ Perception about their Pedagogical Competency and Associated School Factors in Bench-Sheko, and West Omo Zones: Implications for Teacher Education</i> Matheas Shemelis and Miressa Yadessa	27 – 46
<i>Learning Theories and Instructional Designs: Developing a Multimodal Quality and Student Support Service for Online Learning</i> Fetene Regassa Melka	47 – 73
<i>Teacher Attrition and Motivation in Ethiopia: Prevalence, Associated Factors and Influences</i> Tamirat Tadesse	75 – 100
<i>Exploring the Surrounding Community’s View of Addis Ababa University: A Community Service Perspective</i> Eyob Asfaw Gemechu	101 – 117

Editorial

Teacher shortages have become a pressing concern for policymakers at national, regional and institutional levels. According to UNESCO (2024), there will be an urgent need for 44 million primary and secondary school teachers worldwide by 2030. This reflects the need to fill new gaps (e.g. due to an expanding school population) and to replace over half of the existing teachers who are set to leave the profession. However, the geographic distribution of this shortage is uneven. For example, Sub-Saharan Africa alone requires 15 million new teachers by 2030 — over a third of the global requirement. The 2024 UNESCO report confirmed that there had been significant progress in teacher recruitment globally, with the number of teachers required reducing from 69 million in 2016 to 44 million in 2022. However, this is not the case in Sub-Saharan Africa, where progress is slow due to a rapidly expanding school-age population and a lack of resources. Furthermore, young people's growing disinterest in teaching as a career is a factor contributing to Sub-Saharan Africa's inability to address the teacher shortage as effectively as other regions of the globe. Symeonidis and colleagues (2025) state that this issue has prompted a re-evaluation of traditional teacher education pathways, as evidenced by policy measures such as shorter teacher education programmes and increased efforts to recruit professionals from other fields into the teaching workforce. These non-traditional programmes are often referred to as alternative teacher education or alternative certification programmes (Suell & Piotrowski, 2007). The authors argue that alternative teacher certification programmes vary widely. However, based on years of professional experience, they have identified the following variables for such programmes to be effective: careful selection, on-the-job training, coaching, and accountability. The authors emphasise that alternative certification in no way compromises the quality of teachers.

Ethiopia is no stranger to teacher shortages. For example, in the 1960s, students who were out for university services took up teaching in schools. In the 1970s, two types of teachers were introduced to address the shortage of teachers at school level. The first were 'direct' teachers, who were hired by the government and paid from the formal treasury. The other type was the 'community-hired teachers,' who were paid through community contributions and were temporary employees whose contract would be terminated upon the arrival of qualified teachers. The 'direct teachers' received an orientation of a few days' duration before starting to teach, after which they began the summer training scheme to qualify for the level at which they were teaching. In contrast, community-hired teachers received no training or induction, nor did they have any prospect of receiving formal training. However, they could use their credentials to compete for teaching-related jobs when the opportunity arose. Ethiopia has also experimented with alternative certification approaches, including shortening the training period and training people qualified in related fields who wish to become teachers. An example of this is the Postgraduate Diploma in Teaching programme, though its implementation was reportedly ineffective, leading the Ministry to revert to the traditional approach.

The Ethiopian Ministry of Education (MoE, 2021) conducted an analysis of teacher demand and supply, focusing on pre-primary, primary, and secondary education. The analysis revealed that demand for school teachers was increasing faster than the supply of teachers. This is expected to result in significant supply-demand gaps, with a total projected shortage of 300,000 qualified teachers by 2030, of which 59% will be in pre-primary education, 28% in primary education, and

13% in secondary education. The study assumed that teacher training institutes would continue to supply teachers at full capacity. However, recent reports indicate that this may not be possible, as fewer students are choosing teaching as a career. This issue has sparked intense discussion among academics, policymakers and in the mainstream media in recent years. In an effort to address the problem, the Ministry of Education (MoE) has devised an alternative teacher education programme, whereby graduates of related disciplines are trained to become school teachers using shorter training programmes that focus on education and pedagogy.

In light of the above-mentioned global experience, the government's efforts to introduce such an alternative could be considered an acceptable intervention. However, care should be taken to avoid the pitfalls of previous reform initiatives, such as abandoning one initiative in favour of another without giving much thought to how the strengths of previous initiatives can be integrated. Kenea (2021) refers to this as a continued swinging of focus in teacher education reform initiatives.

Although teacher shortages are the main reason for introducing alternative teacher education programmes, quality should always be a consideration. Clear expectations should be set for the training process and the final competence of programme graduates. Personnel capacity development and provision of resources for the programme should precede its large-scale implementation.

Against this backdrop, the current issue of EJTEL presents five articles, which are summarised briefly in the following paragraphs.

In his article, 'Teacher Attrition and Motivation in Ethiopia', Tadesse examined the intricate interplay between teacher attrition and motivation, emphasising their significant implications for educational systems, student achievement, and community well-being. The author argues that attrition among skilled educators, caused by personal factors, institutional challenges and interrelated variables, disrupts learning environments and erodes school culture. Analysis of data obtained from both primary and secondary sources revealed that schools that foster supportive, secure and well-compensated workplaces are more successful in attracting and retaining high-performing teachers. Professional development, well-being initiatives, and fair evaluation systems also enhance retention.

In their article, 'Teachers' Understanding of Learning Styles', Gunjebo and Boru examined how teachers understand learning styles, the impact of this understanding on curriculum adaptation, and its effect on student engagement in secondary schools. The paper focused on how teachers perceive and identify diverse learning styles, the strategies they use to adapt the curriculum accordingly, and the effects of these adaptations on student participation and motivation. Using questionnaires and semi-structured interviews, it was found that, although teachers are moderately to highly familiar with learning styles, their understanding often lacks depth and relies mainly on observational methods rather than systematic assessment.

In their article, Shemelis and Yadessa explore the perceptions of primary and middle school teachers regarding their pedagogical competency, as well as the associated school factors that impact teacher education. The article argues that a teacher's belief in their capabilities is not just confidence, but a conviction that they can positively impact student learning and overcome classroom challenges. The study found that the majority of teachers do not have a positive perception of their competence. The paper proposes intervention strategies to address this issue.

Melka's article deals with 'learning theories and instructional designs.' It explores how prominent learning theories can be used to design online learning environments that prioritise quality and provide effective student support. A bibliometric integrative review method was employed to study the literature on the subject. The review and analysis yielded two key findings. Firstly, the underlying educational philosophy and the chosen learning theory have a significant influence on the design of online learning environments. Secondly, existing online learning approaches often lack strong integration of learning theories, particularly with regard to assessment, student support strategies, and quality learning in collaborative activities. Drawing on these insights, the analysis proposes a model for instructional design in online learning that emphasises a multimodal, integrative approach to quality and student support services.

The final article, written by Gemechu, is titled 'Exploring the Surrounding Community's View of Addis Ababa University' and follows the community service perspective. The study assumes that stakeholders are connected to the university's services and outputs, either directly or indirectly. The results indicate that the surrounding community has a positive view of the university. It also found that the community's view is intertwined with students' economic interactions with the local community and civic life, ranging from involvement in ordinary social life to economic interactions.

The articles in the current issue of EJTEL generally deal with essential topics closely related to teacher education and institutional leadership. We would like to take this opportunity to urge policymakers, members of the education community and practitioners in the education sector to pay special attention to the recommendations set out in these articles. We also encourage teacher education researchers to consider alternative approaches to teacher education in their future research.

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Teachers' Understanding of Learning Styles: Perspectives on Curriculum Adaptation in Secondary Schools of Mareko Special Woreda, Central Ethiopia Regional State

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Abstract:

This study examines teachers' understanding of learning styles and their impact on curriculum adaptation and student engagement in secondary schools of Mareko Special Woreda, Central Ethiopia Regional State. The primary purpose is to assess how teachers perceive and identify diverse learning styles, the strategies they employ to adapt curricula accordingly, and the perceived effects of these adaptations on student participation and motivation. Employing a convergent mixed methods design, data were collected through questionnaires and semi-structured interviews. The study targeted all Mathematics and Natural Sciences teachers (a total of 52) across three secondary schools, using census sampling. Purposive sampling was employed to select six teachers for in-depth interviews. Quantitative data were analyzed using descriptive statistics, including frequency and percentage whereas qualitative data were analysed using thematic analysis. Major findings reveal that although teachers possess a moderate to high familiarity with learning styles, their understanding often lacks depth, relying mainly on observational methods rather than systematic assessment. Group work and multimedia resources are the most common curriculum adaptation strategies, but resource limitations and insufficient training hinder broader implementation. Teachers generally perceive curriculum adaptation as significantly enhancing student engagement; however, their capacity to fully realize these benefits is constrained by limited professional development and resource shortages. The study underscores the need for targeted professional training and resource provision to improve teachers' ability for effective curriculum adaptation aligned with diverse learning styles. The study recommends workshops, resource allocation, and the establishment of peer support systems to foster the accommodation of students with diverse learning styles.

Keywords: Learning styles, Curriculum adaptation, Student engagement, Secondary school, Teaching strategies

Introduction

Background of Study

Curriculum adaptation in secondary education has gained increasing importance in Ethiopia amid the nation's commitment to providing inclusive and relevant education that caters to the

diversity of learners' needs. Policy statements explicitly advocate for the adaptation of curricula to meet regional diversities and learners' specific needs, supporting inclusive education objectives (MoE, 2020). This implies that teachers are expected to adapt the curriculum to meet the needs of learners, emphasizing the engagement of learners in the teaching-learning.

Recent studies appear to support that teachers are increasingly expected to adapt their curriculum and tailor resources to suit students' readiness and learning styles. (Geel et al., 2023; Inayat & Ali, 2020; Tomlinson, 2014). Likewise, studies from several educational settings propose that matching teaching strategies with learning styles (such as auditory, visual, kinesthetic, or other) is important in maximizing learning, high engagement with self-regulated learning strategies, and academic achievement. (Dunn & Burke, 2006; Geche, 2009). These findings suggest that adapting curriculum and teaching strategies to align with students' learning styles is crucial for their meaningful engagement and maximizing learning outcomes.

Since learning styles are thought to affect how pupils process and retain knowledge, they have long been seen as an important component of educational theory and practice. Advocates contend that adapting instruction to each student's unique learning styles, including auditory, visual, and kinesthetic styles, can improve academic performance and engagement (Pashler et al., 2008). To provide more individualized and successful learning experiences that can increase motivation and enhance results, educators have integrated learning styles into pedagogical practices (Dunn & Griggs, 2014). Nevertheless, there has been a much criticism directed at the idea of learning styles. The absence of empirical evidence demonstrating the efficacy of teaching pupils in accordance with their preferred approaches is one of the primary problems. According to meta-analyses, learning results are not considerably impacted by adapting teaching strategies to students' preferred learning styles (Pashler et al., 2008). Critics further contend that the classification may result in fixed mindset beliefs that impede students' growth and oversimplify intricate cognitive processes (Dunn & Griggs, 2014). Additionally, placing too much emphasis on learning styles runs the risk of downplaying the significance of diverse teaching strategies that are advantageous to all students. Even though the idea of learning styles has impacted educational practices, new research suggests a more evidence-based strategy that prioritizes a variety of teaching techniques over strict adherence to learning type ideas.

Studies conducted across the African continent on curriculum adaptations indicated that, although teachers are familiar with the concept of adapting curriculum or modifying instructional strategies, they are not implementing it effectively to meet the diverse needs of the learners due to several hindrances (Ako et al., 2019; Nguvava & Meremo, 2021). This suggests that, despite possessing knowledge of instructional methods modifications, teachers do not effectively execute their lessons in ways to meet the diverse needs of the learners; instead, they predominantly rely on one-size-fits-all, traditional teaching strategies. Moreover, local studies conducted by Merawi (2020) and Tadesse (2018) revealed that, despite teachers exhibiting varying levels of understanding of the concept, they face significant limitations in implementing it effectively. Consequently, many teachers continue to teach diverse learners within the same classroom using a 'one-size-fits-all' approach. Likewise, Amare & Dagnew (2020) and Keski-

Mäenpää (2018) researched the implementation of active learning strategies and reported that, despite teachers having positive perceptions of these strategies, their actual practices of active learning were low. Furthermore, historically, teaching and learning in Ethiopian secondary school culture, as well as teachers' thinking, have been characterized largely by a traditional, teacher-centered approach, which often ignores the diverse learning needs of students. (Geleta et al., 2022; Keski-Mäenpää, 2018; Roseman, 2018). This suggests that pedagogical practices in Ethiopian classrooms do not adequately address the diverse learning needs of students

Likewise, another local study was conducted in the Gedeo Zone and Halaba by Ginja (2016) explained that the implementation of active learning in various stages of the teaching process at primary schools was not yet being fully practiced, but is likely promising. The use of active learning, such as group work, pair work, and open-ended questions, is often overlooked in teaching processes. In the context of Mareko Special Woreda, characterized by its multicultural population, diverse backgrounds, and learning styles, strategic geographic location, these challenges and opportunities are particularly salient. This context provides an ideal setting to explore teachers' understanding of learning styles and curriculum adaptation within a relevant and manageable scope, particularly in subjects deemed foundational by the Ethiopian Ministry of Education, namely Mathematics and Natural Sciences (Physics, Chemistry, Biology, and ICT), which are critical for advancing science and technology in the country (MoE, 2020).

Statement of the Problem

Most studies conducted in the Ethiopian context observed the approaches of teaching-learning as teacher-centered or student-centered without adequately accounting for teachers' understanding of diverse learning styles, or how curriculum adaptation is employed as a response to these styles (, Allen, 2022; Keski-Mäenpää, 2018 ; Roseman, 2018). While some national and international studies have observed the understanding of learning styles and teaching strategies (Geleta et al., 2022; Cardino & Ortega, 2020), they have highlighted the mismatch between the learning styles of students and the teaching strategies employed.

Notably, there is a lack of research focusing particularly on the teachers' understanding of learning styles, the curriculum adaptation strategies they use to meet the students' learning styles in the country, and how these are integrated into the recently reformed curricula. The complexity of subjects like Mathematics and Natural Sciences necessitates curriculum adaptations, which heavily rely on teachers' understanding of students' learning styles and their ability to adapt curricula accordingly (MoE, 2020). Secondary schools serve as a critical transition phase where curriculum adaptation significantly impacts student performance and future educational pathways (Merawi, 2020)

Several contextual challenges further complicate curriculum adaptation. Studies in zones such as the Gedeo Zone and Halaba by Ginja (2016) identified obstacles, including large class size, limited time, bulky content to be covered, and a lack of materials. Similarly, research in the Gurage zone's primary schools by Derese et al. (2025) recognized factors like inadequate curriculum support for friendly teaching, curriculum that allows for discussion, and practical

curriculum, which affect student performance, especially among diverse and multicultural student populations like those in Mareko Special Woreda, Central Ethiopia. Additional challenges affecting the effective implementation of active learning strategies in response to diverse students' learning needs included teachers' perception of adapting instruction as time-consuming, limited resources, lack of knowledge, workload, lack of commitment, a high student-teacher ratio, and inadequate leadership support (Amare & Dagnew, 2020 ; Keski-Mäenpää, 2018; Tadesse, 2018). Therefore, this study was initiated to explore strategies that inform curriculum adaptation based on learners' learning styles during the implementation of newly developed curricula in secondary schools of Mareko Special Woreda. The focus is on assessing teachers' understanding of students' learning styles, curriculum adaptation strategies employed, and their impact on students' engagement in secondary schools of *Mareko special woreda*.

Research Questions

- a) To what extent do teachers perceive and recognize diverse learners' learning styles?
- b) What curriculum adaptation strategies are employed by teachers?
- c) What are the teachers' perceived impacts of curriculum adaptation on student engagement?
- d) What are the perceived challenges that hinder teachers' effective curriculum adaptation practices?

Significance of the Study

The study provides a foundational understanding that can inform targeted professional development programs to enhance teachers' awareness and responsiveness to individual learner needs. This, in turn, supports the creation of more inclusive classroom environments where instruction is tailored to diverse learning preferences. These insights can influence policy decisions to prioritize adaptive teaching approaches, ultimately fostering higher student motivation, participation, and academic achievement.

Collectively, the study's findings will serve as a vital resource for policymakers, curriculum designers, and teachers by providing evidence-based recommendations for curriculum development and instructional strategies that accommodate diverse learning styles. Moreover, the study establishes a scholarly foundation for further research into effective curriculum adaptation practices in secondary education, particularly in mathematics and natural sciences.

Delimitation of the Study

The study examines teachers' understanding of learning styles, their curriculum adaptation strategies, and the perceived impact on student engagement. As the key aspect of curriculum adaptation, the study delimits its scope to process adaptation rather than exploring other areas such as content, product, and assessment adaptation in curriculum delivery. The research targets Mathematics and Natural Sciences teachers, as these subjects are considered foundational for Ethiopia's national development goals in science and technology. The data were collected from

teachers who actively teach these subjects during the academic year, and questionnaires and interviews were used as data-gathering instruments. Geographically, the scope of this study was confined to three available public secondary schools within Mareko Special Woreda.

Definition of Basic Terms

Learning Styles:- Learning styles are ways in which each learner begins to concentrate on, process, absorb, and retain new and difficult information (Dunn & Burke, 2006).

Curriculum Adaptations: - Curriculum adaptations refer to the modification of instructional methods, strategies, or processes to accommodate the diverse learning styles of students, ensuring meaningful access to the curriculum (Tomlinson, 2014).

Teaching strategies: -Teaching strategies refer to the various methods that teachers use to facilitate learning and engage students. Different teaching styles can influence how effectively students grasp concepts, develop skills, and get motivated (MoE,2020).

Student engagement:- Ginting (2021) defined that student engagement is an active participation in a variety of academic, co-curricular, or school-related activities, as well as a dedication to achieving learning objectives.

Review of Related Literature

Conceptual Framework

Understanding Learning Styles

Learning styles refer to the preferred ways in which individuals perceive, process, and retain information. According to Kharb et al. (2013 and İlçin et al. (2016) learning style is the setting under which a person begins to concentrate on, absorb, process, and retain new information. These styles encompass a range of cognitive, emotional, and environmental factors that influence how learners interact with material and how they best absorb knowledge (Tatarinceva, 2012) The concept suggests that individuals have distinct preferences for receiving information, which can significantly affect their learning experiences and outcomes.

Common models of learning styles include the VARK Model, categorizing learners into four types as visual, auditory, reading/writing, and kinesthetic modalities (Dunn & Burke, 2006). This implies that learning styles are individualized approaches, which can vary significantly from one person to another. Thus, understanding learning styles is vital for teachers as it enables them to create more effective and personalized instructional strategies, thereby enhancing student engagement and achievement (Peace et al., 2024). This suggests that recognizing and accommodating these diverse styles can lead to improved instructional outcomes and a more inclusive learning environment.

Learning styles significantly influence curriculum adaptation by shaping instructional strategies to meet diverse learner preferences. Recognizing that students absorb and process information differently, visual, auditory, kinesthetic, or reading/writing, teachers can modify curricula to

enhance engagement and comprehension. For instance, tailoring activities to accommodate these styles can improve motivation and academic outcomes (Dunn & Griggs, 2014). Research indicates that curriculum adaptation that considers learning styles fosters inclusive education and promotes equal learning opportunities (Dunn & Burke, 2006). However, some scholars argue that overemphasis on learning styles may lack empirical support for improving learning outcomes (Pashler et al., 2008). Despite this debate, integrating awareness of learning preferences remains a valuable component of curriculum development, aiming to personalize learning experiences and optimize student success.

Curriculum Adaptation Strategies

Curriculum adaptation is essential to ensure that educational programs effectively meet the diverse needs of learners. According to Allen (2022), while the curriculum encompasses all learning experiences designed to achieve specific educational objectives, it is essential to acknowledge that the appropriateness of these experiences may vary according to contextual factors. Regarding the factors necessitating curriculum adaptation, Andini et al. (2020) identified aspects such as school and classroom context, student characteristics, needs and learning styles, and teachers' professional competence and characteristics. This highlights the importance of personalized and context-aware education, emphasizing the need for ongoing assessment and interaction among students, teachers, and the broader educational framework.

Since the scope of this study is delimited to process adaptation, particular emphasis was placed on strategies such as tailored instruction, flexible teaching methods, and the incorporation of multiple modalities. Process adaptation involves utilizing a variety of teaching methods, such as direct instruction, cooperative learning, and inquiry-based learning, to present information in ways that align with diverse learning styles. Grouping students based on their learning preferences for specific activities, allowing them to collaborate with peers who share similar styles (Peace et al., 2024; Alabi, 2024).

Understanding the different learning styles further informs these instructional strategies. Agustrianita et al. (2019); Peace et al. (2024) categorize learners into four types: visual, auditory, reading/writing, and kinesthetic learners, each benefiting from distinct approaches. Visual learners prefer images, graphics, posters, and illustrative texts and diagrams. Auditory Learners benefit from listening, debates, and discussions. Reading/Writing learners favor text-based activities, including reading and taking notes. Kinesthetic Learners learn best through hands-on experiences and movement-based activities. To effectively address these diverse styles, curriculum adaptation strategies can be employed, intentionally incorporating strategic diversity in the instructional practices to support all learners effectively.

Student Engagement

Engagement can be seen in various terms, such as student participation, academic participation, student involvement, academic involvement, involvement in school assignments, and involvement (Ali & Hassan, 2018). Student engagement is a multifaceted construct that embodies the degree of attention, curiosity, interest, optimism, and passion that students exhibit

towards their learning processes (Abbagidi, 2022). Moreover, research identified that student engagement is multidimensional, comprising behavioral, emotional, and cognitive components. Behavioral engagement includes students observing community norms and participating in activities. Emotional engagement involves students' feelings of interest, boredom, happiness, sadness, and anxiety. Cognitive engagement is closely related to motivation and refers to the involvement of students' desire and ability to engage in a variety of strategies to self-direct learning (Inayat & Ali, 2020).

Building on this understanding, teachers play a vital role in influencing student engagement by creating opportunities through planned strategies and applying effective learning theory. Therefore, teacher support is important in influencing the engagement of students in academics, which in turn contributes to the success of students in school (Ali & Hassan, 2018). This suggests that when teachers actively implement engaging instructional methods, they can better address the diverse needs of their students and create a more inclusive and motivating learning environment.

However, despite the recognized importance of engagement, challenges in classroom student engagement in schools are multifaceted and can significantly impact learning outcomes. Common issues include diverse student backgrounds and learning styles, which make it difficult to implement active learning strategies (Perry, 2022). Additionally, lack of motivation and behavioral problems, and limited resources further complicate efforts to maintain student attention and involvement (Merawi, 2020). Consequently, addressing these challenges requires innovative instructional methods, personalized learning approaches, and fostering a positive classroom environment to enhance engagement and promote academic success (Raza, 2018).

Impacts of Curriculum Adaptation on Students' Engagement

Teachers' understandings of students' diverse learning styles help them design teaching methods that meet students' diverse learning styles (Agustrianita et al., 2019). Another study conducted by Inayat & Ali (2020) appears to show that it is important to realize that teaching style is central to student engagement; hence, it is vital to have learning opportunities in classrooms by adapting their teaching styles to their students' learning styles, which promotes active engagement and collaborative relationships (Inayat & Ali, 2020). This implies that teachers' effective understanding of learners' learning styles and strategies to tailor their teaching methods to students' learning styles leads to higher levels of student engagement.

Determining learners' learning styles will be a great help to teachers in designing and implementing a particular strategy that suits them (Cardino & Ortega, 2020). Regarding the way to determine learners' learning styles, Agustrianita et al. (2019) suggested that teachers conduct a survey or informal assessment to categorize their students' learning styles. Then, based on the data, they can decide what learning style is the most dominant in a particular class and how many smallest styles are found in the class. In other words, they can provide support for students with similar learning styles, and this will create a more student-centered and comfortable teaching environment. Thus, by understanding the different learning styles, teachers can adapt

teaching strategies to the particularities of the learners that suit their learning styles (Pascu, 2024). Consequently, based on the premise that all learners have the potential to learn effectively if their learning styles are considered, students' motivation and interest in learning increase. Then, students who are interested in learning are more likely to devote time and effort to achieving their goals. As a result, involvement is viewed as a motivator in achieving academic success (Ginting, 2021).

The relationship between learning styles, academic performance, and adequacy of instructional materials has received significant attention in educational research (Cardino & Ortega, 2020). By understanding and considering students' learning styles, instructional materials, and teaching strategies can be adapted to better meet individual learners' needs (Oliveira et al., 2023). This creates a more personalized and engaging learning environment, providing students with greater academic success (Andini et al., 2020). Therefore, schools must create enabling experiences so that students with diverse learning styles experience success in learning and achievement up to their potential. This is only possible if the teachers respond to the specific needs of learners in a classroom through curriculum adaptations (Allen, 2022). Without modifications, some students in the classrooms would never be challenged to perform up to their potential, while others may not be able to experience success (Hatami, 2013). This means that to meet diversity, there is a need for adaptations of the regular curriculum, which may involve organizational modifications in the goals and contents, in the methodologies, the didactical organization, the temporality, and the evaluation philosophy and strategies.

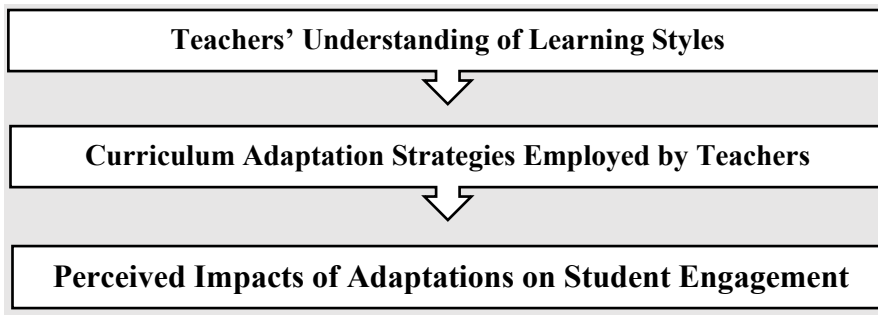


Figure 1. *Visual representations of the interplay among the variables*

Theoretical Framework

Constructivist Learning Theory

Constructivist Learning Theory offers a comprehensive foundation for examining teachers' understanding of learning styles and their influence on curriculum adaptation. Rooted in the philosophy that knowledge is actively constructed by learners through experience and social interaction (Giannoukos, 2024; Harasim, 2018), constructivism emphasizes learner-centered, active, and collaborative learning processes. This perspective aligns well with the research focus, as it underscores the importance of teachers recognizing and accommodating diverse learning styles to foster meaningful and personalized educational experiences.

