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"EDUCATION IS THE MOST POWERFUL WEAPON WHICH YOU CAN USE TO CHANGE THE WORLD."
NELSON MANDELA

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Original Article

The practice of contextualizing English language activities to enhance students' learning: the case of technology villages at Hawassa University

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KEYWORDS:

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Abstract

The primary objective of this research was to investigate how English language teachers contextualized English language activities to align with their students' real-life situations. The study sought to answer key questions about how classroom teachers adapted activities from English language textbooks to their students' contexts and identified the factors hindering such contextualization. To achieve these objectives and address the research questions, a mixed-methods approach was employed. Data were collected from English language teachers and their students using questionnaires, semi-structured interviews, and focus group discussions. The findings revealed that teachers' practices in contextualizing activities were weak. Teachers often used textbook activities without modifications, did not prepare diverse instructional materials, and failed to employ varied instructional strategies in their lessons. Additionally, student grouping methods were problematic, and teachers provided insufficient and unvaried time for students to complete activities. Teachers cited several challenges hindering their ability to contextualize activities effectively. This includes time constraints, lack of knowledge, large class sizes, and insufficient professional support. Based on these findings, recommendations for improvement were proposed for English teachers to align classroom activities with students' real life situations.

1 Introduction

The primary goal of classroom instruction is to facilitate student learning effectively. This objective is achieved when teachers make lessons accessible and relevant to their students. To ensure accessibility, teachers must plan their instruction based on students' backgrounds. Tailoring lessons in this way enables teachers to select activities that are both relevant and engaging. Activities rooted in the backgrounds and contexts of learners not only make learning meaningful but also help students construct the desired knowledge, skills, and dispositions. Therefore, teachers must create an environment where students engage with activities that are meaningful, enthusiastic, and contextualized.

One widely used approach in modern language classrooms is Communicative Language Teaching (CLT), which aims to enhance students' fluency and accuracy (Bachman, 1990; Mitchell, 1994). CLT emphasizes meaningful interaction, shifting the focus from strict accuracy to communication. Teachers design activities that foster meaningful exchanges, providing students with opportunities to negotiate meaning and develop their communicative abilities (Richards, 2005). This approach inherently aligns with contextualized teaching by encouraging the use of authentic, real-world scenarios.

Education is inherently situational. Students do not acquire isolated facts and theories in an abstract vacuum; rather, they learn in connection with their prior knowledge, beliefs, and experiences. Vygotsky (1978) argues that new learning builds upon existing knowledge, underscoring the importance of linking instruction to students' real-life contexts. Contextualized teaching achieves this by connecting classroom activities to students' cultures and interests, incorporating locally relevant materials and situations (Spring, 2010; Perin, 2011). For example, lessons that begin with familiar community scenarios or use local resources capture students' attention and foster active engagement.

Theoretical frameworks further emphasize the importance of contextualization. Constructivist educational theory posits that learners continuously build understanding through active engagement and experience (Baker et al., 2009). Constructivists advocate for learning environments that prioritize experimentation, practical problem-solving, and real-world applications (Hare, 2010). This shift from traditional authoritarian teaching to interactive, contextualized instruction helps prepare students for future challenges. Additionally, motivational theory highlights the role of perceived value and self-efficacy in fostering engagement. Predmore (2005) notes that, contextualized teaching enhances interest and motivation by demonstrating the real-world relevance of lessons, encouraging students to connect their learning with personal experiences. A practical extension of these principles is Problem-Centered Learning, which requires students to collaborate and solve real-life problems. By engaging in meaningful problem-solving exercises, students develop critical thinking, collaboration, and practical skills, recognizing the real-world utility of their learning.

While textbooks provide structured content, they often fail to cater to the diverse needs of students across different cultural and situational contexts. Teachers must adapt textbook activities to ensure relevance and accessibility (C. Brown, 2002). Contextualized instruction involves modifying activities to reflect students' lives and local environments, fostering a sense of belonging and enhancing learning outcomes. Using relatable materials and examples helps students connect with the content, increasing motivation, engagement, and academic success (Mam et al., 2017; Rivet and Krajcik, 2008; Reyes et al., 2019).