According to Efgivia et al. (2021) and Giannoukos (2024), the principles of constructivism applied in teaching and learning are: a) Learners build their knowledge by experiencing and engaging with their surroundings. b) Learning involves active and creative processes, not just passively receiving information. c) Learners should be prompted to inquire, associate ideas, and contemplate their learning methods. d) Learning is a collective and cooperative process because learners develop understanding through collaboration. e) Teachers should facilitate by steering learners through learning and supplying chances to explore and uncover. f) Learning should relate to learners' experiences and interests. g) Seek and assess students' opinions. h) Adjusting the curriculum to respond to student perceptions. From this, it can be deduced that constructivism prioritizes active, collaborative, and relevant learning experiences that are responsive to students' needs and perspectives.

Chand (2023) identified four basic characteristics of constructivist learning environments, which must be considered when implementing constructivist instructional strategies: 1) Knowledge will be shared between teachers and students. 2) Teachers and students will share authority. 3) The teacher's role is one of a facilitator or guide. 4) Learning groups will consist of small numbers of heterogeneous students (Olusegun, 2015). Thus, constructivist learning environments prioritize meaningful interactions in the learning process, aiming to prepare students for engaging with complex problems and diverse perspectives beyond the classroom. Constructivism is one of the cornerstones of contextual teaching and learning (CTL) approaches. Constructivists believe that learning is shaped by the context in which an idea is taught, as well as by students' beliefs and attitudes (Harasim, 2018). There are five important elements in a constructivist learning environment, namely: (a) paying attention to and utilizing students' prior knowledge, (b) meaningful learning experiences, (c) a conducive social environment, (d) encouragement so that students can be independent, and (e) there is an effort to introduce students to the scientific world (Efgivia et al., 2021). Integrating these constructivist elements with an awareness of students' learning styles enables teachers to create more personalized and effective learning environments, foster deeper understanding, and lifelong learning skills.

Constraints in the application of learning according to constructivism are: it is difficult to change the beliefs and habits of teachers, teachers are less interested and have difficulty managing constructivism-based learning activities, the teacher's assumption that the use of new methods or approaches in learning will take considerable time, an evaluation system that still emphasizes the final grade, the magnitude of the teacher's teaching burden, students are accustomed to waiting for information from the teacher, and the existence of a negative culture in the student environment (Harasim, 2018). This shows that the adoption of constructivist principles in education faces significant challenges that can impede the effectiveness of this learning approach.

Materials and Methods

Research Method

To achieve the purpose of this study, a mixed-methods approach was employed. A convergent parallel design was used to examine the research problem by integrating both quantitative and qualitative data (Creswell, 2022). Thus, this design enabled the collection of both quantitative and qualitative data simultaneously using both questionnaires and interviews, analyzed them separately, and then integrated the findings in the discussion section (Johnson & Christensen, 2020). This process helps to validate findings through triangulation, enhancing the overall credibility and robustness of the study.

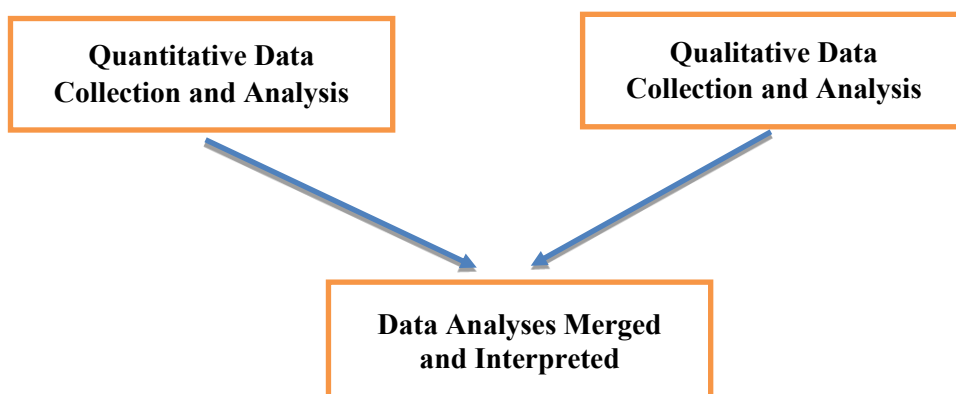


Figure 2: *Process in Convergent parallel Mixed Methods Design (adapted from Creswell, 2022)*

Sample and Sampling Technique

To collect data for this study, the researchers targeted teachers from the Mathematics and Natural Science stream (Mathematics, Physics, Chemistry, Biology, and ICT) within Mareko Special Woreda as respondents. A total of 52 Mathematics and Natural Science stream teachers who had been teaching at the three available government secondary schools in Special Woreda were selected as study participants. Given the manageable size of the teacher population, a census sampling technique was employed for the quantitative phase, whereby all targeted stream teachers in the available secondary schools were included. This approach ensures comprehensive data collection, taking the full range of teachers' perspectives, which enhances the representativeness and strength of the findings for the quantitative analysis.

For the qualitative component, purposive sampling was used to select six teachers (two from each school) for in-depth interviews. The rationale for this targeted selection was to identify participants who could provide rich, detailed insights based on specific criteria, namely, their experience, qualifications, and roles within their respective schools. They participated in both the questionnaire and in-depth interviews to provide a layered understanding of the issues under investigation.

Table 1: The population, Sample, and Sampling Techniques

Subjects	Population	Sample	Sampling Techniques
Secondary Schools	3	3	Census
Mathematics teachers	17	17	Census
Physics teachers	10	10	Census
Chemistry teachers	11	11	Census
Biology teachers	14	14	Census
Total	52	52	Census

Procedures of Data Collection

The collection of the actual data began by contacting the schools' principals in advance. To this end, clear instructions were given to the schools' principals via Zoom Meetings about the study's intention in general and how the questionnaire was to be completed. After a brief discussion with the principals about the objective of the research and the data collection, they made all the necessary arrangements to fill out the questionnaire using Google Forms in their respective schools.

Variables and Measures

- **Understanding Learning Styles:** The extent to which teachers can recognize, understand, and accurately identify students' diverse learning styles, including visual, auditory, kinesthetic, and reading/writing (Agustrianita et al., 2019). This understanding is measured by teachers' self-reported familiarity levels and their ability to accurately classify students' learning styles as evidenced by their responses in questionnaires and interviews (Dunn & Burke, 2006).
- **Curriculum Adaptation Strategies:** The specific methods employed by teachers to align teaching and learning activities with students' diverse learning styles (Allen, 2022). The extent of strategy employment is quantified by teachers' self-reports and observed classroom practices using the frequency and variety of methods used in classroom practice (Peace et al., 2024; Alabi, 2024).
- **Student Engagement:** The active participation, motivation, and behavioral involvement of students during instructional activities, as perceived by teachers (Ali & Hassan, 2018). This is measured through teachers' ratings of student participation levels and interest in learning activities, categorized as high, moderate, or low, based on teachers' observations and responses in questionnaires and interviews (Ginting, 2021).
- **Perceived Impact of Curriculum Adaptation on Student Engagement:** Teachers' subjective assessment of the extent to which curriculum modifications have contributed to increased students' participation and motivation of learners in learning activities (Perry, 2022). This perception is measured through teachers' responses to specific prompts about the effects of curriculum adaptation.

Instruments

As it is convenient to gather vast information from many respondents, both closed-ended and open-ended questionnaires were used to collect data from the teacher respondents. The questionnaire was developed by adapting items from relevant literature, ensuring alignment with the research questions. This approach was chosen to incorporate validated measures while tailoring the instrument to the specific context of the study. The adapted questionnaire was reviewed for content validity and clarity before deployment. Then, it was provided to teacher respondents who had been teaching Mathematics and Natural Science subjects in secondary schools of the Special Woreda.

The researcher employed semi-structured, in-depth interviews as a qualitative data collection method to enrich and contextualize the findings obtained from the questionnaire. The interview guide was developed in English and discussed in Amharic to ensure clarity, cultural appropriateness, and ease of understanding for participants. Before the interviews, participants were briefed on the purpose of the study, confidentiality assurances, and their right to withdraw at any time. The semi-structured format facilitated the capture of rich, nuanced data while maintaining focus on the research questions. The researcher took detailed notes during each interview and, with participants' consent, audio-recorded the sessions to ensure data accuracy and completeness.

Methods of Data Analysis

The information gathered from respondents and informants was analyzed qualitatively and quantitatively to ensure a comprehensive understanding of the data. Quantitative data were analyzed in tabular form using frequency counts and percentage distributions. The scores for each item from the closed-ended questionnaires were systematically organized, statistically compiled, and entered into Excel spreadsheets. Qualitative data derived from semi-structured interviews and open-ended questionnaire items were analyzed through a systematic coding and thematic analysis process. The recordings of the interview discussed in Amharic were transcribed and translated into English, preserving the exact language and expressions used by participants, categorized, and compiled into themes. The results of open-ended questions were summarized and organized into related categories. The results of both qualitatively and quantitatively analyzed data were combined, compared, and interpreted to draw the meanings from the results of the analysis in a combined model.

Validity and Reliability of the Instrument

To gather appropriate data, it was necessary to have reliable and valid data-gathering instruments. Initially, the questionnaire was prepared by the researcher. To enhance content validity, some appropriate and adequate items relevant to the research questions were added to the questionnaire based on the comments provided by my advisor. Then, a pilot test was done

to determine the reliability of the instrument. Questionnaires were administered, and the data were gathered from three secondary schools of *Mareko Special Woreda*. The participants in the pilot study were 9 and 3 from each school. The data was gathered twice from the same respondents within two weeks. Cronbach's alpha was computed using SPSS version 26 for internal consistency and resulted in Cronbach's alpha of .80, which was found to be acceptable as very good. Besides, the pilot revealed that the study questions prepared were seen to be researchable. The procedures tried out to obtain and analyze the data were found to be correct, with a few identified and refined problems.

Ethical Consideration

The researcher had letters of permission from Addis Ababa University for ethical approval, asked for consent from the participants, and did not force anybody to take part in the research. The participants were told that they had the right to withdraw at any time and not to answer or leave the questions they didn't want to ask. The researcher also explained to the participants the purpose of the study and their role in the study. Information obtained from the respondents forms the basis for the research. For the information to be reliable, the respondents should be assured of the confidentiality of the information they provide. Confidentiality was ensured by instructing participants not to include their names on the questionnaire, and all relevant information was communicated to them before data collection

Results

The study investigated teachers' understanding of students' learning styles and their impact on curriculum adaptations and students' engagement. Thus, the study aimed to answer the following research questions: a) How do teachers understand learners' diverse learning styles? b) What curriculum adaptation strategies are employed by teachers? c) What are the teachers' perceived impacts of curriculum adaptation on student engagement? To answer these questions, both quantitative and qualitative data were gathered from teacher respondents and informants. The results of the study are presented as follows, in line with the declarative concepts of each research question.

a) Teachers' Understandings of Students' Learning Styles

This subsection presents both quantitative and qualitative data results to provide a comprehensive understanding of how teachers in Secondary Schools of Mareko Special Woreda, Central Ethiopia, perceive and comprehend learners' diverse learning styles. The integration of data aims to address the core research question: To what extent do teachers perceive and recognize different learners' learning styles?

Quantitative data (Table 4.1) reveals that a substantial proportion of teachers possess at least moderate familiarity with the concept of learning styles, with 57.7% describing themselves as 'moderately familiar' and 40.4% as 'very familiar.' Only a minimum of 1.9% report no familiarity

at all. This suggests that most teachers have at least some awareness of learning styles, which could potentially serve as a foundation for their instructional practices. However, the major category of "moderately familiar" raises questions about the depth of their understanding. The fact that a significant portion of teachers identify as only moderately familiar implies that their conceptual grasp may be superficial, potentially limiting their ability to effectively utilize learning styles in pedagogical strategies.

Table 2: Teachers' familiarity with the concept of learning styles

No	Item	Response Categories	Frequency	Percentage
1	How would you rate your familiarity with the concept of learning styles?	Very familiar	21	40.4
		Moderately familiar	30	57.7
		Not familiar at all	1	1.9
2	What learning styles do you believe are present among your students?	Visual	22	42.3
		Auditory	18	34.6
		Kinesthetic	7	13.5
		Reading/writing	5	9.6

Furthermore, open-ended responses of the questionnaire suggest that while teachers have heard of learning styles, many lack clarity regarding their operationalization. For instance, 19.2% of respondents in their response acknowledged familiarity but expressed uncertainty about how learning styles function in practice, indicating a superficial or incomplete understanding. In addition, 13.5% admitted to having read about learning styles but not fully grasping how to implement them in classroom settings.

The interviews deepen this understanding by highlighting a gap between familiarity and application. Teachers such as T01, T03, T04, and T06 acknowledged the concept of learning styles but expressed limited competence in identifying and addressing them effectively in their teaching practices. For example, T04 commented, "I have come across the concept of learning styles, but I don't feel confident in identifying or using them effectively in the practical application of learning styles."

This sentiment reveals a disconnect between theoretical awareness and practical mastery, which is crucial for translating knowledge into effective teaching practices.

Conversely, some teachers demonstrate a more comprehensive understanding. Teacher T05 articulated a nuanced view, emphasizing the importance of recognizing individual differences in information processing: "Learning styles refer to the different ways students process and understand information. For me, it's about recognizing that each student has a unique approach to learning, whether they prefer visual, auditory, or kinesthetic methods".

This response reflects the teacher's deep understanding of the concept of learners' learning styles, highlighting her belief that learning styles involve recognizing that students have individual preferences and that could inform instructional variation to meet diverse learning styles.

In sum, the findings from both quantitative and qualitative data suggest that in Mareko Special Woreda, teachers possess a foundational awareness of learning styles; however, their in-depth understanding and confidence in applying this knowledge remain limited. Addressing this gap is essential to enable teachers to leverage learning styles effectively, ultimately fostering more inclusive and responsive teaching environments.

As shown in Table 4.1 shows the type of learning styles that have been observed among students in classrooms. Accordingly, 42.3% of teachers identify visual learning as prevalent, while 34.6% recognize auditory learning as common among students. In contrast, 13.5% of teachers believe kinesthetic learning is prevalent, and just 9.6% see reading/writing as significantly present. This suggests a significant portion of teachers believe their students predominantly exhibit visual and auditory learning styles, while kinesthetic and reading/writing learners are less common compared to visual and auditory learners. This distribution suggests that teachers tend to prioritize or recognize certain learning styles more readily than others, possibly reflecting their own teaching experiences or the classroom context.

However, the ways or mechanisms teachers used to identify their students' learning styles were raised by both open-ended questionnaires and interviews. Thus, the open-ended questionnaire responses and insights obtained through interviews reveal a relatively contrasting picture of their understanding. Most (80.7%) teachers in their replies to open-ended questions admitted that they had not employed any specific mechanisms to identify students' learning styles and expressed limited knowledge about how to do so effectively, whereas a few (19.3%) of the teachers skipped answering those open-ended questions. Besides, most interviewed teachers (66.7%) (T01, T02, T04, and T05) expressed uncertainty about how to identify different learning styles or integrate this knowledge into lesson planning. Besides, some informants acknowledged that they relied merely on their experiences or observations rather than systematic methods, and they lacked clarity on the mechanisms or criteria for identifying different learning styles.

The convergence of both types of data points to a scenario where teachers' awareness is limited to easily observable styles, predominantly visual and auditory, with minimal engagement in formal assessment. The absence of systematic mechanisms for diagnosing diverse learning styles reflects a pedagogical gap that could hinder effective curriculum adaptation or instructional modifications. Moreover, it raises concerns about the depth of teachers' understanding, as reliance only on informal observations may lead to misidentification or overlooking of other styles such as kinesthetic and reading/writing.

b) Curriculum Adaptation Strategies Employed by Teachers

This subsection presents the findings that offer a comprehensive understanding of the curriculum adaptation strategies predominantly employed by teachers in the secondary schools of Mareko Special Woreda. The results, derived from both questionnaires and interviews, are integrated to address the central research question: What curriculum adaptation strategies are employed by teachers

Table 4.2 confirms the adaptation strategies employed by teachers in their schools in Mareko Special Woreda. Accordingly, group work was the most frequently used approach, with 48.1% of teachers reporting its use. The use of multimedia resources is also a notable trend, with 26.9% of teachers incorporating multimedia in their instruction to make learning experiences more relevant to diverse learners. Hands-on activities appear to be less commonly adopted, with only 15.4% of teachers implementing such strategies. Lastly, individualized instruction was the least preferred, with just 9.6% of teachers reporting its use.

Table 3: Commonly used curriculum adaptation strategies

Statement	Response Category	Frequency	Percentage
Which strategies do you use to adapt the curriculum?	Group work	25	48.1
	Use of MM resources	14	26.9
	Using hands-on activities	8	15.4
	Individualized instruction	5	9.6

Complementing these numerical data, results of qualitative data from open-ended questionnaires and interviews explained their practical realities and constraints faced by teachers. Many teachers highlighted their predominant reliance on group discussions (pair work and small group discussions) with the gapped lectures, aligned with the quantitative findings. However, teachers also expressed limited awareness of alternative or more sophisticated adaptation strategies, citing a lack of training and professional development in individualized instruction and other innovative approaches. Likewise, some interviewed teachers (T02 and T05) expressed difficulty in listing other strategies beyond those mentioned, citing a lack of awareness or training in alternative methods, other constraints such as limited resources and large class sizes, which hinder their capacity to implement or adopt a broader range of adaptation strategies. Regarding this, one respondent cited: "Managing students' differing levels of participation is challenging; some students hesitate to collaborate, and limited resources make it difficult to form groups for effective implementation." The quote underscores the dual challenges of behavioral management and resource limitations that impede the optimal use of collaboration-based adaptation strategies.

In conclusion, the merged data underscores a scenario where teachers are primarily adapting the curriculum through readily available and familiar methods, notably group work, multimedia use

with gapped lectures. However, their potential to diversify these strategies is hindered by insufficient professional development, resource limitations, and classroom management challenges. Addressing these barriers through targeted training, resource provision, and infrastructural improvements could enable teachers to adopt more effective, varied, and inclusive curriculum adaptation strategies, ultimately enhancing student engagement and learning outcomes in Mareko Special Woreda.

c) *Perceived Impacts of Curriculum Adaptation on Students' Engagement*

The data collected from teachers in the secondary schools of Mareko Special Woreda, Central Ethiopia, offer valuable insights into their perceptions regarding the influence of curriculum adaptation on student engagement. By analyzing data collected through questionnaires and interviews, the study aims to answer the research question: What are the teachers' perceived impacts of curriculum adaptation on student engagement?

Table 4: Teachers' Perceptions of the Effects of Curriculum Adaptation on Student Engagement

No	Statement	Response Category	Frequency	Percentage
1	To what extent do you believe that adapting the curriculum positively impacts student engagement in your classroom?	Very high	17	32.7
		High	24	46.2
		Moderate	11	21.2
		Low	0	0
2	In your experience, how has curriculum adaptation affected student engagement?	Greatly increased	14	26.9
		Somewhat increased	16	30.8
		No change	21	40.4
		Decreased	1	1.9

Table 4.3 presents teachers' perceptions of the effects of curriculum adaptation on student engagement, illustrating a predominantly positive outlook. The majority of respondents (46.2%) of teachers indicated that curriculum adaptation has a "High" impact on engagement, while an additional 32.7% perceived the impact as "Very high." This combined figure of over 79% of respondents reflects a strong consensus among teachers that curriculum adaptation significantly enhances student participation and interest in the classroom. Notably, no respondents regarded the impact as "Low," and only 21.2% perceived it as "Moderate," further underscoring the generally favorable perception of curriculum adaptation's role in fostering engagement. This trend shows that teachers generally view curriculum adaptation favorably, seeing it as a way to boost students' participation and interest. The minimal proportion of teachers indicating a moderate or lower impact suggests limited disbelief about its benefits, further reinforcing the

perceived importance of curriculum flexibility and customization in engaging learners effectively.

Complementing these quantitative findings, open-ended and interview responses revealed that, despite recognizing the positive impacts, teachers face practical challenges in fully realizing these benefits. Notably, gaps in practical skills and resource limitations were frequently cited as barriers to the effective implementation of adapted curricula. These constraints, though not diminishing the perceived value of curriculum adaptation, highlight areas where institutional support and capacity-building are essential to translate positive perceptions into tangible classroom practices.

In summary, the data reflect a predominantly positive perception among teachers regarding curriculum adaptation in enhancing student engagement. While acknowledging existing practical challenges, teachers largely agree that curriculum adaptation is a vital strategy for fostering meaningful student participation. This positive outlook underscores the need for targeted interventions to address resource and skill gaps, thereby maximizing the potential benefits of curriculum adaptation in promoting active student engagement.

The data presented in Table 4.3 reveal valuable insights into the perceived impacts of curriculum adaptation on student engagement from the perspective of teachers' experiences. A combined 57.7% of respondents indicated that curriculum adaptation has either greatly or somewhat increased student engagement, with 26.9% reporting a significant positive effect and 30.8% observing a moderate increase. Conversely, 40.4% of teachers reported no observable change, while a minimal 1.9% perceived a decrease in engagement as a result of curriculum adaptations. This distribution suggests that while a majority of educators perceive curriculum adaptation as beneficial for enhancing student engagement, a substantial proportion perceives no effect, and a very small minority observes a decline.

However, the qualitative insights obtained from open-ended questionnaires illuminate underlying factors influencing these perceptions. Teachers who reported no change or decreased engagement attributed their observations primarily to their limited knowledge and skills in effectively adapting curricula to accommodate diverse learning styles. Similarly, qualitative insights from the interviewed teachers shed light on potential factors underlying successful adaptation of the curriculum to suit learning styles and enhance students' engagement. Specifically, teachers T02, T04, and T05 articulated that their limited knowledge and skills concerning effective curriculum adaptation hindered the realization of potential benefits. For instance, T04 remarked, "Despite my efforts, I feel I lack the strategies to truly engage all students through curriculum adjustment." Furthermore, T02 stated, "Although I am trying to modify the curriculum, I often feel I lack the necessary skills to engage my students effectively. Additionally, a lack of resources, materials, and essential science equipment hinders my ability

to adapt the curriculum to meet students' needs." These statements highlight a critical barrier: teachers' limited capacity and lack of resources to effectively adapt curricula, which consequently impacts student engagement.

On the other hand, the teachers interviewed (T01, T03, and T06) identified that the adaptation of the lessons to accommodate diversified learning styles significantly improves engagement in their classrooms. They added that such adjustments in the curriculum result in an increased involvement in discussions as more students get involved in asking questions, and a sharp increase in interest. This firsthand experience highlights the connection between curriculum adaptation, increased student interest, and the illumination of a previously unexplored area.

Regarding this, one of the Biology teachers (T06) from Udassa Secondary School said:

What I have learned at Udassa Secondary School is that sometimes, the meeting of learning styles can make all the difference in the classroom. Sometimes in my lectures, on adding practical experiments or visual aids, students who would otherwise struggle just hearing information alone suddenly become alive: they start contributing, asking profound questions, and sometimes even working with other students to gain further understanding of concepts. This adaptation has brought a great improvement in their understanding of biology and affection toward the subject, which wasn't quite evident earlier.

These findings confirm that adapting the curriculum to accommodate diverse learning styles enhances students' participation, comprehension, and interest. Teachers' experiences—such as that of T03 from Udassa Secondary School—further demonstrate that employing varied instructional strategies, including practical experiments and visual aids, effectively supports learners who may struggle to keep pace with traditional teaching approaches.

Discussions

The finding of quantitative data indicates that most teachers possess at least moderate familiarity with the concept of learning styles, with 57.7% self-reporting as 'moderately familiar' and 40.4% as 'very familiar' (Table 4.1). This suggests a foundational awareness of teachers on learning styles that align with existing literature emphasizing that awareness of learning styles is a prerequisite for effective, tailored instruction (Oliveira et al., 2023; Dunn & Burke, 2006). However, the dominance of 'moderately familiar' responses indicates that this awareness may often lack depth, potentially constraining teachers' capacity to operationalize learning styles in classroom practice effectively. Furthermore, open-ended responses of the questionnaire suggest that while teachers have heard of learning styles, many lack clarity regarding their operationalization. Regarding the types of learners' learning styles, the findings of quantitative data indicate that visual learning is the most prevalent among secondary schools' students of Mareko Special Woreda, followed by auditory, kinesthetic, and reading/writing styles.

However, the qualitative data complicates this picture, revealing that the majority (80.7%) of respondents in open-ended responses and 66.7% of interviewed teachers admitted to not employing any formal or systematic mechanisms to identify students' learning styles, and expressed uncertainty on how to integrate learning styles into their teaching practices. This discrepancy underscores the limited depth of teachers' understanding, aligning with findings from earlier research indicating that many teachers tend to observe only overt behaviors associated with certain styles, such as visual cues, while neglecting less observable modalities like kinesthetic or reading/writing styles (Oliveira et al., 2023; Allen, 2022). Such reliance on informal assessment methods echoes the literature's assertion that teachers often lack appropriate tools or training for accurate identification, which can lead to misclassification or neglect of diverse learning styles (Dunn & Burke, 2006; Agustrianita et al., 2019).

The findings reveal that teachers in secondary schools in Mareko Special Woreda predominantly employ specific curriculum adaptation strategies, with group work emerging as the most frequently used approach (48.1%), followed multimedia resources (26.9%), hands-on activities (15.4%), and individualized instruction (9.6%) (Table 4.2). These quantitative results are corroborated by qualitative insights, where teachers reported relying mainly on short lectures, small group discussions, and pair work to address diverse learning needs. The prominence of group work aligns with existing literature emphasizing collaborative learning as an effective, inclusive strategy (Inayat & Ali, 2020; Geleta et al., 2022). Teachers reported that group activities facilitate peer learning and cater to different student abilities, though challenges such as resource limitations and student participation issues hinder optimal implementation. Similarly, the use of multimedia resources reflects a trend toward incorporating technology to diversify instructional methods, which has been shown to enhance engagement and accommodate varied learning styles (Giannoukos, 2024; Andini et al., 2020). Hands-on activities and individualized instruction were less frequently employed, likely due to constraints such as limited resources, large class sizes, and insufficient awareness. Moreover, the qualitative data highlighted that many teachers lack awareness or confidence in applying these strategies, consistent with findings by Dunn & Burke (2006), who noted that resource and training deficits impede the adoption of more complex adaptation techniques. Such a view of the authors is supported by Agustrianita et al. (2019) as workshops on individualized instruction and hands-on approaches may better prepare teachers for the curriculum to suit students' diverse learning styles.

The findings of this study reveal a predominantly positive perception among secondary school teachers in Mareko Special Woreda regarding the impact of curriculum adaptation on student engagement. Quantitatively, over 79% of teachers rated the impact as high or very high, indicating a strong consensus that curriculum flexibility enhances students' participation and interest. This positive outlook aligns with the constructivist perspective that individualized, and

contextually relevant curricula foster active participation and motivation (Olusegun, 2015). The positive outlook is further supported by constructivist and multiple intelligences theories, which advocate for learner-centered, personalized instruction responsive to individual learning styles (Giannoukos, 2024). The qualitative responses further underscore that while teachers recognize the positive influence of curriculum adaptation, practical challenges such as limited resources and insufficient skills for effective implementation. However, the gap between positive perceptions and practical application suggests a need for targeted professional development and resource support to bridge skill and resource gaps. Without such support, the full potential of curriculum adaptation to enhance engagement remains unrealized. These barriers echo in the literature, emphasizing the necessity of ongoing professional development and resource support (MoE, 2020; Geel et al., 2023). Moreover, based on the lived experience of teachers, the analysis revealed that teachers predominantly perceive curriculum adaptation as a beneficial strategy for enhancing student engagement, with 57.7% indicating it has either greatly or somewhat increased engagement. This aligns with the theoretical premise that personalized and adapted instruction enhances active participation (Ginting, 2021; Andini et al., 2020). Moreover, from qualitative insights, teachers who reported positive impacts attributed their success in tailoring lessons to diverse learning styles, corroborating the theoretical premise that understanding individual differences fosters deeper engagement (Inayat & Ali, 2020). For instance, teachers who incorporated visual aids and practical experiments observed heightened student participation, validating constructivist principles that active, experiential learning enhances understanding (Giannoukos, 2024).

Conversely, a notable proportion (40.4%) and a minimal share (1.9%) perceived no observable change, and diminished engagement, respectively, citing their limited knowledge, skills, and resources to effectively adapt curricula. This underscores the critical barrier of teachers' professional competence and resource availability, consistent with Efgivia et al. (2021) assertion that curriculum modifications require contextual, tailored approaches, yet without sufficient professional development and resources, teachers may struggle to realize the benefits of curriculum adaptation. and the Ethiopian Ministry of Education's emphasis on ongoing professional development (MoE, 2020).

Conclusion and Recommendations

Conclusion

This study provides a comprehensive understanding of teachers' perceptions, knowledge, and practices regarding students' learning styles, curriculum adaptation strategies, and their perceived impact on student engagement within the context of secondary schools in Mareko Special Woreda, Central Ethiopia. The findings reveal several critical insights that collectively inform both pedagogical practice and policy interventions. Firstly, while most teachers demonstrate at least a moderate level of familiarity with the concept of learning styles,

particularly visual and auditory modalities, the depth of their understanding remains superficial. The discrepancy between awareness and practical application is evident, as a significant majority lack systematic methods for identifying students' diverse learning preferences. This superficial understanding constrains effective curriculum adaptation, potentially limiting the ability to meet individual learning styles and to foster inclusive classroom environments. Secondly, the prevalent reliance on basic and familiar curriculum adaptation strategies, predominantly group work and multimedia-enhanced lectures, reflects teachers' limited repertoire of instructional approaches. Constraints such as resource shortages, large class sizes, and insufficient professional development impede the adoption of more sophisticated and varied strategies like individualized instruction and hands-on activities. This situation underscores the need for targeted capacity-building initiatives and infrastructural support to empower teachers to implement more inclusive and engaging pedagogies. Thirdly, teachers generally perceive curriculum adaptation as having a strongly positive influence on student engagement, aligning with constructivism and multiple intelligences theories that emphasize learner-centered approaches. However, practical challenges, especially limited skills, resources, and institutional support, temper this optimism, resulting in a gap between perceptions and actual classroom practice. Teachers' experiences indicate that without adequate training and resource provision, the potential of curriculum adaptation to enhance active participation and deep learning remains underutilized.

Recommendations

Based on the findings of this study, the following prioritized and actionable recommendations are proposed to enhance teachers' understanding of learning styles, adapt curriculum, and optimize their impact on student engagement:

- Workshops and short-term training sessions focusing on deepening teachers' understanding of learning styles, effective learning styles identification techniques, and practical curriculum adaptation or instructional strategies should be organized by the Mareko Special Woreda Education Office and Secondary Schools (Koshe, Udasu Repie, and Bidara Faka) in the special woreda.
- User-friendly manuals and diagnostic tools, and checklists to support teachers in identifying and utilizing diverse learning styles, had better be offered by the secondary schools and the Education Office of the Special Woreda.
- Allocation of resources by secondary school cluster centers for classroom materials, multimedia equipment, and interventions to facilitate curriculum adaptations and implementation of tailored instructional strategies should be done.

- Schools should establish systems to periodically assess teachers' application of curriculum adaptations based on students' learning styles and their impact on student engagement, providing feedback for continuous improvement.
- Respective departments within the secondary schools in the special woreda should establish teaching communities of practice for sharing successful adaptation strategies, peer mentorship, and ongoing professional dialogue.
- Encourage and support teachers to adopt varied instructional approaches beyond group work and multimedia, including differentiated instruction and experiential learning, through ongoing training and peer collaboration.
- Departments should encourage peer-sharing sessions and collaborative lesson planning that focus on integrating knowledge of learning styles into daily teaching practices, fostering a community of reflective practitioners.

Limitations

Inconsistent internet connectivity hindered some participants from completing online surveys or accessing digital platforms required for data submission. To address this issue, the researcher implemented multiple data collection methods, including offering paper-based questionnaires for participants with unreliable internet access.

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Primary and Middle School Teachers' Perception about their Pedagogical Competency and Associated School Factors in Bench-Sheko, and West Omo Zones: Implications for Teacher Education

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Abstract:

The main purpose of this study was to examine primary and middle school teachers' perception about their pedagogical competency and associated school factors using concurrent QUAN + qual design. Three hundred seventy-four primary school teachers selected through simple random sampling have participated in the study. The finding shows two sets of clusters with a statistically significant difference in pedagogical competency. The first cluster, consisting of n=107 (29%) teachers, perceived they had good pedagogical competency, while teachers in the second cluster n=267 (71%), reported poor pedagogical competency at p<0.01. Lack of capacity building training, working environment, teachers' qualifications, and teachers' training program are factors associated to teachers' pedagogical competency. Finally, the study presented the implications of the findings on teacher education programs with regard to the preparation of teachers, admission to the profession, the quality of the training, and continuous professional development practices.

Keywords: Primary schools, teaching competency, quality education, teachers' training

Introduction

The Education and Training Policy of Ethiopia, launched in 2023, aims to enhance the quality of education at all levels. It recognizes the shortcomings of the previous 1994 policy and its negative impact on student learning. The new policy introduces several changes regarding the structure, language, content, and other aspects of the curriculum in both general and higher education (MoE, 2023a). It views education as a vital tool for addressing long-standing issues, highlighting Ethiopia's understanding of education's role in national development. Consequently, the emphasis on improving educational quality at the policy level is promising.

Additionally, the new policy prioritizes the enhancement of teacher professionalism through various capacity-building initiatives. This underscores the importance of teacher competency in realizing education's potential for nation-building.

Teachers play a crucial role in shaping the future generation through the process of teaching and learning, as people entrust them with this responsibility (Shaughnessy, 1998). However, for this responsibility to be fulfilled, teachers must possess professional competencies and commitment and be empowered to perform their multiple tasks in the classroom, school, and community in a genuinely professional manner. This chain reaction can lead to high-quality student learning in cognitive, affective, and psychomotor domains of human development (Kaldi & Xafakos, 2017). To bring about a positive impact on student learning, teachers must possess the required teaching competencies for their grade level. According to Çayir (2017) competency is more than just knowledge and skills; it involves the ability to meet complex demands by drawing on and mobilizing psychosocial resources, including skills and attitudes, in a particular context. Competency is essential to an educator's pursuit of excellence (Keller-Schneider et al., 2020).

Today's world presents complex challenges that require teachers to possess a wide range of competencies (Breeze & Guinda, 2017). Teaching competency is a result of an effective training process that aspires to contribute to the welfare of a particular teacher's success. Ethiopian Education Development Roadmap (2018) of Ethiopia aims to develop citizens with a humane outlook, countrywide responsibility, and democratic values, possessing the necessary productive, creative, and appreciative capacity to participate fruitfully in development and the utilization of resources and the environment at large. In this sense, a teacher's professional competency is the main agenda to bring about the desired changes on the side of the learners.

Poor-quality teaching has a debilitating and cumulative effect on student outcomes. The effects of quality teaching on educational outcomes are greater than those that arise from students' backgrounds (Floyd et al., 2009). Relying solely on curriculum standards and statewide assessment strategies without paying attention to teacher quality is insufficient to achieve the desired improvements in student outcomes. Evidence suggests that the quality of teacher education and teaching is more strongly related to student achievement than class sizes, overall spending levels, or teacher salaries (Timperley et al., 2007).

The education system's failure to ensure student learning and acquisition of basic skills, such as literacy and numeracy, is a significant contributor to poor attainment and achievement. In particular, the Southwest Peoples Region, where study zones are part is experiencing a shortage of qualified primary and middle school teachers, with only 17% and 69.6% of the target being met in the study area, compared to 50% at middle and 81% at the primary level (MoE, 2023b). This lack of qualified teachers is one of the factors affecting the pedagogical competency of teachers in the study area.

Despite efforts to increase primary school attendance, higher attendance does not necessarily result in high-quality learning outcomes, as evidenced by the findings of the MoE's 2018 study. Primary school graduates often lack the necessary competency, which requires the integration

of knowledge, skills, and essential values. The emphasis on factual knowledge means that a significant percentage of young students fail to grasp basic learning abilities by the end of the first cycle. The quality of Ethiopian education is deteriorating due to various factors, including poor teacher preparation, limited professional development opportunities, an emphasis on quantity over quality, and the commercialization of teacher training colleges, according to Gemedā & Tynjälä (2015). This multifaceted problem is critical in the study area, where teachers are scarce, particularly in remote areas of the zones. Shockingly, students who have completed grade 10 and failed to join preparatory schools were employed as elementary school teachers without any professional pre-service training.

Therefore, it is imperative to study the pedagogical competency of teachers and examine the school context they are working in. Hence, the study aimed to answer the following three basic research questions.

1. How do primary school teachers perceive their pedagogical competence?
2. What is the context of the primary and middle school teachers are working in?
3. What implications does the finding have on teacher education programs?

Review of Related Literature

Teachers play a vital role in delivering education, as the quality of their instruction has a direct impact on the success of their students. According to Masino & Niño-Zarazúa (2016), it is essential for teachers to continuously improve their performance, as they have a close relationship with their students and are constantly working to help them reach their full potential. A quality education produces quality students, and instructors are crucial elements of success because they provide high-quality education (Shishigu et al., 2017).

However, the status of the practice of teaching in primary school is low. Today's teachers should be proficient in managing pupils, identifying student needs, and using technology in the classroom (Schleicher, 2012). The quality of instruction is not solely determined by credentials and knowledge; it also depends on the teacher's aptitude for using instructional strategies, creativity in choosing teaching methods and media, and other factors (Hollins, 2011).

Regarding the standard of the teaching profession, it is more than just a job; it is a unique career that requires expertise (Keller-Schneider et al., 2020; Zheng, 2014) also confirmed that each teacher must possess the credentials and proficiencies that serve as the fundamental building blocks for the execution of learning. A career in teaching that is expert, has teaching competencies, and employs effective teaching methods is thus one that is in the teaching industry (TSC, 2016) In today's global information society, teaching and learning have become complex and multifaceted endeavors that require extended teacher professionalism. The importance of lifelong learning in the continuum of teacher education and learning cannot be overstated, as

teachers need to keep up with the ever-evolving educational landscape (Keller-Schneider et al., 2020; Klassen & Tze, 2014; Kyriacou, 2009).

However, despite the need for extended teacher professionalism, there is a lack of consensus among experts, policy makers, and reformers about what is most important in teacher preparation. This lack of agreement is due to the full range of formal, informal, and non-formal learning opportunities available to teachers (Maba & Mantra, 2018).

One of the challenges facing stakeholders and decision-makers responsible for policy development and implementation is the possibility of reaching an international agreement on a framework that describes different levels of teacher expertise, considering all pertinent aspects of such a multifaceted activity. This debate over teacher standards and competencies is crucial in ensuring that teachers are equipped with the necessary skills to provide quality education to their students (Maba & Mantra, 2018).

One of the key skills required of teachers today is pedagogical competency. This includes the use of suitable strategies and approaches, as well as how teachers interact with their students. The ability to comprehend learners, create instructional materials, implement learning diagnoses, assess learning, and foster learning is the essence of the concept of pedagogical competence (Hakim, 2015). Shukla, (2014) further classified the ability of educators to oversee students' learning, including their understanding of them, creating and implementing learning plans, being able to assess learning outcomes, and assisting students in realizing their full potential. It is important to note that pedagogical competence is not the only topic related to teaching, as there are other areas that are equally important.

Pedagogical competence refers to the ability of individuals to effectively combine various sources of knowledge, including books, articles, skills, experience, and other sources, to enhance their teaching abilities. According to Brundrett & Silcock (2002) this approach is crucial for achieving successful pedagogical outcomes. Çayir (2017) further defines pedagogical competence as the capacity to employ attitudes, knowledge, and teaching skills to effectively assist pupils.

In today's educational landscape, pedagogical competence is a critical quality that instructors must possess. The effectiveness of pedagogic skills is directly related to the way teachers instruct pupils, making teaching proficiency a crucial component of high-quality learning (Hakim, 2015). As (Brandenburg & Wilson, 2013) notes, pedagogical expertise is essential for creating and achieving a high standard of quality education.

To achieve this standard, it is necessary to enhance and improve the pedagogical competencies that teachers already possess. This requires a focus on professional development, which is crucial in enhancing the teaching competency of teachers.

In summary, teachers are essential to the success of education, and their role is becoming increasingly Important. To provide high-quality education, teachers must continuously improve their performance, be proficient in managing pupils, identifying student needs, and using technology in the classroom. The teaching profession requires expertise, pedagogical competencies, and effective teaching methods to produce quality students. Therefore, pedagogical competence is a critical quality that teachers must possess to achieve high-quality learning outcomes. By combining various sources of knowledge and enhancing their teaching skills, teachers can effectively assist pupils in their educational journey.

Conceptual Framework on Perceived Teaching Competency

In this study, teachers' pedagogical competency has been dealt with from three domains, namely, professional knowledge, Professional skills, and professional values and dispositions. These are the competency domains expected from teachers to successfully practice their teaching profession. Throughout their professional teaching career, the role of professional growth and development is vital in improving their competency across the three domains. Therefore, considering the role of professional development in discussing teachers' teaching competency becomes important.

Hence, pedagogical competency consists of the three domains of knowledge, skills and values, and dispositions while all could be improved through teachers' professional development. The following diagrams show the relationship between the three domains of pedagogical competency and the role of professional development.

Effective teaching requires a combination of professional knowledge and skills. Professional knowledge encompasses a deep understanding of pedagogical knowledge. In this study, pedagogical knowledge is defined as the ability to effectively navigate curriculum objectives and pedagogical strategies. On the other hand, skill refers to a teacher's ability to manage a classroom and facilitate the learning process.

In addition to knowledge and skill, professional values and dispositions are also crucial for successful teaching. Teachers who are emotionally invested in their profession and their students are more likely to create a positive and engaging learning environment. Finally, professional growth and development are essential for teachers to stay current and effective in their practice. Engaging in ongoing professional development activities is key to improving teachers' pedagogical competency. In general, in this study, pedagogical competency is conceptualized as the sum of a teacher's pedagogical knowledge, skills, values, and professional development activities.

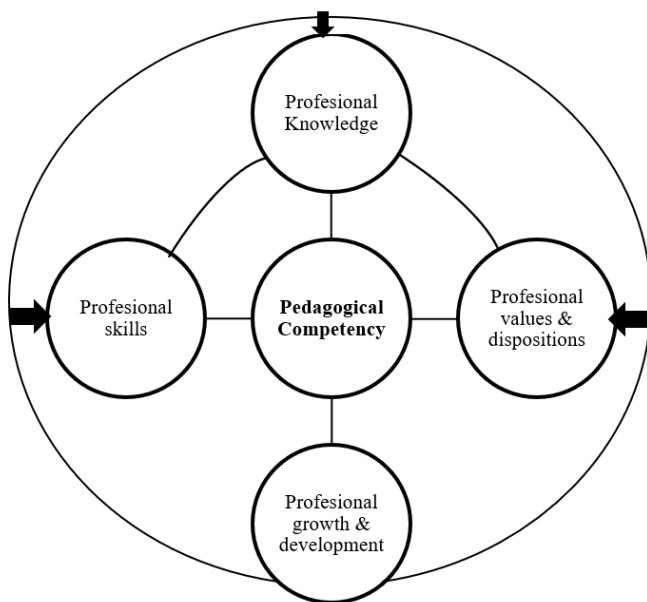


Figure 1: Conceptual Framework on Pedagogical Competency

Methods and Materials

Study Site Description

Bench-Sheko and West Omo Zones are located in the former South Nation Nationalities and Peoples Region, currently under the Southwest Peoples Region, in Ethiopia. The area is found around 600 kilometers from the center, Addis Ababa. Its remoteness from the center has not attracted high-quality professionals, including teachers. In our stay in this area, we have witnessed that a prevalence of teacher scarcity, poor school infrastructure, and even an underserved area in all infrastructural aspects.

Design of the study

The research employed a descriptive survey design to investigate the perception of primary and middle school teachers' pedagogical competency and the associated school factors. Besides, the study has used both primary and secondary sources of data to identify.

Population and Samples of the Study

The study population comprises 5776 teachers, with 3951 males and 1825 females, spread across eleven woredas of the two zones. To determine the sample size, we utilized the Yemane (1973) formula, as cited in Uakarn (2021).

$$n = \frac{N}{1 + Ne^2}$$

$$n = \frac{5776}{1 + 5776 * 0.05^2} = 374$$

Where n = sample size, N = population size = 5776, e = error (0.05), and reliability level 95%. To increase the response rate, the number of sample teachers was increased to 431. The researchers have randomly selected five woredas (Bero, Menit Goldia, Semen Bench, Mizan Town Administration, and Sheko) considering their geographic distribution. Therefore, sample respondents were selected from these five woredas using simple random sampling. Therefore, the sample size selected from each woreda include Bero ($n=61$), Menit Goldia ($n=98$), Mizan Town administration ($n=98$), Semen Bench ($n= 97$), and Sheko (76).

The study involved 431 randomly selected teacher participants. A questionnaire was distributed for them, and the study has secured 374 respondents returning complete data for analysis. Additionally, school principals, supervisors, and Zonal education officials were included in the study as they are key stakeholders in the leadership of the school and the education sector in general.

Table 1: Number of Teachers in 11 Woredas of the two Zones

Woreda	Number of Teachers by qualification			Total
	Certificate	Diploma	Degree	
Bero	70	86	7	163
Debub Bench	319	579	19	917
Guraferda	172	217	8	397
Maji	114	238	2	354
Menit Goldia	471	355	9	835
Menit Shasha	221	162	13	196
Mizan Town Admn.	49	471	41	561
Semen Bench	131	614	6	751
Sheko	212	430	22	664
Shey Bench	109	646	27	782
Surma	111	43	2	156
Total				5776

Data collection tools and procedures

To gather data, the study utilized a questionnaire, two focus group discussions, and document reviews. A self-prepared five-point Likert-type scale questionnaire requesting their level of agreement and consisting of 33 items (9 items measuring Professional knowledge $\alpha = .82$, 8 items measuring professional skills and practices $\alpha = .91$, 10 items measuring professional values and dispositions $\alpha = .86$, and 6 items measuring professional growth and development $\alpha = .84$) was used to measure teachers' perception about their teaching competency. This questionnaire was piloted in another woreda teachers resulting in a total reliability score of $\alpha = .879$. Focus group discussions were held with educational leaders to gain information on teachers' pedagogical competency and the associated school factors. The study also reviewed documents indicating the school performance evaluation, professional development, and qualifications of

teachers. The main reason to use all these techniques is to examine the issue from different sources.

Methods of data analysis

The study used both quantitative and qualitative methods of analysis. This is to substantiate the data obtained from different sources. The quantitative analysis was conducted using statistical tests such as cluster analysis, ANOVA, and an independent t-test, substantiated with qualitative thematic analysis.

Ethical Considerations and Approval

This study has considered important ethical concerns, with the full consent of the respondents to participate in the study. The researchers have made it a priority to protect the dignity of those who participated. Respondents were told they had the right to decline participation in the study, and their data were kept confidential and protected from unauthorized access.

Results and Discussion

Teachers' Pedagogical Competency

The study operationalizes pedagogical competency as a multifaceted construct that encompasses a teacher's professional knowledge, skills, practices, values, and dedication to ongoing professional development. Table 1 below shows the result of cluster analysis.

Table 2: Mean (and standard deviation) cluster scale Z-scores for pedagogical competency

Domains of competency	Cluster one N (107) teachers	Cluster two N (267) teachers	p
Pedagogical competency	1.20(.58)	-.489(.67)	0.00
Professional knowledge and understanding	.81(.83)	-.33(.87)	0.00
Professional Skills and Practice	.52(1.02)	-.21(.92)	0.00
Professional Values and Dispositions	.74(.58)	-.30(.98)	0.00
Professional growth and development	.66(1.11)	-.27(.81)	0.00

To assess the competency level of teachers, a self-report survey was conducted and analyzed using cluster analysis. The results yielded a two-cluster solution, with the first cluster consisting of n=107 (29%) teachers who reported being competent in their pedagogical competency. Conversely, the second cluster, consisting of n=267 (71%) teachers, perceived their pedagogical competency as inadequate. This indicates that many respondents reported low competency levels in their pedagogical competence. It is worth noting that the two clusters were significantly different across all components of competency at $p < 0.01$.

Professional knowledge and understanding

A teacher's ability to effectively instruct in the classroom is dependent on their professional knowledge and understanding. This includes not only expertise in their subject matter, but also a strong grasp of pedagogy and the teaching profession. In this survey of teachers' perceptions regarding their subject matter expertise and understanding of teaching found that out of 374 responders, the average score was 29.76 with a standard deviation of 4.4. While this indicates a moderate level of knowledge and understanding, it falls slightly above the projected average of 27.

Teachers must have a comprehensive understanding of their profession to deliver quality instruction to their students. Without this knowledge, they may struggle to effectively engage and educate their students.

Educational leaders in the region and zone must take action to improve the situation and ensure that teachers have the necessary resources and support to enhance their professional knowledge and understanding. By doing so, we can ensure that our students receive the high-quality education they deserve.

Professional Skills and Practices

The domain of teacher professional skills and classroom teaching procedures is of utmost importance. It is imperative that teachers possess the necessary knowledge and apply it effectively in their teaching practices. This not only ensures the efficacy of their activities but also enhances the overall learning experience of their students.

However, the data acquired for this domain, with $n=374$, $\bar{x}=17.73$, and $s=3.21$, indicates poor competency when compared to the expected mean of 24. This domain assesses teachers' ability to design lessons, use a student-centered approach, conduct assessments, provide feedback, create a positive learning environment, and manage classrooms. Unfortunately, all the teachers have reported below-average results, indicating poor classroom teaching practice. Furthermore, the focus group discussion data reveal that teachers are not utilizing a student-centered approach in their teaching. This directly impacts the execution of policies. As evidenced by the following excerpt from a discussion held with the supervisor at Kitte Primary School:

"The lack of a student-centered approach in our teaching practices is concerning. We need to focus on creating a positive learning environment that caters to the needs of our students. This will not only enhance their learning experience but also improve our overall competency as teachers."

Pantić & Wubbels (2012) found that knowledge is a basis for skills. Though he respondents of this study claimed they have the required knowledge competency, they failed to practice it effectively. Teachers must possess the necessary skills and knowledge to effectively conduct

classroom teaching. The data acquired for this domain highlights the need for improvement in this area. By utilizing a student-centered approach and creating a positive learning environment, teachers can enhance their teaching practices and improve their overall competency. Another discussant from the same school said

Educational leaders often request that teachers implement a student-centered approach and continuous assessment in their classrooms. However, the challenges that teachers face in implementing these strategies are often overlooked. For instance, how can a teacher engage all seventy students in a 40-minute session? This makes it incredibly challenging for teachers to incorporate active learning approaches in such large classrooms.

This indicates that teachers are not operating in an environment that encourages the use of a student-centered approach. Additionally, their evaluation skills and feedback provision were rated as insufficient.

Educational leaders must acknowledge the difficulties that teachers face in implementing these strategies and provide them with the necessary support and resources to overcome these challenges. By doing so, teachers can effectively create a student-centered learning environment that promotes continuous assessment and active learning.

Overall, the primary school teachers who participated in this survey displayed inadequate professional abilities and classroom practices. This highlights a lack of knowledge in this field and calls for all stakeholders to contribute to the enhancement of teacher professional abilities in the area.

To improve the situation, it is essential to create a supportive environment that fosters student-centered teaching practices. Teachers should be provided with adequate training and resources to enhance their evaluation skills and feedback provision. This will enable them to provide quality education and improve the learning outcomes of their students.

Professional Values and Dispositions

Teaching competency is a multifaceted concept that encompasses various dimensions, including instructors' values and attitudes towards their work. In this domain, teachers' beliefs and personal attributes regarding their career are crucial indicators of their effectiveness. These attributes include being a role model, having a strong devotion to their profession, following laws and regulations, understanding and managing differences, respecting community culture and customs, and caring for students' intellectual growth.

A response obtained from 374 elementary school teachers in the zone revealed that they possess positive professional values and attitudes. The study's results showed that the mean score was

34.5, with a standard deviation of 5.4, and an estimated mean of 30. This indicates that teachers in this area have shown a good perception of their pedagogical competency in this domain.

It is essential to note that having positive professional values and attitudes is crucial for effective teaching. Uztosun (2018) found that teachers who possess these qualities are more likely to inspire and motivate their students, create a positive learning environment, and foster a sense of community in the classroom.

In general, the study's findings suggest that elementary school teachers in the zone have positive professional values and attitudes, which are a crucial aspect of teaching competency. This underscores the importance of nurturing and preserving these qualities in teachers to enhance their effectiveness in the classroom.

Professional growth and development

In order to excel in their profession, teachers must actively engage in reflective practice and strive for continuous professional growth and development. According to (Goldman & Grimbeek, 2015), critically reflective teachers take ownership of their actions, analyze and evaluate them, and consider how they relate to the larger organizational and societal context in which they operate. This level of self-awareness and introspection is crucial for improving teaching abilities and achieving success in the field.

However, a recent study of 374 teachers revealed that their engagement in professional growth and development activities is below average, with a mean score of only 14 (compared to a projected mean of 18). This is concerning, as modern teaching demands that educators be reflective practitioners who are constantly seeking to improve their skills and knowledge. The lack of participation in professional development activities suggests a weak commitment to this ideal in the study area. Hakim (2015) revealed that continuous professional development enables teachers to improve their competency.

One teacher from Mizan-Aman primary school summed up the issue well, stating: "We need to prioritize our professional growth and development if we want to be effective teachers. It's not enough to simply go through the motions - we need to actively seek out opportunities to learn and grow." By embracing a culture of reflective practice and ongoing learning, teachers can enhance their abilities and make a positive impact on their students and the wider community.

On the other hand, a female discussant from Shewa bench said that "Although we recognize the importance of continuous professional development for teachers, our current working conditions do not support its implementation. With overwhelming teaching responsibilities and large class sizes, it becomes challenging to provide effective teaching, assessment, and management. Moreover, opportunities for professional learning are scarce, making it difficult for us to engage in such activities".

Through a one-way analysis of variance (ANOVA), we discovered a significant impact of experience on teaching competency. The findings indicated a statistically significant difference in teaching competency between two groups of teachers with varying levels of experience, with an $F=4.426$ and $p<0.005$. This suggests that teachers become more skilled in their teaching as they gain more experience.

Associated School Factors

During focus group discussions and document reviews, teachers and principals identified various factors that contribute to inadequate pedagogical competency. The following challenges are associated with the pedagogical competency of primary school teachers in Bench Maji Zone:

Educational Qualification

The general education curriculum framework of Ethiopia requires primary and middle school teachers to have a minimum of a diploma and a first degree, respectively (MoE, 2020). According to the MoE (2023b), only 50% of the national plan for middle school and 81% for primary school is met. However, the Southwest West Ethiopia People Regions (SWEP), where the study zone is located, has achieved 69.6% of the primary school qualification target and 17.2% of middle school teachers' qualification, which is among the three least performing regions in this regard. This indicates that the qualification of teachers is a significant challenge to their pedagogical competency.

The study zones are experiencing a low rate of rate of qualified teachers for the respective grade level. The graph below illustrates the qualifications of teachers in different woredas found in the zones.

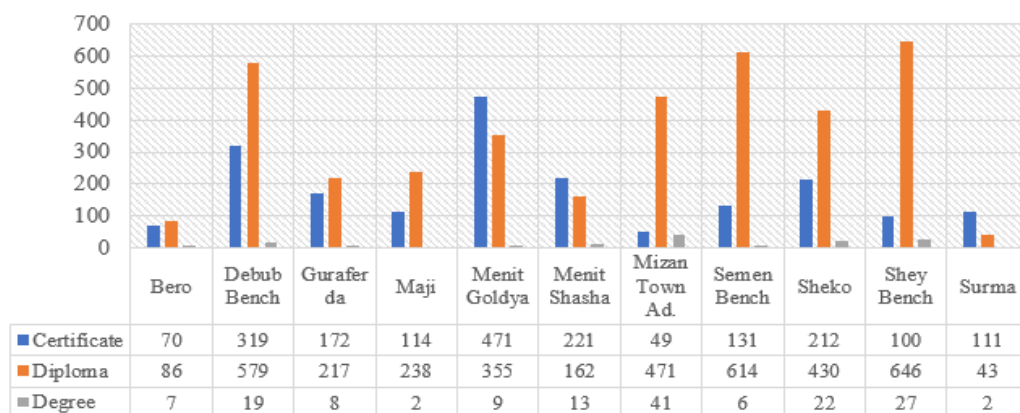


Figure 2: Bench-Sheko and West Omo Zones primary and middle school teachers by qualification in 2021, source: Each Zone's Education Bureau

The two zones currently have a total of 33% certificate instructors and 64.4% diploma holders. Unfortunately, only 2.6% of teachers possess a bachelor's degree and meet the necessary requirements for their level. This lack of qualifications among teachers is contributing to a low

level of pedagogical competency, which demands an intervention. It is imperative that the Ministry of Education provide opportunities for teachers to upgrade their qualifications.

One solution to this problem is to hire new teachers who possess a first-degree. More importantly, the government should also consider providing diploma holders with the chance to earn their degree through various training modalities, such as summer programs. This will not only improve the quality of education in the area but also provide teachers with the necessary skills and knowledge to excel in their profession.

Improving the educational qualification of teachers is crucial to enhancing their pedagogical competency. The government and other stakeholders should prioritize efforts to increase the number of qualified teachers in the region. This can be achieved through targeted training programs, incentives for teachers to pursue higher education, and other initiatives that support professional development. By investing in the education and training of teachers, the government can ensure students can receive the high-quality education they deserve.

Limited Capacity Building In-Service Training

Improving the knowledge and teaching skills of teachers is crucial to enhancing their competency. In-service training is an effective way to achieve this goal. However, in the Bench Maji Zone, primary schools are facing a significant challenge in accessing such training opportunities. The data collected from the sample schools indicates that the lack of teacher capacity-building training is a major issue. This confirms the conclusions given by Hakim (2015) which say, without access to various training programs that can enhance their knowledge and abilities, the chances of improving their competency and educational quality are slim.

To address this issue, all responsible bodies, including Zone and woreda Education officers, higher education institutes, and volunteers, must contribute to teacher skill development. It is essential to establish partnerships between Zonal educational leaders and nearby educational institutes to ensure the implementation of effective training programs. By working together, we can provide teachers with the necessary tools and resources to improve their teaching skills and enhance the quality of education in the Bench Maji Zone.

Therefore, it is imperative to prioritize teacher capacity-building training to improve the quality of education in the Bench Maji Zone. By investing in the professional development of teachers, we can ensure that they are equipped with the knowledge and skills necessary to provide high-quality education to their students.

Poor reflective practice

In contemporary pedagogy, practitioners need to engage in reflective practice. By reflecting on their own teaching methods, educators can identify areas of strength and areas that require

improvement. This self-evaluation process is crucial in enhancing their profession and ensuring that they are providing the best possible education to their students.

Unfortunately, primary school teachers in Bench Maji Zone have not had the opportunity to engage in reflective practice. As a result, they continue to teach in the same way without any improvement. Kyriacou (2009) found that this lack of self-evaluation is particularly notable given the rapid technological advancements in the education sector.

To address this issue, it is critical to promote and assist teachers in becoming reflective practitioners. This requires a collaborative effort from all parties involved. By creating a culture of reflection, teachers can benefit from their own insights and improve their skills over time.

Poor supportive working environment

The environment in which teachers operate is a crucial factor that impacts their teaching competence. A conducive working atmosphere is essential for delivering effective instruction and bringing about a positive change in the students. The physical environment of the school, leadership, school buildings, infrastructure, learning resources, internet connectivity, and other relevant resources all play a significant role in enhancing teachers' teaching competency.

As Çayir (2017) stated, when teachers work in a comfortable atmosphere with ample resources, they have more opportunities to refresh their knowledge and skills. This, in turn, leads to better teaching results and improved student performance. Therefore, it is necessary for schools to provide a supportive environment that fosters professional growth and development.

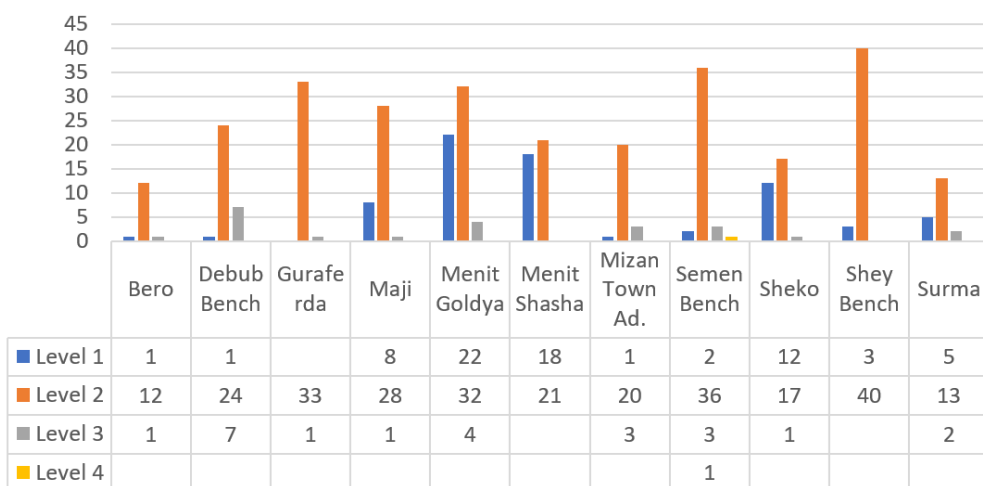


Figure 3: School standard classification of Bench-Sheko and West Omo Zones in 2021, source: each Zones Education bureau

To assess the quality of schools, external inspections are conducted, and the results are depicted in the graph below. The graph provides a visual representation of the school's standard, which

is a crucial factor in determining the quality of education provided to students. By improving the school's standard, we can enhance the learning experience of students and enable teachers to deliver their best.

The Ministry of Education (MoE) established a standard in 2006 that requires primary schools in the country to maintain a level four rating to ensure a quality learning environment. Unfortunately, the two zones are experiencing low school standards, as shown in Figure 3. Many schools in the area are only at level one or two, indicating poor school standards. This means that the input, process, and outcome are below the standard. According to inspection reports, only one school has met the standard, indicating that the poor standard of schools in the study area might affect the teaching competency of teachers.

The reality in the sample schools is troubling, as the working climate is not conducive to learning. Teachers and school managers reported a scarcity of educational resources, with few schools having poorly furnished and equipped pedagogical centers. Access to the internet is unimaginable in all schools, and libraries are not up to par. Leadership practices do not support teachers' professional development in the area, exacerbating the scarcity of basic facilities that have a significant impact on the effectiveness of instruction.

Efforts must be made to minimize these challenges and scale up the standards of schools in each zone to meet the required level four rating. All stakeholders must work together to provide an enabling atmosphere for teachers' professional betterment. Klassen & Tze (2014) indicated that teachers must also engage in establishing an environment in which they can grow professionally. By doing so, it can ensure that all students have access to a quality learning environment that will prepare them for success in the future.

Poor quality teacher education program

Goldman & Grimbeek (2015) indicated that the quality of a teacher's training program is crucial in determining their performance in the classroom. Unfortunately, the current teacher training program in Ethiopia is has a limited impact on the competency of teachers. The system has undergone frequent changes, resulting in the hiring of untrained teachers. According to a report by the Ministry of Education (MoE) in 2018, frequent changes in teacher training modalities for primary schools have been a serious handicap in teacher training. Graduates who passed through a given modality are uncertain about their future due to these changes. Additionally, the existing modality is not aligned with the country's primary school education structure and does not produce effective graduates for the specified level.

Moreover, teachers are not interested in attending professional courses in summer programs, despite the benefits it could have on their teaching practice. They only seek the certificate to receive a salary increment, disregarding the program's role in improving their teaching skills.

Hence, the current teacher training program in Ethiopia needs to be re-evaluated and improved to ensure that teachers receive adequate training to provide quality education to students.

Implications on Teacher Education programs

Teachers play a crucial role in the learning process and are considered the most important human factor among all the elements involved in implementing educational policies. In Ethiopia, the Ministry of Education (MoE) emphasizes the importance of teachers having the necessary qualifications and competencies through pre-service and in-service training (ETP, 1994). This includes basic knowledge, professional code of ethics, methodology, and practical training.

However, despite the policy, there is a gap between what is expected and what is happening on the ground. This study aims to summarize the implications of this gap in teacher education programs.

One of the major issues is the preparation of adequate teachers. While the new education development and road map suggest that primary school teachers should be degree holders, only 12% of teachers at the national level have fulfilled this requirement. This means that the preparation of teachers is not meeting the demand, and the pool of teacher education candidates at the primary level is often from low achievers and low socio-economic status backgrounds. This leads to a vicious cycle of inadequate quality, which further deteriorates the quality of education.

To address this problem, universities and colleges that train teachers should increase their intake capacity so that an adequate number of teachers can enter the job market. Additionally, more universities should take on the responsibility of training teachers to meet the growing need for qualified educators in schools.

Therefore, it is essential to bridge the gap between policy and practice in teacher education programs in Ethiopia. By doing so, we can ensure that teachers are equipped with the necessary qualifications and competencies to provide quality education to students.

The second is admission to the teaching profession. Nowadays, many individuals who are unable to obtain a university education are turning to diploma programs at teachers' training colleges to pursue a career in teaching. Unfortunately, this has resulted in a widespread lack of interest and competency among primary school teachers. To address this issue, it is critical for all stakeholders in the education sector to work together. One key solution is to establish a strong connection between primary schools and training colleges, which would provide aspiring teachers with sufficient knowledge about the teaching-learning process, primary school curriculum, and learners. The Ministry of Education (MoE) has also emphasized the importance of admitting only those with the necessary qualities who have performed well in national and entrance exams to the teaching profession.

Continuous Professional Development (CPD) is another crucial factor for teachers to enhance their teaching competency. While preservice training is offered to teachers, in-service training opportunities should also be made available to help them improve their skills. A recent study has revealed that teachers are not engaging in professional development activities, indicating poor practice in professional growth and development (Akalu, 2016; Gemedu et al., 2014). This is a concerning issue that demands immediate attention.

To address this problem, it is essential to encourage teachers to consider CPD as an integral part of their job and support them in conducting their development activities effectively. Educational leaders should plan and execute professional development opportunities to ensure that teachers have access to the necessary resources. Teacher training programs should also include strategies on how teachers can develop their professional competency while at work placement.

It is important to note that engaging in CPD activities is not only beneficial for teachers but also for their students. Teachers who continuously develop their skills are better equipped to provide quality education and create a positive learning environment. Therefore, teachers must take the initiative to engage in CPD activities and make it a priority in their professional lives.

Hence, CPD is an essential aspect of teaching competency that should not be overlooked. Teachers must be encouraged and supported to engage in continuous professional development activities to enhance their skills and provide quality education to their students. Educational leaders should take the lead in planning and executing professional development opportunities to ensure that teachers have access to the necessary resources.

Limitation of the study

This study has a limitation that upcoming researchers in this area should consider. The study has employed a self-report questionnaire to measure teachers' perceived teaching competency. It could have been better to administer tests to check teachers' teaching competency. As a result, the study presents how teachers perceive their own teaching competency. However, the researchers made efforts to triangulate their findings by conducting focus group discussions and reviewing documents. Therefore, upcoming researchers should take this into account when designing their own studies.

Conclusions

The study has revealed a pressing need for robust interventions to address the challenges related to teaching competency and to enhance the professional development of teachers. In the study area, teachers reported good competency in professional knowledge and understanding, as well as professional values and dispositions. However, they also reported poor competency in professional skills and practices, as well as professional growth and development. The researchers have perceived that the area is experiencing a significant deficit in teaching

competency among teachers, compared to the required level of professional competency. Specifically, the domains of professional skills and practices, as well as professional growth and development, require a concerted effort from both teachers and educational leaders to effect change.

The study also provides valuable insights into the preparation of teachers, admission criteria, mode of delivery, quality of training, and the issue of continuous professional development. These findings underscore the importance of ongoing professional development for teachers, as well as the need for educational leaders to prioritize the development of professional skills and practices among teachers. By doing so, we can ensure that teachers are equipped with the necessary tools and knowledge to provide high-quality education to students.

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Learning Theories and Instructional Designs: Developing a Multimodal Quality and Student Support Service for Online Learning

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Abstract

This work explores how prominent learning theories can be used to design online learning environments that prioritize quality and offer effective student support. Employing a bibliometric integrative review method, a comprehensive analysis was conducted on eighty-nine relevant articles refined from a pool of 357 sources. These sources explore (online) learning theories, practices and their associated instructional designs. Six prevalent learning theories were identified: Behaviorism, Cognitivism, Social Constructivism, Connectivism, Community of Inquiry, and Online Collaborative Learning. Each Theory was examined, highlighting its strengths, limitations, and its potential to inform effective online instruction. This analysis yields two crucial insights. First, the underlying philosophy of education and the chosen learning theory significantly influence the design of online learning environments. Second, existing online learning approaches often lack a strong integration of learning theories, particularly regarding assessment, student support strategies and quality learning within collaborative activities. By drawing on these insights, this Analysis proposes a model for online learning instructional design that emphasizes the multimodal, integrative, quality and student support service online learning model. This Model incorporates the concepts of different learning theories, and prioritizes quality and student support services, aiming to create engaging and effective online learning experiences that promote deeper learning and critical thinking skills.

Keywords: Higher education; instructional designs; learning theories; online learning

Introduction

Instructional design is a systematic process for planning and developing effective and efficient learning experiences. Instructional designers leverage various theories and models to guide the design and implementation of online learning (hereafter referred to as OL). This Paper presents a critical evaluation of different learning theories and their implications to designing online instruction within higher education institutions. Furthermore, it proposes a comprehensive and theoretically sound framework for online learning, particularly relevant to developing countries where the quality of traditional education is already under strain, let alone the OL modality.

A defining characteristic of OL instructional design involves delivering learning materials to students through a learning management system (LMS) (Pozzi et al., 2019), often designed by external entities like Google Classroom. This creates a physical separation among instructors,

institutions, and students, placing a greater responsibility on students to take responsibilities of their learning (Yilmaz 2019). The focus of a learning session may shift towards a student-centered approach depending on the subject matter, learning objectives, and student familiarity with the complexity of the topic. However, a core tenet of OL is to enhance the convenience and flexibility of student-teacher interaction (Bandara & Wijekularathna, 2017). Well-designed synchronous classes cater to both convenience and flexibility in OL environments. These sessions are scheduled at mutually agreeable times and recorded for asynchronous student review (Fish & Snodgrass, 2019; Qureshi, 2019).

Effective instructional designs necessitate adherence to relevant and sound pedagogical and learning principles. These principles, in turn, are grounded in various philosophies and theories of education and learning to ensure successful implementation. Instructional designs are influenced by diverse philosophical questions such as the nature of learning, teaching, and their purposes; the selection of valuable learning content; optimal learning methods for students; and strategies for instructors and institutions to verify student learning and goal achievement. The backgrounds of instructional designers, encompassing factors like socio-economic and technological factors like ethnicity, gender, research preferences, and educational attainment, can influence their philosophical and methodological orientations (Sheehan & Johnson, 2012).

The contemporary educational landscape is witnessing a transformative shift from traditional to modern teaching modalities. This shift is driven by advancements in communication technologies, coupled with the disruptions caused by COVID-19. These factors have compelled most higher education institutions worldwide to transition from traditional classroom instruction to online and blended learning approaches. This shift represents a radical and historic change for both education in general and higher education institutions specifically. However, this transition often lacks extensive research into teaching and learning theories and practices, particularly within the context of developing nations. Consequently, contextualizing instruction based on learner characteristics and learning theories remains an overlooked aspect. Notably, existing models or frameworks derived from various theories, such as the works of Garrison, Anderson & Archer (2000), Harasim (2012), Picciano (2021), and Siemens (2008), fall short of comprehensively addressing the unique nature of OL and its practices that lead to quality education.

Therefore, the subsequent sections explore and analyze different learning theories through the lens of course and instructional design for effective online teaching and learning, ultimately empowering learners to achieve the intended program outcomes. To guide this exploration and analysis of learning theories, instructional design, and their implications for online learning, the following key questions have been formulated:

1. How do various learning theories inform instructional design for online learning?

2. How can existing instructional design models for online learning be refined to create a more working multimodal, comprehensive, and inclusive framework that effectively address their current strengths, weaknesses, and limitations?

Objective

This research aims to build a new model for OL by analyzing existing instructional design and learning theories. It uses an integrative literature review, which means thoroughly examining past research to create a fresh conceptual framework (a "multimodal, integrative and quality student support service OL model"). By critically evaluating strengths and weaknesses of current OL models, the study synthesizes knowledge from various sources to build a robust and innovative model for OL. This approach is ideal for established topics like OL, where the goal is to refine existing knowledge and expand the theoretical foundation of the field.

Operational Definition

Instructional designs are defined as the systematic processes and methodologies employed to create effective and engaging learning experiences (Cennamo & Kalk, 2019; Rothwell & Kazanas, 2011). This includes the structured planning, development, implementation, and evaluation of online learning environments, materials, and activities.

Learning theories refer to the systematic frameworks and principles used to explain how individuals acquire, process, and retain knowledge and skills (Reddy et al., 2005; Saunders & Wong, 2020). In the context of the present study, these theories (e.g., constructivism, cognitivism, connectivism) are identified by their specific tenets and proposed mechanisms of learning, as evidenced by their application in the design of online learning activities, content sequencing, and assessment strategies within the developed service.

Multimodal quality refers to the provision of diverse forms of sensory and interactive content within the online learning environment, aiming at enhancing comprehension, engagement, and accessibility (Lu & Hanim, 2024; Sankey et al., 2010). This is measured by the presence and integration of multiple media types (e.g., text, images, audio, video, simulations, and interactive quizzes), and the strategic use of various communication channels (e.g., discussion forums, virtual office hours, collaborative documents) within the online learning platform.

Online learning is defined as any educational process where instruction and learning activities primarily occur via digital networks and technologies, without the constant physical presence of an instructor or peers in a traditional classroom setting (Rhim & Han, 2020; Singh & Thurman, 2019). This is measured by the delivery format of courses (e.g., fully online, hybrid), the use of Learning Management Systems (LMS) for content delivery and interaction, and the reliance on internet-enabled devices for access to educational materials and communication.

Student support service refers to the structured provisions and resources available to online learners beyond direct instructional content, designed to facilitate their academic success, well-being, and retention (He et al., 2019; Simpson, 2013). This is measured by the availability and accessibility of specific support mechanisms such as technical assistance (e.g., help desk, FAQs), academic advising (e.g., virtual office hours, tutoring), mental health resources (e.g., counseling referrals), community-building initiatives (e.g., student forums, virtual study groups), and administrative guidance (e.g., registration help, financial aid information).

Method and Approach

The study uses a bibliometric analysis, a quantitative approach that examines publication data to identify influential researchers, their institutions, frequently used keywords, and more importantly, the connections between academic works. This form of study helps to identify the most important and influential papers in the field under investigation and track the development of ideas and methods over time (Mukherjee et al, 2021; Öztürk et al., 2024; Snyder, 2019) to analyze research on online learning. This method fits the research questions, which aim to synthesize existing knowledge, not for exhaustive coverage. This has allowed the author to strategically combine diverse perspectives to build a new theoretical model. Moreover, by including a wide range of evidence (case studies, meta-analyses, etc.), the author has gained a comprehensive understanding for model development.

This systematic literature review follows a six-step framework to ensure rigor and transparency.

1. Research questions and objective formulation: The review commenced with the formulation of specific research questions and objectives. These foundational elements, guided by Kitchenham and Charters (2007), have served as the cornerstone for subsequent stages, including literature searching, selection criteria, and data analysis.

2. Literature search and identification: A comprehensive search for relevant literature was conducted across three databases: Scopus, Web of Science, and Google Scholar, adhering to guidelines by Polanin et al. (2019). A systematic keyword and Boolean operator approach was employed, defining core concepts from "Learning Theories and Instructional Designs: Developing a Multimodal Quality and Student Support Service for Online Learning." These concepts were translated into refined search strings incorporating synonyms and variations. This process yielded an initial pool of 357 articles.

3. Article screening and inclusion process: The initial pool of articles underwent a multi-stage screening process (Booth, 2016). After having removed duplicates, 191 unique articles remained. These were then subjected to a rapid title and abstract screening by the primary author and two independent reviewers, reducing the selection to 125 potentially relevant articles. A thorough full-text review was then made against strict inclusion criteria, focusing on: *learning theories, instructional design, multimodality, quality assurance, and student support services in*

online learning. Peer-reviewed journal articles, conference papers, PhD dissertations and “other” published in English between 2014 and 2023 were included (Booth, 2016; Paré et al., 2015). This process resulted in 89 articles for in-depth analysis.

Table 1: *Article Screening and Inclusion Process*

Stage of Screening	N
Initial Pool	357
After Duplicate Removal	191
After Title/Abstract Screening	125
After Full-Text Review	89

The selection of the articles published between 2014 and 2023 is justified by the rapid evolution of online learning, encompassing the post-MOOC era and the accelerated innovation spurred by the COVID-19 pandemic, ensuring the inclusion of the most recent advancements and relevant technological developments (Valdiviezo, 2021). This focused ten-year window provides a manageable yet comprehensive scope that captures contemporary pedagogical considerations. Simultaneously, the specific focus on online learning theories and frameworks is crucial for adopting a systematic, evidence-based approach that directly addresses key research gaps and offers practical guidance for online education. This approach facilitates deeper analysis and synthesis of how these conceptual tools influence various aspects of online learning, ultimately contributing significantly to the body of knowledge (Booth et al., 2021; Ngulube & Mosha, 2023; Paul et al., 2024).

Distribution by Publication Type

The 89 articles included in this review represent a diverse spectrum of scholarly output, encompassing peer-reviewed journal articles, conference papers, PhD dissertations, and other publication types. As detailed in the Table below, peer-reviewed journal articles constitute the largest proportion, accounting for 71.91% (64 articles). Both conference papers and PhD dissertations each contribute 3.37% (3 articles) to the overall distribution. The other category,

Table 2: *Articles by Publication Type*

Publication Type	N	(%)
Peer-Reviewed Journals	64	71.91
Conference Paper	03	03.37
PhD Dissertation	03	03.37
Others	19	21.35
Total	89	100

making up 21.35% (19 articles), includes a variety of scholarly materials such as books or book chapters, reports or white papers, online articles or blog posts from reputable sources, editorials or commentaries, and reviews of other works, along with preprints or working papers.

Publication trends over time (2014-2023)

Analyzing the publication years of the 89 articles reveals a clear trend of increasing research output in online learning, particularly in the latter half of the review period. As illustrated in Figure 1, there was a noticeable flow in publications from 2019 onwards, coinciding with the global shift to online learning modalities due to the COVID-19 pandemic. This trend underscores the heightened interest and accelerated research efforts in the domain of online learning theories and instructional design in recent years.

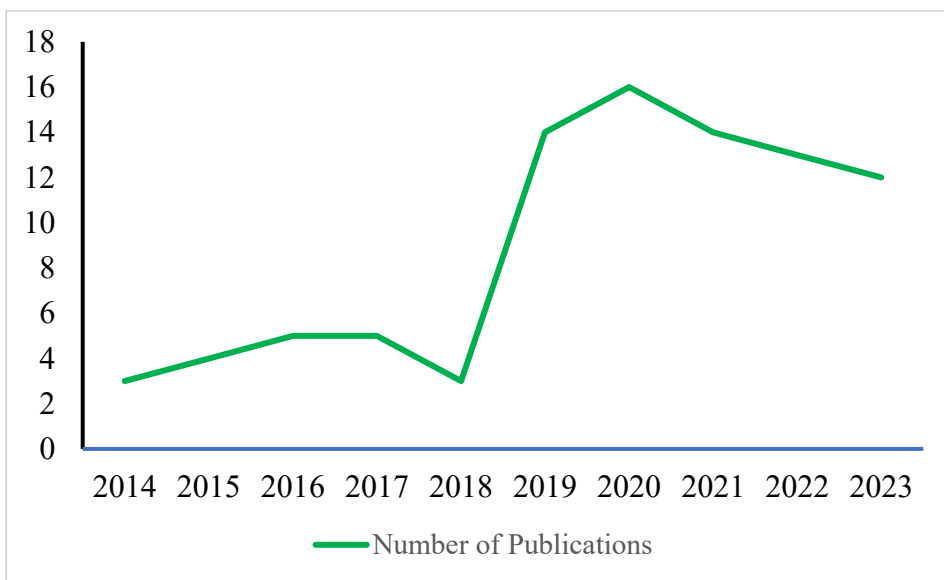


Figure 1: *Annual Publication Trend (2014-2023)*

4. Quality assessment of primary studies: The researcher subjected the 89 selected articles to a rigorous quality assurance procedure to assess their methodological soundness and research design (Petticrew & Roberts, 2008). This assessment was crucial for refining the final sample of articles, as it allows to identify any potential variations in quality that could influence the conclusions and to guide the subsequent data analysis and interpretation (Jesson et al., 2011; Petticrew & Roberts, 2008). To maintain objectivity and minimize potential biases, three independent reviewers from the author's institution participated in a multi-stage screening process (Levy & Ellis, 2006; Vom Brocke et al., 2009). Any disagreements that arose among these reviewers during the assessment were consistently resolved through consensus (Liberati et al., 2009; Shea et al., 2009), ensuring the integrity and reliability of the quality assessment outcomes.

5. Data extraction: Pertinent information was methodically extracted from each of the 89 included studies (Okoli & Schabram, 2010). The data extraction focused specifically on information relevant to learning theories, instructional design, and online learning, directly aligning with the pre-established research questions.

6. Data analysis and synthesis: The final step involved a comprehensive process of summarizing and organizing the extracted data. A comparative analysis was then conducted to identify patterns, themes, and potential contradictions within the evidence. The aim of this critical synthesis was to generate new insights and contribute meaningfully to the existing body of knowledge.

In essence, this study employs a rigorous and manifold approach to conducting a comprehensive literature review. By applying a bibliometric analysis and integrative review methodology and adhering to a well-defined six-step framework, the author was able to gather and synthesize the relevant literature. This analysis provided a solid foundation for the development of a novel theoretical framework for OL quality and student support, ultimately aiming to address the limitations identified within existing models.

Findings and Discussion

Analyses of Learning Theories and their Implications to Instructional Designs on Online Learning

Drawing on the research questions which guides the current study, this section critically analyzes and evaluates six prominent learning theories. The analysis explores the implications of the learning theories on OL design and effectiveness.

(1) Behaviorism: A stimulus-response approach to learning

Behaviorism (Bryant et al., 2013; May-Varas et al., 2023) is beneficial for designing OL for adults. It focuses on clear objectives, practice activities (drag-and-drop exercises), feedback, and rewards to reinforce desired behaviors. Behaviorist principles can inform online activities like discrimination (categorizing concepts), generalization (learning from examples), and association (connecting new information to real-world applications).

While Behaviorism provides a structured OL experience with clear objectives, frequent practice activities (discrimination, generalization, association, chaining), and strong feedback and reinforcement mechanisms, it overly focuses on rote memorization. This may limit the development of critical thinking skills essential in today's world. To create effective OL designs, instructional designers can apply behaviorist principles strategically to introduce new concepts and skills. However, these principles should be combined with approaches from other learning theories to encourage deeper exploration and analysis.

(2) Cognitivism: Emphasizing active knowledge construction

Cognitivism stands in stark contrast to behaviorism, shifting the focus from passive stimulus-response to active knowledge construction. This theory posits that learning is a dynamic process driven by internal mental processes such as attention, memory, and problem solving. Pioneering work by Jean Piaget (1970) underscores this notion, highlighting the learner's active role in constructing knowledge through experiences and environmental interactions.

This perspective has profound implications on OL design. While traditional multiple-choice quizzes may gauge basic knowledge retention, they often neglect the crucial cognitive processes behind the answers (Cakir, 2008; Yilmaz, 2011). As content designers and course sponsors, we must move beyond a "test-centric" approach and prioritize assessing learners' reasoning skills and deeper understanding.

Cognitivism emphasizes individual learning paces and the need for a flexible OL environment. Arshavskiy (2018) highlights the importance of allowing learners to sequence content based on their needs, which aligns with adaptive learning software that personalizes instruction. These personalized approaches informed by cognitivism hold promise for enhanced OL effectiveness.

However, cognitivism can overlook the social and cultural aspects of learning (Zembylas, 2005). Learners benefit from interactions with peers and diverse perspectives. To address this, instructional designers can incorporate cognitivist principles for knowledge acquisition (Cakir, 2008) alongside strategies that promote metacognition ("thinking about thinking"), consider managing cognitive load during OL experiences and balancing between the individual and social levels of cognition (Hung & Nichani2001). Additionally, fostering social interaction through collaborative activities and discussions can enrich the OL experience (Jeong & Hmelo-Silver, 2016). By embracing these insights from cognitive research, educators can create OL environments that foster active knowledge construction, cater to individual needs, and ultimately lead to deeper understanding for all learners.

(3) Social constructivism: Learning through social interaction

Social constructivism, rooted in Lev Vygotsky's (1978) social development theory, stands in stark contrast to both behaviorism and cognitivism. Vygotsky emphasizes the fundamental role of social interaction in cognitive development. Unlike Piaget's focus on individual stages and cognitivism's emphasis on solitary knowledge construction, social constructivism posits learning as a collaborative process heavily influenced by social interaction.

This theory emphasizes the importance of prior knowledge. Students build upon existing knowledge frameworks through active, collaborative, and socially constructed learning activities designed by educators (Akpan et al., 2020; Kelly, 2012; Olorode and Jimoh, 2016). Therefore, learning is seen as a collaborative endeavor where the environment shapes the

individual, and learning itself leads development (Secore, 2017). In contrast to a solitary journey of discovery, Vygotsky argues that learning is inherently social (Amineh and Asi, 2015).

A key concept in Vygotsky's theory is the Zone of Proximal Development (ZPD) (Margolis, 2020). The ZPD represents the gap between what a learner can achieve independently and what they can accomplish with adult guidance or collaboration with more capable peers (Eun, 2019; Valsiner & Van der Veer, 2013). The ZPD underscores the importance of social interaction in propelling learners from potential to actual development. This highlights the learning process as a journey from the unknown to the known, where learners are encouraged to use the social aspects of learning to demonstrate their capabilities (Moll, 2013). Social constructivism acknowledges the influence of social interaction (family, peers, culture) on how knowledge is constructed (McLeod, 2019).

Social constructivism thrives in online environments where collaborative learning flourishes (Olorode & Jimoh, 2016). Online learning, e-learning and the open-source movement share roots in the constructivist approach to learning, where knowledge is built through active participation and collaboration (Koohang & Harman, 2005). Instructional design can use online simulations, discussions, and peer review activities to promote active engagement, guidance, reflection, and knowledge co-creation (Kirschner, et al., 2006; Evanick, 2023). This fosters higher-order thinking as learners grapple with diverse perspectives through hands-on activities and problem-solving. However, a crucial balance is needed. While social constructivism excels at collaborative learning, neglecting individual knowledge acquisition can be a pitfall (Alanazi, 2016). Effective online courses should incorporate clear structures and resources to support independent learning alongside opportunities for collaborative knowledge building.

(4) Connectivism: Learning in a Networked Age

Connectivism emphasizes connections and networks as central to learning in the digital age (Dunaway, 2011; Evanick, 2023). Learners use technology to build personal learning networks and critically engage with information from diverse sources. Learning is fundamentally about connections among people who share knowledge and help each other learn (Sangrà & Wheeler, 2013). New technologies are being utilized to create models that facilitate informal learning. This shifts the role of educators to facilitators, empowering learners to manage their journeys and build strong personal learning network skills (Siemens, 2008).

This theory translates to OL environments rich in digital tools like online courses, social networks, and blogs. The internet becomes the platform for networked learning and developing digital literacy. Online social networks connect learners and online curation tools empower them to explore complex information landscapes (Dunaway, 2011; Siemens, 2008).

Connectivism emphasizes acquiring knowledge through connections and real-world application (Kop & Hill, 2008; Siemens, 2008). Collaborative activities and learner encourage exploration of diverse viewpoints and problem solving in a digitally connected world (autonomy (Boyras & Oca, 2021; Sahin, 2012). However, connectivism may downplay critical thinking (Verhagen, 2006). Online courses informed by this theory can apply technology to connect learners and foster knowledge creation, but should also integrate activities that teach students to critically evaluate information.

(5) The Community of Inquiry (CoI) framework: Fostering deep learning

The Community of Inquiry (CoI) framework, developed by Garrison, Anderson, and Archer (2000, 2001), is a prominent theory designed specifically for online learning. Unlike approaches focused on surface-level learning, CoI emphasizes deep, collaborative learning experiences achieved through critical discussion and reflection (Nor et al., 2012). The framework underscores that building OL communities is crucial for effective OL (Palloff and Pratt, 2007). They argue that a sense of community fosters student engagement, collaboration, and ultimately, deeper learning. This framework has a strong philosophical and epistemological foundation, setting it apart from many other OL theories.

CoI, as shown in Figure 2 (next page), conceptualizes OL as driven by three interdependent elements: *social presence*, *cognitive presence*, and *teaching presence* (Akyol & Garrison, 2008). These presences interact dynamically to create effective collaboration and meaningful learning experiences, and results in learning presence as a moderator ((Shea & Bidjerano, 2012). Social presence refers to the ability of learners to interact meaningfully with each other. This sense of community fosters emotional, cognitive, and motivational support, which is crucial for successful online learning. Cognitive presence focuses on how learners construct and confirm meaning through communication (Garrison & Archer, 2000; Garrison et al., 2000). This involves critical analysis, exploration of diverse perspectives, and collaborative knowledge building.

Teaching presence encompasses the design, facilitation, and direction of both social and cognitive processes to promote meaningful learning (Garrison et al., 2000). The instructor acts as a guide, creating a structured learning environment that fosters critical inquiry.

Therefore, the CoI framework emphasizes social, cognitive, and teaching presences as interdependent elements for successful OL (Garrison, Anderson & Archer, 2000). A strong online community fosters deeper engagement and critical inquiry (Akyol & Garrison, 2008; Cleveland-Innes et al., 2019). Instructional design informed by CoI principles can create opportunities for collaboration, feedback, and shared learning through discussion boards and other online tools (Priest, 2020). This fosters a sense of community and promotes meaningful learning experiences.



Figure 2. Model of Social, Cognitive and Teaching Presences to bring Effective Collaboration for Better Elements of an Educational Experience. Source: Community of inquiry by Garrison, Anderson and Archer (2000, p.88)

However, scholars like Annand (2011, 2019) recognize the CoI framework as a theory for online learning. He argues that CoI research relies on assumptions that prioritize fixed knowledge and measurable outcomes, which contradicts the social constructivist view of knowledge building through social interaction. Additionally, the framework emphasizes constant communication for learning, which might not be necessary for effective online learning. Finally, Annand criticizes the use of surveys in CoI research, suggesting they fail to capture the complexities of how knowledge is socially constructed in online environments. Overall, Annand argues for a theory that better considers the subjective, social, and potentially less communication-driven aspects of online learning.

(6) **Online Collaborative Learning (OCL): Building knowledge together:** Online collaborative learning stands out as a method for collaborative knowledge creation using technology (Harasim, 2012). Unlike rote memorization, online collaborative Learning encourages students to work together, explore, and innovate using modern technology. This fosters a deeper understanding of concepts and the ability to solve problems, rather than simply rehearsing facts. Online collaborative learning promotes student engagement and teacher involvement to facilitate group discussions and ultimately enhance learning outcomes (Breen, 2013; Gaad, 2022; Kali et al., 2009; Ng et al., 2022; Reeves et al., 2004).

Harasim (2012) positions OCL as a transformative approach that reshapes education across formal, non-formal, and informal settings within the knowledge age. It integrates seamlessly with existing learning organizations, such as universities, by incorporating online components into the student experience. Online collaborative Learning draws upon and integrates various

learning theories, including cognitive development (Pask, 1975), deep learning (Entwistle, 2000; Marto & Saljø, 1976), academic knowledge development (Laurillard, 2001), and knowledge construction (Scardamalia & Bereiter, 2006).

Online Collaborative learning offers a versatile approach to online learning, integrating with formal and informal settings (Harasim, 2012). It uses established learning theories (Entwistle, 2000; Pask, 1975) and emphasizes a structured discourse for knowledge co-creation. This structured approach, involving *idea generation, organization, and intellectual convergence*, fosters deep learning and critical thinking (Harasim, 2017). Instructional design informed by OCL can incorporate group projects, discussions, and peer review activities to promote collaborative knowledge construction and self-reflection (Chiong & Jovanovic, 2012).

Technology plays a supportive role in OCL by enhancing communication and knowledge construction (Harasim, 2012). However, the teacher remains crucial. Teachers act as a link to the knowledge community and a facilitator of learning, ensuring core concepts and best practices are integrated into the learning cycle (Bates, 2022; Salmon, 2000).

Learning Management Systems (LMS) are a common platform for promoting OCL, often featuring online discussion forums (Bates, 2022). These forums are typically text-based, asynchronous (allowing participation at any time), and often threaded (enabling responses to specific comments). Effective online discussions center on several instructional design principles outlined by Govindasamy (2001) and Hodges et al. (2020). By adhering to these principles, OCL can achieve its intended benefits. Online collaborative learning can foster deep learning, critical thinking, analytical thinking, synthesis, and evaluation skills – all valuable for success in the digital age (Carr, 2022). However, OCL is not without limitations. Scalability can be a challenge, as it often requires highly skilled instructors and smaller learning groups (Bates, 2015). Additionally, OCL may resonate more readily with disciplines in the humanities, social sciences, education, and some areas of business.

Discussion

This analysis explores the strengths and weaknesses of current online learning (OL) models and frameworks as applied in higher education. It emphasizes the importance of critical considerations for an effective OL instructional design model and examines how existing models fall short in providing a multimodal and integrative system for quality instruction and effective student support.

Within the scholarly discourse on OL, prominent figures like Anderson (2011) and Picciano (2021) have proposed foundational models. Anderson's integrated theory of OL laid early groundwork, acknowledging its own limitations. Picciano's multimodal model builds upon this, emphasizing pedagogical aspects and broadening Anderson's scope by incorporating self-paced

learning and distinguishing OL from mere distance education. This model proposes six blended learning modalities: content, interaction, questioning, assessment, collaboration, and reflection, with self-paced learning added later. Recognizing learner diversity, Picciano advocates for a multifaceted approach integrating face-to-face methods and online technologies. Grounded in established learning theories like behaviorism, cognitivism, and social constructivism, Picciano's model acknowledges the evolving nature of online education and the potential relevance of other theoretical frameworks.

While Picciano's multimodal model offers a rich pedagogical toolbox, it *implicitly* addresses aspects of student success rather than providing *a strong and explicit framework* for quality and student support services in OL. *It tends to overlook the diverse and specific needs and engagement strategies essential for online learners* (Meda & Waghid, 2022; Selvaraj et al., 2020). Additionally, its primary focus on instructor and designer-centric pedagogical approaches can overshadow student voices and comprehensive quality assurance measures, both vital for ensuring effective OL experiences (Rotar, 2022; Stewart et al., 2013).

To address these shortcomings, this article proposes incorporating sound student support systems encompassing admissions, academic advising, technical assistance, personal counseling, and career services. Furthermore, it advocates for a comprehensive quality assurance framework that includes strong leadership commitment, adequate resource allocation, continuous review and improvement, all with a student-centered focus (Holt et al., 2014). By prioritizing student needs and fostering a quality-focused environment, OL can fulfill its potential for effective and engaging education.

Through combining the strengths of Anderson's and Picciano's models and explicitly addressing their limitations, OL can be designed to be both pedagogically sound and supportive of student success. A holistic approach that considers all facets of OL, from pedagogical principles to comprehensive student support systems, is essential for creating effective and engaging (quality) OL experiences in higher education, as depicted in Figure 3 (next page).

Figure 3 depicts a framework for OL design where learning objectives serve as the central guiding force. These clear and concise statements outline the specific knowledge, skills, or understanding learners will gain by the end of a course, acting as a compass directing all other design choices towards a successful learning journey (Chen, 2016). This framework emphasizes that learning objectives are not set in isolation but are continually informed by an understanding of the diverse needs and characteristics of online learners, ensuring a learner-centered paradigm where outcomes are purposeful and measurable.

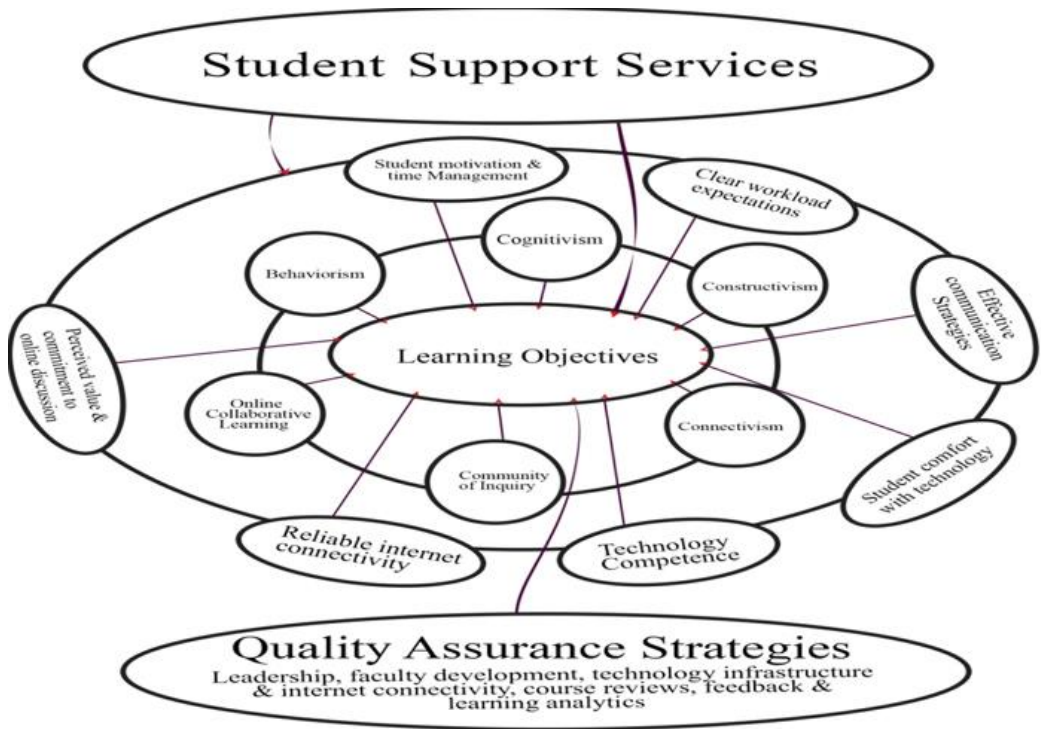


Figure 3: Multimodal- integrative Approach to Online Learning Design

Surrounding the learning objectives are various instructional theories. Frameworks like cognitivism, constructivism, and connectivism offer different approaches for diverse learners. The beauty of an integrative approach lies in drawing from these various theories to create a rich learning experience, ensuring learning objectives are achievable through a variety of learning activities and resources. This multimodal-integrative approach strategically incorporates elements such as lectures, videos, simulations, discussions, case studies, and hands-on activities, catering to diverse learning styles and preferences and ensuring all learners have opportunities to engage with the material. This model explicitly illustrates the linkages between diverse learning theories and the strategic choices for multimodal content delivery and support mechanisms, highlighting how theoretical foundations directly inform specific design decisions beyond general modalities. For example, principles from constructivism might guide the design of collaborative multimedia projects, while cognitive load theory could inform the presentation of complex information across different visual and auditory modalities.

Beyond instructional theories, the framework acknowledges the critical importance of student support services and quality assurance. These elements form a strong foundation for successful OL. Strong student support services encompass motivation strategies, clear workload expectations, effective communication and time management guidance, and readily available support systems including technology/technical support, internet access guidance, and online

discussions for academic assistance and guidance services (Rolle, 2023; Yilmaz, 2019). Because online students encounter distinct learning challenges as compared to traditional counterparts, institutions should provide support services that address their unique technical, academic, and personal needs. All students require access to clear information regarding online education's requirements, including preparation strategies (Babacan & Thurgood, 2022; Brown et al., 2020; Gillett-Swan, 2017). This model provides more detailed and actionable guidance on the design and integration of these comprehensive student support services, treating them as integral components from the outset rather than auxiliary considerations.

Crucially, while an instructional designer does not directly control external factors such as reliable internet connectivity, institutional technological infrastructure, or a student's prior technology competence and comfort, the proposed model emphasizes that the design process must strategically account for these realities. The designer's role is to build resilience into the learning experience, scaffold technology use, and establish clear pathways to support. Moreover, the designer is expected to assure the instructional strategies are relevant to real-world application (Chen, 2016; Moller, 2010; Stavredes & Herder, 2014). This means:

- i. Designing for diverse technological access: Incorporating asynchronous activities and providing downloadable or low-bandwidth content options to accommodate varying internet stability.
- ii. Integrating institutional support: Ensuring prominent and intuitive access to existing institutional technical support, academic advising, and personal counseling services within the learning environment.
- iii. Promoting digital literacy: Designing explicit introductory modules or activities to help students develop necessary technology competence and comfort, ensuring they are prepared for the online learning environment.

Quality assurance measures ensure if the online course meets specific standards. This involves accessibility checks, regular review of course content and assessments, and gathering learner feedback to continuously improve the OL experience. Effective OL environments rely on strong quality assurance mechanisms. Learning analytics provide valuable data on student learning patterns, allowing educators to identify areas for improvement and enhance learning outcomes (Holt et al., 2014; McFurtane, 2011). Strong leadership and a culture of quality within an institution are crucial, with administrators establishing strategic plans, performance indicators, and fostering continuous improvement (Awais, 2023). Technological infrastructure plays a critical role; adequate resources must be allocated to ensure accessible, reliable technology for all students regardless of location (Bates & Poole, 2003). This includes not only institutional learning management systems but also faculty development on using technology effectively (Khalil & Elkhider, 2016). Additionally, students' "bring-your-own-device" approach opens doors for innovative technology use in OL (Garrison & Anderson, 2000; Yeung et al., 2019).

Regular reviews informed by performance data and stakeholder feedback (including students) are essential for program improvement and building a strong reputation (Oliver, 2001).

Quality assurance models for OL should be integrated into existing frameworks but tailored to the specific online delivery mode. A whole-of-institution approach is necessary, gathering information across all aspects of service delivery, teaching and learning, and staff management (Maphsa et al., 2020). This comprehensive approach ensures ongoing evaluation and improvement of OL environments.

Student experience and assessment strategies play a significant role in delivering quality OL. While often overlooked, student experience is crucial for OL success, with positive experiences influencing student retention. A sense of belonging fosters student engagement and identification with the institution. As online education offerings expand, prioritizing positive student experiences can significantly impact course selection (Dumford & Miller, 2018; Sharpe & Benfield, 2005). Furthermore, clear communication of assessment tasks and effective moderation strategies are hallmarks of a quality OL program. Assessments should demonstrably align with program learning outcomes and provide opportunities for students to showcase their knowledge and skills (Al-Khatib, 2023; Gil-Jaurena et al., 2022). Established assessment guidelines are essential to manage and support the unique dynamics of online group work and collaboration (Brindley et al., 2004; Brindley et al., 2009). To enhance assessment legitimacy and reliability, providers increasingly utilize plagiarism detection tools and incorporate features like facial recognition software (proctored exams) and keystroke identification to minimize cheating (Labayen et al., 2021; Vegendla & Sindre, 2019). While these technological advancements hold promise, it is vital to maintain a balance by also incorporating real-world application through authentic projects or intensive work experience placements (Banta & Palomba, 2014; Sheridan et al., 2019). The development of discipline-specific and generic skills, such as oral communication and interpersonal skills, remains achievable within online environments (Luca, 2002).

Ultimately, this comprehensive approach to quality assurance and instructional design fosters a successful and engaging learning experience for all students. It ensures the online program delivers effective and stimulating educational experiences that promote deep learning and critical thinking skills. By integrating quality assurance mechanisms with a multimodal-integrative design, OL environments can truly empower students to achieve their full potential.

Conclusion and Way Forward

As OL becomes increasingly mainstream in higher education, the need for continuous evaluation and adaptation of instructional design theories becomes paramount. This ensures their ongoing relevance and effectiveness within the unique context of OL environments. Instructional designers must stay abreast of the latest technological advancements and

innovations in the field. They should be open to experimenting with new OL approaches to deliver the most effective and engaging learning experiences for their students.

The learning theories explored in this study provide a valuable framework for designing effective and efficient OL environments, with their strengths and weaknesses. These theories are powerful tools, but only tools, that can enhance learning when used judiciously. With sound learning theories as the foundation, effective instructional design can create flexible, engaging, participatory, inclusive, and personalized learning experiences. This fosters deep learning and the development of critical thinking skills in online learners. Furthermore, research exploring the application of these theoretical frameworks in diverse instructional design contexts for OL holds immense value.

Instructional designers must carefully consider the application of each theory to specific learning goals and contexts. Making decisions about which theories to apply in a particular OL course requires careful consideration of their advantages and limitations. It's important to remember that there's no single "best" theory for all situations. Most of these theories can be leveraged to promote and integrate technology into OL experiences. This suggests that multiple theories can be applied simultaneously within the same OL course to address different learning activities. Rather than adhering to a single theoretical approach, instructional design should strategically select the most appropriate and contextually relevant theories to address specific learning objectives.

Through applicable instructional design grounded in sound learning theories, coupled with comprehensive and continuous student support services, robust assessment practices, and informative feedback mechanisms, OL can offer learners a multitude of benefits. These include flexibility, engagement, collaboration, and personalization, ultimately leading to deeper learning and the development of critical thinking skills. Therefore, the author recommends *a multimodal-integrative or mixed approach* that strategically combines the strengths of behaviorism, cognitivism, constructivism, connectivism, CoI, and OCL. This approach can cater to the specific needs of each learning objective and context, maximizing the likelihood of mastery and offering students the optimal OL experience. However, the effectiveness of integrating and combining these theories through an eclectic method is highly dependent on various factors. Some of these key factors include student motivation, time management skills, workload, communication approaches, understanding student comfort levels with technology, the level of student support available, technology competence of both students and instructors, internet connectivity, commitment to online discussions, and the perceived value and role of online discussions.

Future Research Directions

Future research efforts should explore the effectiveness of OL theories within an *integrated multimodal model* for online education. This model should incorporate strong student support services alongside robust assessment and feedback strategies. This research should also investigate the potential influences of such an integrated model on student engagement and learning outcomes.

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Teacher Attrition and Motivation in Ethiopia: Prevalence, Associated Factors and Influences

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Abstract

This study examines the intricate interplay between teacher attrition and motivation, emphasizing their significant implications for educational systems, student achievement, and community wellbeing. Attrition among skilled educators driven by personal factors, institutional challenges, and interrelated variables disrupts learning environments and erodes school culture. Employing a triangulated research design, the study integrates quantitative and qualitative methods, including desk reviews, teacher surveys, focus group discussions, and administrative data analysis, to capture both statistical trends and lived experiences. Findings suggest that schools fostering supportive, secure, and well-compensated workplaces are more successful in attracting and retaining high-performing teachers. Professional development, well-being initiatives, and fair evaluation systems further enhance retention. However, economic pressures, particularly in sub-Saharan Africa, with Ethiopia as a focal case, exacerbate attrition, as stagnant salaries fail to keep pace with inflation. Addressing this issue requires systemic reform and improved economic conditions. Given the diverse political, cultural, and socioeconomic contexts across regions, further localized research is essential to develop effective, sustainable solutions.

Keywords: Teacher Attrition, Teacher Motivation, Teacher Retention, Teacher Turnover

Introduction

The provision of high-quality education through the employment of a well-qualified teaching workforce and the establishment of effective school leadership remained an education policy priority for Ethiopia (Ministry of Education [MoE], 1994 & 2023). However, the education system faces mounting challenges, particularly in teacher motivation and retention, which directly impact the quality of education and student achievements. As noted by Gemedu and Tynjälä (2015a), the two greatest challenges facing the education system are the deteriorating quality of education and the decline in students' learning outcomes. Motivation—the central focus of this study, refers to the intrinsic values and personal convictions that drive individuals to pursue and remain in the teaching profession. Ethiopian teachers face numerous demotivating factors, including poor working conditions, low salaries amid high inflation, limited career

growth, lack of resources, and unsafe environments. These challenges have contributed to a growing concern over teacher attrition.

Teacher attrition, defined as leaving the profession entirely, is often conflated with teacher migration, which involves transitioning between schools. This conceptual distinction remains difficult to delineate due to the absence of systematic exit interviews and longitudinal tracking mechanisms. As Gundlach (2025) emphasises, further investigation into the differences between teacher attrition and teacher migration is necessary in order to inform policy and practice. Teacher attrition refers to teachers leaving the profession entirely, while teacher migration refers to teachers transitioning between schools.

In Ethiopia, data collection challenges have led to ambiguity in understanding teacher mobility. According to the Education Statistics 2023/24, the reasons for attrition in public schools are largely categorized under “Other,” with “Change/Left teaching profession” accounting for 5.2% and “Retirement” following. Regional disparities are evident, with attrition rates ranging from 0.0% in Addis Ababa to 9.0% in Gambella.

Globally, teacher attrition rates vary significantly. According to UNESCO (2017), during the mid-to-late 2010s, primary school teacher attrition in Sub-Saharan Africa (SSA) was 4.8%, while attrition at the lower secondary level reached 7.3%. Some countries, such as Benin and Sierra Leone, have reported rates exceeding 20%. Scholars have identified a motivation crisis among teachers in SSA, which threatens efforts to improve education quality (Pitsoe, 2007; Bennell & Akyeampong, 2007; Harding & Mansaray, 2005).

In contrast, high-income countries tend to experience higher attrition rates due to broader employment opportunities. For example, Europe’s average teacher attrition rate is 7.1%, with England and Scandinavia reaching 10.2% (Bennell, 2023, p. 2). As can be seen from the data presented by Bennell (2023) on annual attrition rates among primary school teachers in SSA in the mid-to-late 2010s, the attrition rate of public-school teachers in Ethiopia is about 2%, which is relatively low. In countries like Ethiopia, this relatively low rate may be viewed in the context of limited alternative career options and high teacher unemployment among job seekers (Bennell, 2023).

This study provides deeper insights into the causes and trends of teacher attrition in private schools, with their higher attrition rates. It explores the socioeconomic, cultural, and political factors influencing teacher motivation, reviews relevant theoretical frameworks, and analyzes how school allocation and economic conditions affect staffing stability. Furthermore, it offers data-driven recommendations for educational institutions and policymakers to reduce attrition rates, enhance teacher motivation through professional development and workplace incentives, and address systemic challenges to improve teacher retention.

Rationale

The continual loss of qualified and experienced teachers disrupts the learning process, undermines educational quality, and fosters instability within schools. Such turnover weakens staff morale and erodes the broader school culture. In contrast, retaining teachers strengthens relationships with students, parents, and stakeholders, building trust and mutual support. A stable and supportive environment also enables teachers to grow professionally, gain valuable experience, and enhance their instructional effectiveness, ultimately advancing the education system.

Teacher attrition further strains school resources. Administrators are compelled to divert significant time and funding toward recruitment, hiring, and training, often at the expense of other critical priorities. This cycle imposes a heavy financial burden, whereas reducing attrition would ease costs and allow schools to redirect funds toward pressing educational needs. Addressing the root causes of attrition, therefore, requires targeted interventions, including reducing excessive workloads, strengthening institutional support, and expanding opportunities for professional development.

In Ethiopia, these challenges are intensified by severe economic pressures faced by civil servants. According to the World Food Programme (June 2022), conflict and drought have driven inflation to unprecedented levels, with the Food Price Index rising by 43% compared to the previous year. Similarly, Trading Economics (2024) reported that Ethiopia's inflation rate reached 17.5% in September 2024, with food prices increasing even more sharply. These conditions place immense financial strain on teachers, whose stagnant salaries fail to keep pace with the rising cost of living.

As a result, many teachers struggle to meet basic needs. Despite minor salary adjustments, no substantial measures have been taken, leading to widespread dissatisfaction that erodes morale and diminishes passion for teaching. Economic hardship and systemic inefficiencies have forced teachers to attend school only when scheduled for classes, while many seek secondary employment to survive. This dual burden limits their ability to prepare lessons, pursue further study, and maintain physical, emotional, and mental well-being. Creativity is stifled, motivation remains low, and many teachers are present in classrooms only physically, while mentally and professionally disengaged. This reality is reflected in declining national school leaving examination results.

Against this backdrop, the present study aims to explore the complex realities confronting teachers, their financial struggles, their capacity to sustain motivation under adverse conditions, and their commitment to professional responsibilities. By examining these lived experiences,

the research seeks to identify practical solutions to improve teacher well-being and strengthen the broader educational system.

Research Question

This study attempts to answer the following research questions

- What are the key factors influencing teacher attrition, and how does teacher motivation mediate the relationship between these factors and teacher retention in Ethiopia?
- Which intrinsic factors (e.g., personal values, job satisfaction, no reward or recognition, absence of professional development training, etc.) and extrinsic factors (e.g., working conditions, administrative support, low monthly salary, and institutional environment, etc.) most strongly influence teachers' decisions to leave or stay in the profession?
- What are the differences, if any, in reasons for attrition and motivation among teachers in private schools in Ethiopia?
- What effective motivational approaches or methods are being practiced in private schools in Ethiopia, and their effectiveness?
- If there are any strategies and motivational interventions in Private schools (e.g., professional development, recognition programs, etc.), to what extent have they ever influenced teacher retention and overall school performance?

Literature Review

Conducting an extensive literature search is crucial for analysing current statistical trends related to attrition and motivation across various contexts. This entails reviewing pertinent academic research to grasp the wider educational implications of these phenomena, as well as sourcing the latest available reports on the subject. To facilitate a thorough investigation, the literature review was systematically organized by themes, enabling a deeper conceptual understanding to support the study. Accordingly, the review was structured under the following subheadings: Teacher Attrition, Attrition in Sub-Saharan Africa, Teacher Motivation, and Theories of Motivation.

Teacher Attrition

Teachers play a pivotal role in the education sector, as they are at the frontline of curriculum implementation and are directly accountable for student growth and development. Consequently, teacher attrition has become a growing concern in educational research, prompting scholars to investigate its underlying causes and contributing factors. Nguyen et al. (2019) provide a comprehensive overview of this trend, noting that research on attrition has expanded substantially over the past thirteen years. They propose a refined conceptual framework that organizes determinants into three broad categories: personal, school, and external correlates, offering a more nuanced lens through which to examine retention and attrition.

Studies highlight the serious implications of teacher attrition. Ronfeldt, Loeb, and Wyckoff (2013) demonstrate that high levels of attrition are negatively associated with student achievement, even among students whose teachers remain. Beyond academic outcomes, attrition also imposes substantial financial costs on schools, underscoring the urgency of addressing this issue. Within the school context, Nguyen et al. (2019) emphasize that teacher satisfaction is a critical factor influencing decisions to stay or leave. They further note that middle school teachers are more likely to exit than elementary teachers, and that organizational features such as disciplinary climate, administrative support, and professional development strongly shape retention. Access to adequate teaching materials also reduces attrition, whereas other school body characteristics appear to exert only a minor influence. “The role of evaluation and accountability has been debated, with some scholars expressing concern that such measures may drive teachers away” (Darling-Hammond, 2013; Darling-Hammond et al., 2012). However, more recent evidence suggests otherwise.

Springer et al. (2019) found that teachers subject to evaluation, even for accountability purposes, were less likely to leave than those who were not. Similarly, Boyd et al. (2008) and Feng (2010) argue that evaluations can empower teachers by providing feedback on strengths and areas for growth, thereby reducing attrition. These findings suggest that evaluation and accountability, when implemented constructively, may improve workforce quality by retaining effective teachers and encouraging weaker ones to exit.

Globally, determinants of attrition extend beyond school-level factors. Nguyen et al. (2019) identify teacher characteristics (e.g., gender, age, and family status), qualifications, organizational features, resources, and student body composition as key influences. Yet findings remain mixed. For instance, Borman and Dowling (2008) found little evidence that socioeconomic composition strongly affects attrition, while Engel, Jacob, and Curran (2014) observed that teachers’ preferences vary systematically according to student demographics. Such contradictions show the complexity of attrition research and the need to consider interactions among multiple variables.

Cross-national comparisons further illustrate this complexity. In OECD countries, attrition rates range from 2% to 14% annually, with Korea reporting the lowest and the United States the highest (UNESCO, 2020). Rates also fluctuate over time within individual countries. Importantly, even in the absence of voluntary resignation, education systems typically experience a baseline attrition rate of 3–4% annually due to retirement, illness, or death. In Ethiopia, recent statistics from the Ministry of Education (2024) indicate a 2% attrition rate in public schools, which is considered acceptable. However, this figure masks deeper challenges: poorly performing teachers often remain in the system, as qualifications alone determine entry

and retention. This underscores the need for policies that address not only attrition rates but also teacher competence and effectiveness.

Teacher Attrition in Sub-Saharan Africa

Sub-Saharan Africa (SSA) refers to the regions of the African continent lying south of the Sahara, comprising between 46 and 48 countries depending on the organization defining the region (UN, WHO, World Bank). Like many parts of the world, SSA faces significant challenges with teacher attrition, which is often context-dependent. The main causes identified include HIV/AIDS, low salaries, poor management, and weak teacher motivation (Xaba, 2001; Bennell, 2005; World Bank, 2007; Mulkeen, 2010; Mutune & Orodho, 2014). Teaching is frequently perceived as a last-choice profession or a stepping stone to more attractive careers (World Bank, 2007, as cited in Giertz, 2016).

Teacher attrition rates in SSA vary widely, with estimates ranging from 5% to 30% depending on the country. Attrition imposes substantial costs on educational institutions through increased recruitment and hiring needs, while also undermining student performance and school effectiveness. As Ortega-Dela Cruz (2016) notes, strategic responses must focus on improving school-level conditions that support effective teaching, since strong teaching environments foster better learning outcomes.

Low salaries remain the most significant factor driving attrition in SSA. Salaries are a double-edged instrument: adequate pay can attract and retain teachers, while inadequate pay leads to demotivation and declining education quality. Even minor salary adjustments can have major fiscal consequences for governments, given the large proportion of education budgets devoted to teacher wages (World Bank, 2007). Furthermore, corruption has been identified as a major obstacle to economic and social development, including within the education sector (World Bank, 2002, 2007).

Bennell and Akyeampong (2007) emphasize that low pay and poor working conditions are the primary causes of attrition and shortages. While merit pay has been linked to reduced attrition, evidence remains inconclusive regarding which program characteristics are most effective. Nguyen, Pham, Springer, and Crouch (2019) caution that much of the research relies on associational evidence, leaving uncertainty about whether observed effects are unbiased or influenced by unobserved school-level factors. Similarly, evidence on whether merit pay attracts more effective teachers or not teacher evaluation reduces attrition, remains limited.

Mulkeen (2010) argues that policies addressing attrition must improve working conditions, ensure reliable payment, and strengthen management. Guskey (2000) adds that reforms assuming uniform national education systems often fail, as teaching is shaped by diverse contextual factors. UNESCO (2015a) highlights the chronic nature of teacher shortages in SSA,

projecting that countries such as Tanzania, Sudan, and Gambia will not close the gap until after 2030. Collaboration between program developers and teachers is therefore essential to balance and improve teaching and learning processes. Research in Ethiopia reinforces this point: schools offering safe, supportive environments and adequate compensation are better able to attract and retain motivated teachers (Gemedā & Tynjälä, 2015b).

Overall, teacher attrition in SSA is complex and multifaceted, shaped by economic, social, and institutional factors. Research remains inconclusive, requiring careful approaches that integrate first-hand evidence from teachers and stakeholders. Recent studies have expanded the determinants of attrition beyond traditional factors, identifying teacher evaluation, merit pay, federal policies, principal effectiveness, race/gender matching, school reform, and research practice partnerships as emerging influences (Nguyen et al., 2019). This underscores the contextual nature of attrition, which is profoundly shaped by geography, social environment, and national development.

Teacher Motivation

Teacher motivation refers to the intrinsic values that drive individuals to choose and sustain teaching, as well as the effort they invest, which is shaped by contextual factors (Han, 2016). Teacher motivation is crucial for effective performance, and addressing declining motivation is essential for sustaining high-quality teaching and enhancing student learning outcomes (TTF, 2016; World Bank, 2018)

Globally, governments have recognized the importance of teacher motivation in addressing attrition. For example, teacher shortages have been reported in countries such as the United States, Australia, the United Kingdom, Germany, and Norway, where teaching is often perceived as a less attractive career option (Kyriacou & Kunc, 2007; Weiss, 1999). In response, the U.S. Department of Education announced more than \$368 million in new grant opportunities through the Education Innovation and Research (EIR) program and the Teacher and School Leader (TSL) incentive program. These initiatives prioritize educator diversity, career advancement, and leadership opportunities tied to increased compensation (U.S. Department of Education, 2023).

Beyond government efforts, numerous NGOs, philanthropic foundations, and community organizations also provide small education grants to support teachers and schools. Directories such as *GrantWatch* list hundreds of active education-related funding opportunities from non-profit and private sources (GrantWatch, n.d.), while *FundsforNGOs* highlights international and U.S.-based grants aimed at school improvement and teacher development (Funds for NGOs, n.d.). These proactive measures reflect the urgency of addressing teacher attrition and motivation.

Research interest in teacher motivation has grown significantly in the past decade, with scholars identifying causes of shortages such as early attrition, an ageing teaching force, limited career opportunities, low job security, and declining prestige (OECD, 2005; Richardson & Watt, 2005, 2006; Sinclair, 2008; Sinclair et al., 2006; Watt & Richardson, 2007; Watt et al., 2012). Motivation is closely linked to student outcomes, educational reform, teaching practice, and teachers' psychological well-being. Administrators, therefore, need to consider how to attract and retain teachers by ensuring supportive environments and fair compensation.

To address motivation, policy recommendations are emphasizing strong administrative support, collaborative school cultures, and meaningful professional development. Podolsky, Kini, Bishop, and Darling-Hammond (2016) caution, however, that more rigorous evaluations of such initiatives are needed. Similarly, Beng Huat See et al. (2020) argue that mentoring and teacher development programs often lack robust evidence of effectiveness, underscoring the need for causal research. Mulkeen (2010, as cited in Beng Huat See et al., 2020) adds that teachers are motivated by student achievement but demotivated by conditions that limit their ability to meet objectives.

Despite clear evidence that attrition negatively affects educational outcomes, limited research has examined how motivation can mitigate these effects, particularly within the Ethiopian context. Schools that provide safe, supportive environments and adequate compensation are better able to attract and retain motivated teachers. Ultimately, effective leadership is essential to ensure equitable access to quality education, especially in underserved communities where shortages are most acute.

Theories of Motivation

Educational institutions have frequently applied Herzberg's Two-Factor Theory to enhance teacher motivation and retention. To strengthen intrinsic motivation, schools implement structured career development programs such as workshops, mentorship initiatives, and leadership training. At the same time, hygiene factors are addressed through smaller class sizes, improved teaching resources, and supportive administrative policies, which help mitigate dissatisfaction. Institutions also introduce teacher awards, performance-based bonuses, and public recognition programs to reinforce motivation. In addition, granting educators greater autonomy in curriculum design and classroom management fosters a sense of ownership and engagement.

In the Sub-Saharan African (SSA) context, multiple factors influencing teacher motivation warrant further exploration. These include strengthening teacher-parent relationships, ensuring sustained distribution of resources (e.g., materials and water), providing adequate and regular in-service training, and enabling a more transparent and accountable education system. Herzberg's Two-Factor Theory

(intrinsic motivators and extrinsic hygiene factors) and Maslow's Hierarchy of Needs have been used as frameworks to analyse these issues in developing countries. Findings suggest that satisfying teachers' needs leads to higher motivation, improved performance, better student achievement, and overall quality education (Frehiwot, 2021, p. 35).

In Ethiopia, however, only a few of these theories have been implemented within the school system. While numerous professional development programs have been introduced in public schools, many were framed as motivational initiatives designed primarily to provide per diem compensation rather than to enhance teachers' skills. As a result, financial incentives often shifted participants' focus on monetary benefits rather than the actual learning experience. Regarding hygiene factors, private school teachers tend to benefit more than their public-school counterparts. Flexible schedules, smaller class sizes, and improved teaching resources are more prevalent in private schools. In contrast, public schools are heavily influenced by political directives, and well-structured administrative policies play little role in reducing dissatisfaction. Transparent communication, fair workload distribution, and responsive leadership are rarely practiced, making it difficult to foster a stable and motivating work environment. Conversely, private schools that actively address compensation, job security, and professional growth through thoughtful administrative support are better able to mitigate frustration and enhance teacher retention and engagement.

Although several studies have examined structural and policy-related aspects of teacher attrition in Ethiopia, significant gaps remain in understanding the lived experiences of teachers, particularly regarding economic hardship, motivational decline, and professional disengagement. Much of the existing research focuses on quantitative attrition rates without capturing the qualitative dimensions of teacher well-being and commitment. Addressing this gap requires in-depth exploration of how socioeconomic pressures and institutional conditions shape teachers' daily realities and long-term career decisions.

In summary, while some components of Herzberg's Two-Factor Theory (See Table 1 on next page) have been applied in Ethiopia, the depth and capacity to fully translate each factor into actionable strategies have proven unrealistic. This highlights the need for more context-sensitive approaches to teacher motivation that integrate both structural reforms and the lived experiences of educators.

Maslow Comes to Life for Educators and Students further to what has been stated above, which explores how "Maslow's Hierarchy of Needs (See Figure 1 on next page) can be applied in classrooms to support both teachers and students" Maslow, A. H. (1943).

Table 1: Summary of Key Concepts of Herzberg's Two Factors That Affect Teachers' Motivation

No	MOTIVATING FACTORS (Intrinsic)	DEMOTIVATING FACTORS (Extrinsic Hygiene Factors)
1	School improvements	Workload (Working conditions)
2	Meaningful PDT	Low Monthly Salary
3	Supportive Teacher Evaluation	Recognition (reward vs. performance)
4	Recognition from colleagues or mgmt.	Teacher Accountability
5	Advancement	Lack of Career Development
6	Responsibility	Institutional Environment
7	Work itself	Teacher's Voice
8	Minimum threshold/ Reward	Materials and Facilities



Figure 1: Maslow's Hierarchy of Needs

The idea is that when basic needs (like food, safety, and emotional well-being) are met, students are more engaged and ready to learn. Educators can also create brain-friendly environments by addressing these needs through strategies like mindfulness, positive affirmations, and supportive classroom structures. Likewise, a teacher or student can reach his or her full potential to be mentally critical and be able to influence his or her environment,

provided there is a fulfilled aesthetic needs and a coercive environment to trigger personal desire to learn and understand more are in place. Otherwise, expecting an influence on existing teaching and learning condition to attain an improved school environment and the quality of education would be poor. This is the point where a paradox has emerged between those advocating for salary increases (Teachers) and the government's expectations for quality education. Due to the inherent nature of the issue, finding common ground and reaching an amicable resolution appears impossible, as the demands seem fundamentally irreconcilable.

In summary, the reviewed literature spans 15 years, with publications dating from 2007 to 2022. Recently, the case of attrition and motivation has become a more of a challenge for most SSA, including Ethiopia. The readings on attrition and motivation research made so far are quite complex and have made it impossible to deduce one size fits for all conclusive endorsement. The problem varies between countries, regions, political systems, and the type of school administration in this case (private, public, religious, international schools, etc.). Moreover, human beings are egoistic by nature and have multiple needs and unlimited demands that vary throughout changing times, so be true with teachers. Hence, considerate understanding of attrition and motivation issues vary along with contexts of the external environment, and too difficult to speculate the consequences of any action taken to resolve both. Hence, research done so far on attrition and motivation reflects an intrinsic value than extrinsic hygiene factors, as shown above, which would have more significance.

Research Methodology

This study employs a mixed methods approach, combining both quantitative and qualitative techniques to investigate teacher attrition in private schools, with particular attention to the factors driving teacher attrition and the resulting instability in the education system. This approach allows for a comprehensive understanding of the issue by integrating statistical data with contextual insights.

Study Participants and Sampling

The study was conducted in three private schools in Addis Ababa, each with over ten years of continuous operation, ensuring stable records and reliable insights into teacher attrition and motivation. Teachers from Grades 1–12 were included to capture variations across grade levels. Selection criteria emphasized institutional longevity, multi-campus operations, and established private sector practices, while teacher participation required full-time engagement in teaching responsibilities.

Data were collected from administrative records, structured surveys, and focus group discussions, with attrition rates calculated annually. Ethical safeguards were rigorously applied, including informed consent, confidentiality, and measures to minimize bias. Although five

additional schools were initially approached, only institutions granting consent were included; in this case, 2 consented, which makes the studied schools 3 in total, thereby ensuring that the findings reflect mature private school practices and remain ethically aligned with research protocols.

A total of 45 teachers from 3 schools were selected using simple random sampling. Participants' names were written on slips of paper, shuffled, and drawn to guarantee unbiased selection.

Data Collection Instruments

Data were gathered through a structured questionnaire consisting of self-developed 4 multiple-choice and 3 open-ended questions:

- Basic Information plus 4 key multiple-choice questions to capture quantifiable data that contains fulfilment, motivation factors, and attrition & retention.
- 3 open-ended questions to explore personal experiences and perspectives.
- 3 Focal group discussions (FGDs) were conducted, each comprising 4–5 participants.

Where participants were asked guiding questions such as the reasons for teacher attrition, influencing factors, and potential strategies to mitigate it. Participants' opinions and concerns were recorded in handwritten notes, which were later transcribed into digital format. The discussions were conducted in the native Amharic language, allowing participants to express themselves more freely. These FGDs provided rich qualitative insights into the emotional, professional, and institutional dimensions of teacher attrition and motivation.

Purpose and Analysis

This methodological framework enables:

- Methodical assessment of teacher attrition patterns.
- Evaluation of motivational factors affecting retention.
- Interpretation of qualitative narratives from focus group discussions to enrich the quantitative findings.

Together, these methods offer a robust foundation for understanding the dynamics of teacher attrition and its implications for private school systems.

Data Analysis

The data collected through questionnaires and focus group discussions were analysed using both quantitative and qualitative techniques to ensure a comprehensive understanding of teacher attrition and motivation in private schools.

Quantitative Analysis

Responses from the 4 key multiple-choice questions with multiple answers were coded and entered a spreadsheet for statistical analysis. Descriptive statistics, mainly frequencies and

percentages, were used to identify patterns in Rates of teacher attrition, Common motivational factors, Perceptions of job and Institutional support mechanisms. This analysis helped quantify the prevalence of key issues and provided measurable insights into the factors influencing teacher retention and turnover.

Qualitative Analysis

The 3 open-ended questions and transcripts from the three focus group discussions (each with 4–5 participants) were analysed using thematic analysis. This involved:

Transcribing the responses verbatim, coding recurring ideas and expressions and Grouping codes into broader themes such as motivation factors, demotivating factors, reasons for leaving and staying in the teaching profession explored. These themes were then interpreted to uncover deeper meanings and contextual factors that may not be evident in the quantitative data.

To enhance the validity of the findings, triangulation was employed by comparing insights from both data sources. This cross verification allowed for a more nuanced understanding of how personal experiences align with broader trends in teacher attrition and motivation.

Ethical considerations

Most research process in social science, mainly education, presents unique ethical challenges due to the involvement of human participants who have the fear of accountability, risk of losing confidential information, or the sensitive nature of educational data, which, if not carefully handled, sometimes violates the rights of the research participants.

- “This study implemented strict protocols to protect personal and organizational data, including anonymization of participant information, restricted access to sensitive records, and compliance with institutional privacy guidelines. Ethical considerations were addressed comprehensively, balancing the interests of teachers, department heads, supervisors, HR managers, and school directors. As Bruton et al. (2024) note, ensuring responsible and ethical conduct is paramount to maintaining research integrity and safeguarding participant well-being. These measures ensured that privacy and ethical standards were upheld throughout the research process.”
- The consent form ensures that names are left out of the document, and participation is purely voluntary.
- The research document does not include the name of any school or individual, as this was anticipated and mutually agreed upon by the participants.

Result and Discussion

Teacher Survey Result

This study examines the underlying causes of teacher attrition in private schools and emphasizes the pivotal role of motivation in sustaining retention. Drawing on survey responses from 45 teachers, it provides a comprehensive perspective on the complex interplay between motivating and demotivating factors that shape teachers' decisions to remain in or leave the profession.

The findings highlight a clear tension between **intrinsic motivators**, such as passion for teaching, positive relationships, and opportunities for professional growth, and **extrinsic pressures**, including salary dissatisfaction, heavy workloads, and limited career progression. Although teaching continues to attract individuals due to its accessible entry requirements, inadequate compensation and restricted advancement prospects reinforce its perception as a temporary or stopgap career rather than a sustainable long-term profession.

Detailed results across all key categories are presented in the following tables.

a) Motivational Factors

Table 2: What motivates teachers in their current teaching job?

Motivational Factors	School 1	School 2	School 3	Total
a) Passion for teaching	7	4	10	21 (28.00)
b) Supportive work environment	6	4	4	14 (18.67)
c) Salary & benefits	8	1	1	10 (13.33)
d) Opportunities for professional growth	5	3	5	13 (17.33)
e) Positive relationships with students & parents	6	3	5	14 (18.67)
f) Other (please specify) (Admin Effort)	2	1	0	3 (4)
Total=	34 (45.33)	16 (21.33)	25 (33.33)	75 (100)

NB: Numbers in parentheses are percentages (%).

Analysis of motivational factors across the three schools reveals that passion for teaching (28%) is the most significant driver, followed closely by supportive work environments (18.67%) and positive relationships with students and parents (18.67%). Opportunities for professional growth (17.33%) and Salary and benefits (13.33%) were comparatively weaker motivators.

Notably, School 3 demonstrated a strong reliance on intrinsic motivation (i.e., passion for teaching), while School 1 highlighted financial incentives as a key factor. These findings suggest that teacher motivation is sustained more by intrinsic and relational factors than by extrinsic rewards, aligning with literature on professional identity and school climate.

b) Demotivating factors

Analysis of demotivating factors (Table 3) reveals that salary dissatisfaction (31%) and high workload and stress (28.17%) are the most significant challenges across the three schools. Limited career progression (18.31%) and student behaviour challenges (16.90%) also contribute to teacher demotivation, though to a lesser extent. School-level differences highlight that salary dissatisfaction is most acute in School 1, career progression concerns dominate in School 2, and workload stress is particularly high in School 3.

Table 3: What demotivates teachers in their current teaching job?

Factors	School 1	School 2	School 3	Total
a) Workload & stress	9	2	9	20 (28.17)
b) Limited career progression	5	6	2	13 (18.31)
c) Salary dissatisfaction	12	3	7	22 (31)
d) of administrative support	2	1	1	4 (5.63)
e) Student behaviour challenges	6	4	2	12 (16.90)
Total	34 (47.89)	16 (22.54)	21 (29.60)	71 (100)

NB: Numbers in parentheses are percentages (%).

Overall, the findings highlight the need for systemic interventions in compensation and workload management, complemented by targeted strategies for career development and classroom management. Such measures are essential to reducing teacher demotivation and enhancing retention.

c) Attrition

Table 4: Primary reason for leaving the teaching position

Factors	School 1	School 2	School 3	Total
a) Better salary elsewhere	9	4	6	19 (36.54)
b) Burnout & stress	3	1	3	7 (13.46)
c) Lack of career advancement opportunities	4	1	2	7 (13.46)
d) Poor work-life balance	7	3	2	12 (23.08)
e) School leadership issues	5	0	2	7 (13.46)
f) Other (please specify)	1	0	0	00
Total	28 (53.85)	9 (17.31)	15 (28.85)	52 (100)

NB: Numbers in parentheses are percentages (%).

Analysis of primary reasons for leaving teaching positions indicates that better salary opportunities elsewhere (36.54%) and poor work-life balance (23.08%) are the most significant drivers of attrition. Burnout and stress, lack of career advancement opportunities, and school

leadership issues (13.46% each) also contribute, though to a lesser extent. School-level differences reveal that financial incentives and work-life balance are particularly pressing in School 1, while salary remains the dominant factor across all schools.

These findings underscore the need for systemic reforms in compensation and workload management, complemented by targeted strategies for career development and leadership improvement to enhance teacher retention. Without such interventions, teaching positions risk being perceived as transitional rather than long-term careers, leading to instability in the profession. This has profound implications for the quality of education and the holistic development of learners, who may otherwise face inadequate learning experiences and long-term gaps in essential skills and knowledge required for success in contemporary society.

d) Primary Reason to encourage teachers stay in teaching job

Table 5: What would encourage teachers to stay in teaching role?

Factors	School 1	School 2	School 3	Total
a) Salary increase	16	4	8	28 (33.73)
b) More professional development opportunities	6	4	10	20 (24.1)
c) Stronger administrative support	4	1	8	13 (15.66)
d) Improved work-life balance	8	3	5	16 (19.28)
e) Better classroom resources	3	1	2	6 (7.23)
f) Other (please specify)	0	Passion	0	00
Total	37 (44.58)	13 (15.66)	33 (39.76)	83 (100)

NB: Numbers in parentheses are percentages (%).

The data reveal that salary increase is the most influential factor in encouraging teachers to remain in their roles, with a total score of 33.73% across the three schools. School 1 reported the highest emphasis on salary, while Schools 2 and 3 also highlighted it as a significant motivator.

Professional development opportunities ranked second (24.1%), with School 3 placing the strongest emphasis on the same factor, suggesting that opportunities for skill enhancement and career growth are particularly valued in this context.

Work-life balance was equally important (19.28%), and administrative support comes next (15.66%). School 3 reported the highest need for stronger administrative support, while School 1 emphasized improved work-life balance. These findings highlight the importance of institutional structures and workload management in sustaining teacher motivation. Classroom resources were less frequently cited, though Schools 1 and 3 acknowledged their relevance. School 2 uniquely identified the “human element” and “passion” as additional motivators,

underscoring the role of intrinsic factors in teacher retention. These findings suggest that effective retention policies must integrate competitive compensation with career development, workload management, and supportive leadership.”

The survey of 45 teachers provides a comprehensive view of the complex interplay between motivational and de-motivating factors shaping teacher retention. Across schools, passion for teaching remains a strong intrinsic motivator, yet this commitment is undermined by persistent challenges such as salary dissatisfaction, workload stress, and limited career progression. The data reveal that while teachers value supportive environments, professional development, and positive relationships with students, these factors alone are insufficient to counterbalance the pressures of inadequate compensation and demanding responsibilities.

Attrition is most strongly driven by the search for better salaries elsewhere and concerns over work–life balance, while retention is most effectively encouraged through salary increases, professional development opportunities, and stronger administrative support. These findings underscore the need for a balanced approach that integrates both extrinsic incentives and intrinsic motivators to sustain teacher engagement.

For Ethiopia, the implications are clear: without systemic reforms in compensation, workload management, and career advancement pathways, teaching risks being perceived as a transitional occupation rather than a long-term profession. This perception threatens the stability of the education system and the quality of learning outcomes for students.

Conversely, by addressing these challenges through targeted policy interventions, the private school system can foster a more resilient, motivated, and committed teaching workforce, one capable of delivering high-quality education and equipping future generations with the skills and knowledge required to thrive in a rapidly changing world.

e) Open-ended questions provided to teachers to give their views

Following the ‘tick box’ questions, teachers were asked to respond to an open-ended section consisting of three guiding questions designed to elicit their views. These questions were intended to allow teachers to contribute additional reflections freely, and the excerpts below capture the perspectives they shared.

i) What are the most rewarding reasons about teaching in a private school?

Teachers expressed confidence that their compensation was comparatively better than that of their public-school counterparts. In addition, the institution offered opportunities for supplementary income through overtime and special assignments designed to motivate staff. Educators emphasized that the school environment cultivated strong work ethics, effective time

management, and systematic task execution aligned with the academic calendar, factors that significantly contributed to their professional growth.

Beyond financial considerations, teachers valued the collaborative culture, intellectual freedom, and constructive feedback that fostered teamwork, brainstorming, and self-development. This atmosphere provided space for passionate educators with creative potential to thrive. The learning environment was described as highly supportive of quality education, strengthened by smaller class sizes, closer academic supervision, and robust administrative support. A teacher with 5 years' experience said:

Induction that involved training in smart board technology not only prepared me for teaching but also enabled full eye contact and stronger classroom control, an advantage unattainable with a traditional blackboard and chalk.

A strong sense of community and mentorship further promoted professionalism, motivation, and genuine enthusiasm for teaching. Educators appreciated the opportunity to work with eager learners, celebrate student achievements, and access richer teaching resources within a positive social setting. The presence of experienced and qualified faculty was regarded as a critical factor in enhancing student satisfaction and academic outcomes, creating a cycle of growth and fulfilment for both teachers and learners.

ii) One thing teachers would change about their work environment if given the opportunity

Effective teacher deployment requires assigning qualified individuals to subjects that align with their expertise, while fostering shared responsibility and balanced accountability. Schools highlighted the need for adequate classroom resources and moral support to encourage innovation and the adoption of advanced teaching methods. Despite these efforts, challenges remain.

Addressing such concerns calls for a structured system that ensures fair remuneration and promotes job satisfaction. Participants emphasized that management should create supportive working environments where career advancement is facilitated, living standards are improved, and teachers are motivated to teach with commitment.

Findings also reveal limited engagement with research evidence on educational policy and practice, alongside insufficient understanding of institutional frameworks. Strengthening these areas would enhance teaching and learning outcomes while contributing to a more informed, empowered, and professionally fulfilled teaching workforce added with a strong commitment to responsibility.

iii) Further comments by the teachers

Assign the right teacher for the right subject and enhance shared responsibility along with balanced individual accountability. A teacher conveyed his deep sense of sorrow, remarking:

I should not have become a teacher; I would have preferred to be self-employed, a master of my own time, free to live and enjoy life, rather than being bound to work for a small salary that does nothing to change one's life.

The above testimony underscores how individuals who enter the profession without a genuine calling or passion often remain in teaching merely to secure a daily livelihood, a situation that ultimately undermines the quality of the learning environment.

In summary, teachers value private schools for their financial advantages, supportive environments, and professional growth opportunities. However, they seek improvements in fair compensation systems, career pathways, classroom resources, and evidence-based policy engagement. Overall, their reflections highlight the importance of aligning teacher expertise with subject assignments, fostering collaboration, and balancing accountability to sustain motivation and professional fulfilment. As detailed in the discussion of results from the closed-ended items above; the teachers would still wish to leave if obtained better opportunities.

f) Focus Group Discussion

Focus group discussions conducted in three private schools in Addis Ababa identified teacher attrition as a persistent challenge, with rates ranging from 8% in School 3 to 12% in School 2 and reaching 31% in School 1. To mitigate attrition, school management implemented stringent recruitment procedures, typically involving curriculum vitae screening, subject-specific interviews, written assessments, and practical teaching demonstrations. Successful candidates then underwent induction programs designed to familiarize them with institutional systems and ease their transition into teaching assignments. Despite these measures, newly recruited teachers, particularly those from rural backgrounds, frequently encountered difficulties in subject mastery, pedagogical practice, and adjustment to urban school contexts, which shortened their tenure. Participants unanimously concluded that there is a broader national challenge in teacher preparation.

One HR manager explained that recruitment practices are aligned with predictable cycles of attrition. As noted,

It has become customary each July to advertise vacancies for teachers across all subjects, in anticipation of filling gaps created by those who leave without prior notice.

All three schools reported similar difficulties in securing qualified candidates, especially in English, mathematics, science, and, more recently, vocational subjects. Teachers were regularly evaluated through monthly performance checklists linked to financial incentives or certificates of recognition. However, attrition persisted, compounded by the absence of exit interviews, reluctance among teachers to disclose reasons for departure, and limited documentation of staff

movement. The discussions highlighted salary disparities and the pursuit of better financial opportunities as the primary drivers of attrition. Institutions that linked evaluation outcomes to awards, salary increments, and opportunities for leadership progression demonstrated stronger retention. Beyond financial incentives, schools that promoted collegial relationships, provided subsidized meals, offered welfare services such as counseling and partial medical reimbursement, and acknowledged personal milestones were viewed as enhancing teacher commitment. Short-term interventions such as merit pay, bonuses, and supplementary income were noted to reduce attrition temporarily, whereas supportive work environments, transparent evaluation systems, and recognition of teacher competence were regarded as more sustainable retention strategies. Nevertheless, participants in the focus group discussions acknowledged that performance evaluation for competence remains a complex mechanism: while stringent accountability measures often provoked resistance among less competent staff, particularly in contexts of teacher shortages, effective teachers perceived evaluations as empowering, fostering professional growth, constructive dialogue, and enhanced morale.

Likewise, persistent challenges like frequent shifts of education bureau policy, lack of reliable attrition data, and competition from international schools offering higher salaries continue to undermine retention efforts. In response, one school introduced motivational strategies such as traditional savings schemes (Equib), interest-free credit, higher learning scholarships, and MSc summer courses. Collaborative practices, including supervision, lesson studies, and multidisciplinary discussions, were reported to enhance teaching quality, while social and wellness programs such as travel, sports, weekly meetings, and counselling promoted staff engagement and well-being, discouraging teachers from seeking employment elsewhere.

The FGD affirmed that workload management was structured around a standard teaching load of 20–24 periods per week, and reduced contact hours for non-academic subjects such as sport classes and vocational subjects. Teachers with lighter loads were encouraged to take supplementary employment, including weekend classes, while those in high-demand subjects assumed additional responsibilities with financial compensation. This approach was designed to incentivize staff and reduce the likelihood of teachers seeking employment elsewhere.

This measure has been asserted by a school management advisor and recruitment officer who explained that:

Recruiting new teachers has become a heavy burden, consuming resources and diverting staff from development and systemic improvement, a challenge that has increasingly become routine in school management.

Looking forward, school leadership consistently prepares strategic initiatives for the subsequent academic year. Such as establishing a CV bank that mitigates last-minute departures. Several planned measures are taken, including mandatory pedagogical training, performance-based

salary increments, strengthened work-life balance policies, and proactive interventions to reduce attrition.

Conclusion and implications

This study demonstrates that teacher attrition and motivation in private schools is primarily driven by salary disparities and workload pressures, while retention is strengthened by supportive environments, transparent evaluation systems, and recognition of teacher competence. Understanding these underlying factors behind teacher attrition and motivation requires a deliberate, well-structured approach grounded in the perspectives of teachers and other central figures within the school community. Attrition is not merely a staffing challenge; it imposes financial and moral strain on institutions through continuous recruitment and hiring, while also undermining student performance and overall school quality. Effective solutions must therefore be school-centred, focusing on the conditions that foster high-quality teaching, since strong teaching environments inevitably create better learning outcomes.

Globally, teacher attrition and motivation have become pressing issues, often driven by rising costs of living and stagnant salaries that fail to adjust for inflation. This erodes financial stability and diminishes the attractiveness of teaching as a long-term profession, leading many to view it as a temporary occupation. In Ethiopia, as in other Sub-Saharan African contexts, the lack of systematic tracking of attrition further hampers efforts to understand and address the problem. It is therefore crucial that the school admin evaluates these concerns and implements sustainable measures to enhance retention, maintain motivation, and ensure job satisfaction.

Given the challenges of an underperforming education system and increasing economic pressures, several reforms are essential to strengthen teacher motivation and retention with observable implications on educational leadership, policy, and institutional landscape:

Implications on educational leadership: The leadership is urged to implement a coordinated, but diverse strategy to reinforce teacher motivation and retention. First and foremost, flexibility and opportunities for income diversification should be allowed, provided they do not compromise established quality standards or weaken accountability and monitoring mechanisms. In addition, recruitment efforts must prioritize candidates with genuine passion and commitment to teaching, while pedagogical training should be reinforced with practical skill-building to ease teachers' workload through task delegation and enhance student engagement.

One key point that has received little, if any, attention is the provision of guidance and counselling services, which are essential to support teachers during financial and personal difficulties. In addition, building partnerships with NGOs, philanthropists, and donor programs can broaden the resources available to sustain incentives and motivation. Strengthening ties with

community-led initiatives to recognize and reward teacher performance is also encouraged, while proactive school administration should prioritize enhancing teacher satisfaction, given its strong influence on retention.

Policy implications: Addressing the challenges of teacher attrition and motivation requires coordinated action by both schools and policymakers. Regular salary adjustments to offset inflation are essential for reducing dissatisfaction, fostering motivation, and ensuring long-term commitment. Equally important is the implementation of workload management and work–life balance policies to mitigate stress and burnout, while clear career development pathways at the school level can foster professional growth. Strengthened administrative support and leadership practices remain critical for building trust and sustaining motivation among staff.

Implications on institutional practices: At the institutional level, several practices have been introduced to support teacher performance and retention, yet they require further strengthening. Monthly performance evaluations, often linked to financial incentives or certificates of recognition, have been designed to foster accountability. However, attrition remains a persistent challenge, compounded by the absence of systematic exit interviews and limited documentation of the reasons for teacher departure.

Motivational strategies encompass a range of financial and educational supports, including Equib (which provides members with access to lump sums of money through pooled contributions) schemes, interest-free credit, scholarships, summer courses, and MSc sponsorships, alongside collaborative professional practices such as supervision, lesson studies, multidisciplinary discussions, and curriculum evaluation. Social and wellness

programs, including travel opportunities, sports activities, weekly meetings, and counselling services, also contribute to teacher motivation.

In terms of workload management, a standard teaching load of 18–20 periods per week is applied, with reductions for non-academic subjects. Teachers with lighter loads are encouraged to pursue supplementary employment, while those in high-demand subjects may assume additional responsibilities with financial compensation, thereby incentivizing staff and reducing reliance on external recruitment. To consolidate these efforts, leadership should prioritize mandatory pedagogical training, performance-based salary increments, stronger work–life balance policies, and proactive measures to mitigate attrition and foster collaboration among staff.

Finally, these implications highlight the need for a holistic approach that combines systemic reforms, supportive policies, and strengthened institutional practices. By aligning financial incentives with professional development, fostering supportive environments, and addressing

workload challenges, schools can build a motivated and resilient teaching workforce capable of driving sustainable educational success.

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Exploring the Surrounding Community's View of Addis Ababa University: A Community Service Perspective

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Abstract

This qualitative study explored the perspectives of the external community surrounding Addis Ababa University (AAU), recognizing that these stakeholders are directly or indirectly connected to the University's services and outputs. Data were collected from three key informants through semi-structured interviews, one focus group discussion and two case studies. The sample was selected using purposive-opportunistic sampling and was drawn from the woredas of Arada and Gulele sub-cities. The findings of this Study show that the University students and staff are not strangers living in an ivory tower, completely disconnected from the community. The Study showed that communities living in the adjacent woreda of Arada and the Gulele sub-cities have a quite ambivalent/paradoxical perception of the University while they view members of the community as enablers of peace. They also tend to view the University as a contributor to the rise in deviance and crime. The community's view is intertwined with students' economic interactions with the local community, and the community's civic life (ranging from involvement in ordinary social life to economic interactions) and University community services shape the community's perception.

Keywords: Community Services, Community View, Economic Interaction, University-Community engagement

Background

There is a long history of continuous interaction between universities and communities (Walsh & Backe, 2013). This interaction is facilitated through 'teaching and learning' (Belete, 2024), 'research' (Kaba et al., 2021; Mashamba, 2003) and the need for casual economic interactions (Steinacker, 2005). Other literature has also demonstrated the ever-increasing phenomenon of students acting as a transmission belt between the community and a university, highlighting their political activism and involvement in social affairs within the wider community, a trend that has continued for decades in Ethiopia (Abebe, 2019; Adamu & Balsvik, 2017; Ahmed, 2005).

It has been almost half a century since the idea of a university as an ivory tower, detached from the community, has been rejected (Mashamba, 2003). It should be noted that faculty members and students are drawn from and sent to the community on a regular basis. The non-academic

community found adjacent to the university is also expected to integrate with the academic community. Here, by the community it means the local unity of a group of human beings who live their social, economic and cultural lives together, and who recognise and accept certain obligations and hold certain shared values. As Universities are very much attached to the perception of community, their satisfaction can be defined as the discrepancy between aspiration and achievement, ranging from the perception of fulfilment to deprivation. Therefore, satisfaction with the university's community services is highly personal and heavily influenced by past encounters and current expectations (Potter et al., 2014).

It was only by the middle of the 20th century that Ethiopia founded its first formal university, which is Addis Ababa University. Addis Ababa University (AAU) is the oldest and largest higher education and research institution in Ethiopia. Established in 1950 as the University College of Addis Ababa (UCAA), it has a long history. From its inception, the University has been a leading centre for teaching, learning, research and community services (AAU, 2024). Starting with an enrolment capacity of just 33 students in 1950, AAU has grown to host over 50,000 students (including undergraduates, graduate and post-graduate studies) and 8,709 staff (3,110 academics, 4,346 administrative support staff, and 1,253 health professionals). Across its 14 campuses, the university runs 70 undergraduate and 293 graduate programmes (72 PhDs 10.63990/ejtel.v3i1.13134 and 221 Master's), as well as various specializations in Health Sciences. To date, the University has graduated more than 222,000 students in various fields (AAU, 2024).

Recently, AAU has been re-established as an autonomous university, entrusted with robust teaching, learning and research duties, as well as knowledge-based community engagement, for the economic development of the Country and its people. Thanks to its autonomy, the University will be able to improve its community engagement record in its newly reorganised setup and with its reinvigorated institutional infrastructure. Subsequently, the interim administration revised the existing strategic plan in line with the Country's priorities for homegrown economic development. The ten-year development plan of the University explains that it coheres with the global SDGs (FDRE 2020). One of the major themes of the strategic plan, 'Reimagining Our Future', is 'Outreach, Extension, Service and Engagement'. In this endeavour, it is evident how the community's perspective is relevant to and intertwined with the university's strategic plan.

Throughout its history, the University has engaged with the community as a way of nurturing good citizenship (Kaba et al., 2021). Since its inception, Addis Ababa University has notably registered to operate community engagement. Understandably, 'civic engagement' has been coterminous with 'community services' for most of its history, until recently adopting the definition of the Carnegie Foundation (n.d).

Given the above missions of the University, one can easily assume what the community's view of the university is, as this is taken for granted. Perhaps the ontological content of community perception should be studied, as this remains an outstanding issue and a knowledge gap in this Study

Statement of the Problem

Although community engagement scholarship is grabbing the attention of policymakers and academia, many things happening in both the community and the university have not been sufficiently studied (Desta & Belay, 2018; Kaba et al., 2021). Among other things, the dynamics of communal peace along the university–community interface, environmental protection and solving societal problems that directly impact the needs of a community have been overlooked in community literature.

The literature conceptualizes community representatives as carriers of practical research (Swantz, 2008), conduits of service learning (Stoecker, 2016) and catalysts of the co-creation of problem-solving schemes (Fitzgerald et al., 2016). However, none of this research has contextualized the voice of community representatives, nor has it conclusively demonstrated how university services shape the community's view. More than seven decades have passed since universities began operating in Ethiopia, contributing to the production of professionals and researchers, and evolving their capacity to impact community life (Abebe, 2019; Adamu Balsvik, 2017; Belete, 2024; Kaba et al., 2021). Throughout its history, Addis Ababa University, the oldest in the country, has undergone enormous growth over the years. The University's founding documents (the autonomous University Proclamation No. 1294/2023) and the Council of Ministers Regulation No. 537/2023) presume universities to be interlinked with their local communities (Belete, 2024; Kaba et al., 2021). There is ample evidence showing the low participation of academic staff in research and community service (AAU, 2021; Desta & Belay, 2018), which is exacerbated by the lack of a comprehensive repository of community engagement activities (AAU, 2021). Other factors include the inability to track the outcomes of community engagement practices, a lack of sustainability and an inability to satisfy the community, coupled with community fatigue and attitudinal barriers. There is also an inability to build cultural competence in serving the community, misunderstandings about the mission and roles of partnerships, institutional bureaucracy and resource limitations (AAU, 2021; Desta & Belay, 2018, p. 13).

Despite the experiences of the University, little or no information is available on what the wider community thinks and says about AAU. Exploring the interaction between the university and the outside community would significantly contribute to filling the knowledge gap within community engagement scholarship. This Study examines the circumstances in which the perception of community is shaped by the services provided by universities, or the lack thereof,

resulting from the failure to integrate teaching, learning, research and community service practices in a way that is relevant to the community living adjacent to the university. Against this background, this Study aims to address the lack of empirical knowledge regarding the community's perception of the University and the experiences of its beneficiaries.

Objectives of the study

The main objective of this Study was to explore the views of the external community (beneficiaries and non-beneficiaries alike) in the vicinity of AAU towards the University.

Specifically, this Study intended to:

- 1) explore the community's view of AAU and how the university interacts with the local community, with a special focus on community service.
- 2) investigate the perception of the beneficiaries of the services that the university claims to provide to the community.

Methodology

As this Study was exploratory in nature, a qualitative approach was adopted since little research had been conducted to uncover the community's view of Addis Ababa University, to the best of the researcher's knowledge. As Brinkman (2020) eloquently argued, exploratory studies are well-suited to times when domains are little known or when newly emerging social phenomena are being studied, as the spontaneous expressions require the qualitative researcher to engage in dynamic social interaction rather than conducting casual individual interviews.

Sampling

As this was a qualitative and exploratory Study, purposive sampling was used. Specifically, the opportunistic sampling method was used, which is well-suited to this Study. According to Bryman (2012), 'opportunistic sampling' involves generating qualitative data from certain individuals by optimising the opportunity for frequent contact and a long-term relationship with the central issue or area under research. Hence, I was selective when engaging participants in the Study. In this endeavour, participants' frequent contact with the University community is often unforeseen, but this Study has capitalised on that. Unlike other qualitative sampling methods, such as stratified purposive sampling, it is sometimes unlikely that data saturation could be reached through opportunistic sampling. The trustworthiness of the Study has been maintained by selecting respondents who were familiar with the university and its services. After undertaking reconnaissance of the area, I observed that not everyone who sells at the University gate knows everything about the University. I often asked the vendors in the vicinity of the university a simple question. However, their responses justified their limited knowledge due to their limited involvement with the University, whether through business or community service. Initially, I used the list of community representatives from the community engagement office documentation and asked if they would be willing to take part in my research. Since the

main campus of the university is located in the Sidist Kilo area of Addis Ababa, the selected informants were chosen for their proximity to the area. Therefore, all the informants were selected from people living within a radius of about one and a half kilometers. The Study participants were picked from Arada sub-city (Woreda 6 and Woreda 9) and Gulele sub-city (Woreda 2 and Woreda 3), which are in the vicinity of the Sidist Kilo campus. Thus, the duration of participants' for staying in the vicinity and proximity to the University were taken into account. As the FGD participants were drawn from STEM beneficiaries, I consulted the STEM centre coordinator of AAU. Initially, I received a long lists of schools whose students participated in STEM programmes. The AAU STEM centre used to run a programme aimed at training members of the wider community, including high-achieving high school students, using the 'Electronics Lab and Virtual Computer Lab' facilities at the 'Samsung Building'. As the acronym suggests, the programme covers 'Science, Technology, Engineering and Mathematics'. The programme covered selected beneficiaries from Menelik Secondary School, Radical Academy, St Selassie School and Belay Zeleke School. In the 2023/24 academic year alone, the university claims to have provided services to 40 STEM beneficiaries in these schools. However, after consulting the STEM coordinator at AAU and the school director at Radical Academy, I selected five beneficiaries from Radical Academy, as it is situated almost 500 metres away from the main campus and next to the College of Technology and Built Environment (Amist Kilo Campus) of AAU. On the other hand, in this research, I considered two factors for the two case studies. The first is how well-known and significant the case is within the community, and whether it is influential enough to shape the community's perception. The second is how representative it is of the two objectives of the study and how well it can demonstrate them. The story of Eden, therefore illustrates the first objective, i.e. the community's view of university services, while the story of Ambachew illustrates the second objective, i.e. the community's perception of the university's services.

Methods of Data Collection

In order to address the general and specific objectives, both primary and secondary data were used. Relevant first-hand information was gathered from documents and fieldwork. As for the documents, written materials related to the University's engagement practices with the adjacent community were reviewed. In particular, the STEM reports and community engagement reports from the Community Engagement Office were accessed. Besides, various scholarly works which include articles, books and book chapters, were reviewed.

The fieldwork method enabled semi-structured interviews, focus group discussions and case studies to be included. Face-to-face and online interviews were conducted with key informants representing the communities adjacent to the campuses. Semi-structured interviews were conducted and recorded based on the consent of the research participants. Although the guide

was prepared in English, all of the interviews and focus group discussions were conducted in Amharic. Furthermore, the focus group discussions took the form of informal, engaging discussions; the proceedings were also audio recorded. In resonance with this, case studies were drawn from subjects who could help to shed light on how the community is tied to or distanced from the nearby university. Greenhalgh and Aikins (2024) argue that case studies offer an opportunity to learn from particular features of lived experiences. Hence, case studies were used to develop a better understanding of the community's view of the University and to assess how beneficiaries found the services provided by the University. It should be noted that the case studies were instrumental in helping the researcher to analyse the interaction between the Addis Ababa University and the adjacent community. Finally, additional sources and different perspectives from existing literature indeed enriched the findings.

Methods of data analysis

In line with Bryman's (2012) characterization of thematic analysis, the frequent occurrence of certain words, suggesting certain types of discourse and patterns of interaction, have been thematised. Therefore, the Study has employed thematic analysis of interview and focus group discussion (FGD) transcripts in its methods of analysis.

Table 1: Summary on the Study participants' profile

Community Category	Gulele Sub-city Woreda 2 & 3 (no. of participants)				Arada-Sub-city Woreda 6 & 9 (no. of participants)				Data collection Tools
	Informant	Sex	Age	Education	Informant	Sex	Age	Education	
Residents /Woreda sector office	1	male	45	1 st degree	1	male	39	1st degree	Interview
Business community	-	-	-	-	1	Male	40	12 complete	
STEM beneficiaries	2	One male & one female	17 and 18	11 th and 12 th graders	3	3 females		11th and 12th graders	1 FGD

However, this was complemented by reviewing relevant archives and literature, and by interviewing participants in the research using non-probability and purposive sampling methods to identify the research participants. In line with the characteristic feature of 'opportunistic sampling', the research participants' frequent contact with the university community was a key factor in selecting informants. Accordingly, the participants of this Study were drawn from the

catchment community (residents, businesspeople and sectors) found in the vicinity of the Sidist Kilo campus (Arada sub-city, Woreda 6 and Woreda 9; Gulele sub-city, Woreda 2 and Woreda 3).

Ethical considerations

In addition to obtaining permission to conduct the study from the University's Centre for Sustainable Development and Office of Community Engagement, this Study has strictly adhered to privacy and informed consent procedures for the participants. This is in line with the views of Bryman (2012) and Brinkman (2020), who argue that social research ethics strongly recommend that investigators keep the privacy of anonymous interviewees, even when consent has been obtained from the subjects.

Challenges faced during the fieldwork

According to Conrad and Hepner (2005), field researchers often find it difficult to obtain reliable information, and information gathered from chance visits is frequently incomplete and inaccurate. Moreover, a literature review on the broader theme of this Study's title unveils that published information on the community's view of the University is notoriously difficult to obtain. Interviewing some community members or representatives was also difficult, which tempted the researcher to use covert means to collect the required data in a convenient way. Understandably, undertaking this research was not seamless, but rather involved overcoming several intermediate challenges, including:

- Difficulty accessing informants within a set timeframe
- Inability to access FGD participants limited the research to conducting one FGD.
- Some FGD participants hid behind alpha behaviour, resulting in their voices being disguised. Consequently, I was compelled to use covert means to collect the necessary data in a convenient and understandable way.

Being this Study based on a topic with which I had worked closely, it was very difficult to eliminate bias entirely. As a researcher, I sometimes found myself knowing better when the interviewees began to share their views on the University's community engagement practices. This is essentially the moment at which reflexivity comes into play. In accordance with Lincoln et al.'s (2024, p. 109) characterization of reflexivity, the researchers must interrogate themselves regarding the ways in which their research efforts are shaped and staged around the contradictions and paradoxes that form their own life.

Findings and Discussions

Before discussing the findings of the Study directly, this section explains the global and national trends as to how universities interact with the local community. The underlying assumption is that the eventual findings from the field could be understood within the framework outlined by

global practices and institutional factors (ranging from national plans to university strategic plans). After transcribing and translating the interview and FGD audio files, a thematic analysis of the data, which, according to Bryman (2012), is characterized by the frequent occurrence of certain words were done. Therefore, the words that appeared frequently in the interview and FGD transcripts were coded to identify if they suggested certain types of discourse and patterns of interaction. Accordingly, this section discusses two major topics: i) perceptions about university-community engagement and interaction, and ii) community perspectives on the benefits of university services.

Perceptions about University-Community Engagement and Interactions

It should be noted that universities around the world provide an ideal setting in which to test community engagement practices intertwined with the foundational philosophies of higher education, knowledge generation and transfer, and contributions to national and sustainable development, as well as the consolidation of democracy (Filho et al., 2024; McIlrath, 2008). Similarly, Barnett (2011:62) emphasized, “a University is always unfinished business”, requiring a level of uncertainty that a research university may not want to embrace. In line with this, literature has revealed that community engagement has become the norm rather than the exception since the 19th century land-grant university movement in the United States, which mandated that universities serve societal needs (Boyer, 1996). Over time, this concept has spread worldwide, influenced by initiatives such as the Campus Compact (Boland & McIlrath, 2008), which emphasised the civic roles and social responsibilities of universities.

Against the aforementioned background, the remainder of this section discusses the actual findings by combining data presentation with literature and relevant theoretical statements. In this section, community views have been categorized in to two. The first is the University as a threat or burden to the community, and the second is the University as an enabler of communal peace and security. The discussion strikes a balance between these two categories to avoid bias in the synthesis exercise.

Is AAU a Threat or Enabler for Communal Peace and Security of The Community?

It is true that the University hosts students from a variety of cultural backgrounds. As a result of this, AAU students may exhibit manners that are considered desirable or undesirable by the community. There were times when students were the source of security crises and crime in *Menen* (Northern Neighbour of the AAU) and the surrounding area (KII-1). This informant explained:

Some students who come from critical areas may turn out to be deviant and engage in the theft of student property. Worryingly, the Menen police station used to receive a similar report every day. In a few cases, students even report thefts to the police, but then go on to steal items such as mobile phones and laptops themselves.

KII-2 also shared a similar experience, which resonates with the above tendency of students seeking security. There used to be a few places around the Campus where students could fulfil their addiction to khat, shisha and other substances, especially a chat chewing house near Dire Dawa restaurant. It took several attempts before the woreda administration was able to close the house. It is clear that AAU trends deviate from the traditional methods used by university campuses to protect their students from security concerns. In contrast, Maurrasse (2001, p. 17) observed that universities often invest in campus security to protect students from criminal behaviour in urban areas. Often, across the global spectrum, such dynamics lead to tension between universities and their surrounding communities, manifesting as crime, protest and overall resentment. Contrary to Maurrasse's (2001) contention, AAU students used to be a security concern for the community, rather than being innocent prey to the local community's criminal activities.

Also, KII-3 shared his thoughts on the vibe closer, 'Arat Kilo Campus'. He explained that:

There are a few houses that are still a threat due to their potential to act as an addictive site for students. I know they are dangerous places because they are also nightclubs at night. Especially at weekends, the atmosphere is dangerous. I think the woreda authorities should force the closure of such houses.

Assessing this retrospectively, such a tendency among AAU students is, contrary to the new AAU 2024 Student Code of Conduct, Arts. 9.14 and 9.15, which demand that AAU students be responsible for being exemplary in their interactions with the local community.

Another informant (KII-2) disclosed that the entire student population (drawn from Sadist Kilo main campus, FBE and Arat Kilo) is a chief source of income for the local population, especially in the Amest Kilo area. Furthermore, he stressed that:

Especially firfir tera (a dish of sliced injera mixed with sauce), which is entirely dependent on serving students from Sadist Kilo and Arat Kilo. Firstly, students are served at a very affordable price. Students are happy that firfir houses prepare food according to their preferences and needs. Conversely, these small enterprises will profit from the mass customers they receive from the university student bodies.

Furthermore, this informant stated,

I was personally involved in photocopying teaching materials and other resources for students. Most of them thanked me even after they had graduated. So, I see my business as a service rather than a source of profit. I only make a profit when I copy multiple pages.

The above excerpt resonates with Steinacker's (2005) argument that university expenditure and rents in the surrounding area are markers of its contribution to the local economy, but are often

overlooked by university bodies and local authorities. To the University's credit, the informant (KII-2) disclosed that the area adjacent to Amest Kilo-AAiT was used by young people as a place to work as a parking assistant, since customers and students of the Amest Kilo campus used to park there. Some of them are now lamenting the demolition of the parking spaces to make way for the redevelopment of the area next to the campus. Regrettably, there is a risk of delinquency unless their livelihood as parking attendants is maintained.

Community View on AAU Student Behaviour

The rationale behind discussing the community's view on AAU student behaviour is that there are issues beyond merely assessing the community's view of university services, which sheds light on the community's view from all possible vantage points. This means that the AAU community services are very important to the community and affect other areas of interaction between the university and the neighbouring community. In this endeavor, an informant (KII-2) disclosed that:

I can confirm that no one blames the Amist Kilo students for their behaviour. In all their economic interactions with the neighbouring community, they demonstrate amicable relationships. They are not blamed for disposing of rubbish recklessly. I don't remember any students disturbing the community with an alcohol-related hangover. I probably don't know about the FBE or Arat Kilo campus students either. But I am certain of the community's view of Amist Kilo students.

In contrast to the above response, informant KII-2 continued to recount the exceptions.

I remember a few students who were addicted in 2006 and 2007. They were known in the local area and went so far as to be completely dismissed, yet they are still roaming around the neighbourhoods. Fast forward to 2009, I remember a few students who showed similar deviant behaviour. Apart from that, most students at Amist Kilo area are by far decent.

Given the response of the aforementioned informant, it is clear that the community views AAU students as decent and peaceful, despite the behaviour of a few deviant students. A tale from community members about students' love affairs with members of the community: KII-2 shared that students' interactions with the local community can follow the natural patterns of life, such as love and hate. The following story illustrates a student's love affair with local vendors.

Case study 1: Ambachew is a local bookseller whose kiosk is located next to the Amest Kilo campus of AAiT. His customers come from a variety of backgrounds, including university students, faculty members, and members of the local community. One day, Merhawit (a former AAiT student) approached Ambachew casually to buy a rare book. She then became a loyal customer. Eventually, they became romantically involved. Their relationship has continued even after they graduated.

The aforementioned story aligns with what Peters et al. (2018) termed 'jumping into civic life'. In that small book, the authors — drawn from student and faculty members alike — argued that academicians faced patterns of life journey that were no different to those of other members of the outside community. The essential insight is that we are all human, and our humanistic instinct drives us beyond the institutional walls separating the university from the community.

Community Perspectives on the Benefits of the University Claimed Services

Case study 2: The story of Eden¹: she was a recipient of the scheme to maintain houses for low-income families. She was selected because she was a single mother with a low or no income. As part of a challenge initiated by PM Abiy Ahmed, the University renovated her old house during one of the summer campaigns. Due to the home maintenance, Eden's neighbour became resentful, believing that she deserved the renovation support more than Eden. This is because her neighbour is disabled and believes that she is more in need of the service than Eden. Later, her neighbours quarreled with Eden because her maintained home was draining rainwater towards them. As a result, the hostility between them grew and they denied Eden a typical invitation to a neighbourly coffee ceremony. The community knew, however, that this was the result of envy. In fact, the informant remembers that, later, another ministerial office came and maintained the house of another neighbour. As a result, the quarrel caused by envy eventually stopped.

The key implication is that one should not take for granted the benefits to society as a whole, assuming that this can keep the neighbourhood intact. As can be seen from what happened to Eden, University intervention in the community can result in the breaking of community ties. From the standpoint of the disabled neighbour, it would be reasonable to assume that the University's intervention would be perceived as the action of a discriminatory institution. The aforementioned encounter resonates with Peters et al.'s (2018) memoirs. In his Book, he has made clear that universities should be aware that communities sometimes lack the civic infrastructure or cohesion to withstand the effects of an intervention.

View from STEM beneficiaries: The focus group discussions (FGDs) with STEM beneficiaries reveal that the students' views as members of the community have never been heard to date. The following section will explain the students' narratives from their perspective as participants in the STEM programme.

As the FGD participants have revealed, the service was good. Since it was held in the summer, it barely conflicted with regular education. The programme turned theoretical lessons into practical applications. One informant disclosed that the STEM programme brought hardware

¹ Pseudo name used for ethical purpose

closer to beneficiaries, whether they were in grade 10, 11 or 12. This is important because, in comparison to other public schools, neither their wealthy families nor the relatively better private schools (e.g. Radical Academy) could make electronics accessible to students. Their testimony attests that physics has become more accessible to them.

One of the participants argued that it would have been better if the STEM centre had considered subjects beyond physics and engineering. Nevertheless, the investigator is curious about the fact that one of the STEM beneficiaries joined the social science stream after being promoted to grade 11. This is an important issue that needs to be addressed, as it is a blind spot in the data. This shows us that tracing beneficiaries is not always successful. It tells us that, somehow, wastage of investment in the community can be detected if one traces it meticulously. The STEM beneficiaries have reservations about the university not exhausting its potential to support extracurricular endeavours. In this Study, one of the investigators asked the participants to define extracurricular engagement. Most of them replied, 'Extra-curricular means an academic activity that is separate from regular teaching and is often required by scholarship grantors throughout the application process'. Although they understood the concept of extracurricular activities correctly, they seemed to lack the appropriate motivation. As an investigator, I interjected to explain the rationale behind launching someone's extracurricular engagement as part of their civic duty. Notably, the FGD participants agreed with the investigator's view that the motivation behind extra-curricular engagement is the fulfilment of civic duty and a virtue, rather than a means to obtain further opportunities. Understandably, extracurricular engagement is about far more than grabbing scholarship opportunities; it speaks volumes about higher education and high schools alike. In this endeavour, Kassaye (2023) emphasised that universities offer a variety of extracurricular activities, including student unions, training sessions, workshops, and community service, which are supported by legislation and the education sector roadmap. Nevertheless, this finding suggests that the university could seize the opportunity to link its extracurricular activities with those of the surrounding schools.

In short, based on the data from the focus group discussion (FGD), it could be argued that the STEM programme did not help the high school students of Radical Academy to form an emotional connection with AAU. The researcher observed that STEM participants did not develop an emotional attachment to the university. Indeed, the relatively short period of time that they participated in the programme contributed to the lack of sentimental attachment. Nevertheless, Walsh et al. (2013) noted that partnerships for school intervention remind both the university and the school community that they are all members of the same human community. Community view on Faculty member's participation in Fund Raising:

By and large, the AAU community service targets government institutions, businesses, non-profit organisations and society at large, and is always geared towards solving societal problems.

Against this background, there is a tenuous link connecting the university community to fundraising, though support could never be professional. Nevertheless, faculty members' support for the community extended beyond mere professional assistance. As informant KII-1 disclosed: 'I remember the staff participating in fundraising activities for disadvantaged people in the community. The university's community service office was receptive to written requests from the Menen police department; later, the university also made efforts.'

From the AAU's perspective as an enabler of communal peace and security, an informant recounts that the university's support for the community extended beyond mere professional assistance. He recalls that:

The University's community office was receptive to the police department of the Menen area's written requests; the university also made efforts later on. We received various training sessions free of charge, including computer literacy training. The training we received was important in increasing our computer literacy. In addition, I remember the training provided from the law school staff, which introduced us to legal concepts. Such free capacity-building exercises are important for the police force.

Similarly, another informant (KII-2) recounts how the AAU staff, particularly a few professors from AAiT, approached the local woreda which is found in the vicinity of the Campus. In this endeavour, he recalls that:

At one point, one senior staff approached the woreda authorities in person to offer his voluntary services in design and engineering. Another senior staff member also made efforts to find out what areas the woreda authorities needed professional support in. However, in my opinion, the woreda authorities did not respond to the gesture of the university community. Unfortunately, the woreda authorities did not utilise the goodwill of the Amist Kilo academicians.

Another informant (KII-3) also disclosed that they always appreciate the University staff showing their cooperation when they share lunch (in Amharic, 'maed magarat') during holidays. Moreover, KII-3 believes that AAU is fulfilling its social responsibility, citing the Natural Science Campus's provision of groundwater access for the community located behind the Arat Kilo Campus. Similarly, the university has rescued communities in danger, for which the communities are grateful. He said,

Years ago, 300 households were displaced due to a city administration development project. The university was committed to providing them with temporary work, such as gardening and cultivating nursery plants. However, I don't think they continued later on, since their new placement/house is far away

from the Arat Kilo campus. Nevertheless, the effort to create employment opportunities is commendable in itself.

In summary, the community representatives prioritise what the University's strategic plan undervalues or neglects in terms of university intervention in the community. According to the AAU (2021) document, 'Rubrics for Guiding University Community Engagement', the University does not promote mere cash transfers; rather, the Policy insists that university staff should capitalise on their professional excellence, which is needed more for contributing to the community. What are we missing from the community's view? What is missing from the community's view is that the AAU community, particularly the student community, could also benefit from the local economy through formal or informal part-time work.

According to the community representative response, the University's contributions to the community were overemphasised. They did not consider what the community could give back, such as part-time job opportunities for students. Internationally, Maurrasse (2001, p. 113) argued that students plan to join colleges and universities elsewhere with the intention of earning money from part-time jobs in the local area. The community representatives are unaware that AAU students are providing paid-for tutorials to the children of affluent parents. From the university's perspective, this misses the point of community partnership. Murrasse (2001) argued that it is difficult to develop community-driven higher education/community partnerships unless communities uphold the appropriate hope for a more engaged role for universities. In this endeavour, the AAU is detached from the community and avoids forming an ongoing partnership with it.

Conclusions and Implications

Against the backdrop of limited knowledge regarding the community's view of AAU, this Study has explored how the surrounding community and beneficiaries perceive the university and the services they receive from AAU.

Contrary to what an outsider might expect, the findings show that AAU students and staff are not strangers to the community and are not living in an ivory tower. This Study has revealed that the community living in the adjacent woredas of Arada and Gulele perceive the university as either an enabler of communal peace and security or a contributor to an increase in criminal activities and deviance. However, this view is intertwined with economic interactions between the University community and the local community, as well as AAU community services and STEM programmes. In summary, despite some token interaction between the university and its staff and the surrounding community, the problems explored in this research arguably contribute to the University's mixed record of being both attached to and detached from the community, as it significantly shies away from continual partnership with the local community. By implication, the University's fulfilment of its social responsibility and civic engagement rests on community

perception of its services and its actual existence within the community. Praise is due to those Higher Education Institutions and their campus administrations that implement community engagement in a way that reflects the needs of the local community. Consequently, the views and voices of the community must be contextualised. Further studies must focus on:

- (i) the interaction between academic programmes and community views;
- (ii) community views on university researchers; and
- (iii) the factors that influence the community's perception of the university's institutional image.

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Immediately after the abstract, about 4-6 keywords should be given.

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In this issue:

Articles	Pages
Editorial	i
Teachers' Understanding of Learning Styles: Perspectives on Curriculum Adaptation in Secondary Schools of Mareko Special Woreda, Central Ethiopia Regional State <i>Ethiopia Ergogo Gunjebo and Ambissa Kenea Boru</i>	1 – 25
Primary and Middle School Teachers' Perception about their Pedagogical Competency and Associated School Factors in Bench-Sheko, and West Omo Zones: Implications for Teacher Education <i>Matheas Shemelis and Miressa Yadessa</i>	27 – 46
Learning Theories and Instructional Designs: Developing a Multimodal Quality and Student Support Service for Online Learning <i>Fetene Regassa Melka</i>	47 – 73
Teacher Attrition and Motivation in Ethiopia: Prevalence, Associated Factors and Influences <i>Tamirat Tadesse</i>	75 – 100
Exploring the Surrounding Community's View of Addis Ababa University: A Community Service Perspective <i>Eyob Asfaw Gemechu</i>	101 – 117

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