Research confirms the benefits of contextualized activities, including improved participation, collaboration, and critical thinking. Teaching materials that are not adapted to align with students' cultural backgrounds or contexts can feel detached and irrelevant, diminishing motivation and engagement (A. V. Brown, 2006; Kumaravadivelu, 2003; Littlewood, 2014; Richards and Rodgers, 2014). Kumaravadivelu (2003) emphasizes that aligning materials with students' lived experiences makes learning more meaningful and effective, while A. V. Brown (2006) warns that generic lessons reduce students' willingness to participate, hindering skill acquisition. Similarly, Littlewood (2014) highlights the importance of tasks that reflect real-world scenarios, bridging the gap between theoretical knowledge and practical application.

Richards and Rodgers (2014) summarize that effective teaching practices involve adapting and modifying standard materials to better meet students' diverse needs and connect learning to real-world applications. Tailoring materials to students' cultural backgrounds, interests, and aspirations makes lessons more engaging and helps learners recognize the practical value of their education.

Building on these principles, this research explores how teachers in the technology villages of Hawassa University contextualize their teaching activities to align with their students' real-life contexts. By examining these practices, the study seeks to contribute to the growing understanding of contextualized instruction and its impact on student learning outcomes.

2 Research problem

The global demand for English language proficiency has grown significantly due to its widespread use across various sectors such as education, diplomacy, politics, and economics. In Ethiopia, English has been a core part of the education system since the inception of modern schooling (Abebe, 2012). Its importance is further underscored by its role in fostering international engagement and economic advancement (Amlaku, 2010). In recognition of this, the Ethiopian Ministry of Education has prioritized English language education, introducing it as a subject from grade one onward. English language textbooks are developed for each grade level and serve as primary resources in classrooms.

The primary goal of teaching and learning is to enable students to achieve meaningful and practical learning outcomes. Research consistently demonstrates that instructional activities which are engaging, meaningful, and contextualized yield better learning outcomes than those that rely on rote memorization (Baker et al., 2009; Bond, 2004; Predmore, 2005). Contextualized instruction, which connects teaching materials to students' real-world experiences, encourages active engagement and fosters experiential learning. This approach helps students construct knowledge, develop skills, and apply what they learn in practical, real-life situations.

While the theoretical and empirical benefits of contextualized teaching are well-established, there is limited research on its application in English language instruction in Ethiopia. In particular, little is known about how teachers in the technology villages of Hawassa University contextualize English language activities to align with their students' real-life contexts. Given the increasing demand for English language skills and the critical role of effective teaching practices, this gap presents a significant challenge to improving student engagement and learning outcomes.

This study seeks to address this gap by exploring the practices of English language teachers in the technology villages of Hawassa University. Specifically, it investigates how these teachers adapt and contextualize instructional activities to enhance learning and make lessons more relevant to their students' lives and future aspirations.

2.1 Research questions

1. How do teachers contextualize classroom activities to align with their students' contexts when teaching English?
2. What factors hinder teachers from contextualizing activities effectively?

2.2 Objectives

The primary objective of this research was to investigate the practices of English language teachers in contextualizing language activities to their students' real-life situations.

2.3 Specific Objectives

1. To examine the practices of classroom teachers in contextualizing activities in English language teaching.
2. To identify the factors that impede teachers from contextualizing activities effectively.

2.4 Significance

The findings of this study are expected to provide valuable insights and practical implications for various stakeholders:

Teacher Education Programs: The study offers a clear understanding of teachers' practices in contextualizing classroom activities, enabling teacher education programs to review and improve their training curricula.

Governmental and Non-Governmental Organizations: The research provides first-hand information on teachers' classroom practices, supporting initiatives to enhance the quality of English language teaching.

Teachers: The study raises awareness among teachers about their current practices, encouraging them to improve their methods in the future.

Curriculum Developers: The findings inform the development of alternative activities during textbook preparation and provide suggestions for presenting activities effectively in classrooms, particularly in teacher guides.

3 Research methodology

3.1 Research design

This study employed a mixed-methods approach, which combines qualitative and quantitative research methodologies. Creswell (2003) define a mixed-methods study as "a study that involves the collection or analysis of both quantitative and/or qualitative data in a single study, where the data are collected concurrently or sequentially, assigned a priority, and integrated at one or more stages in the research process" (p. 212). This approach emphasizes that combining quantitative and qualitative data provides a more comprehensive understanding of research problems than either method alone (Cohen et al., 2018).

3.2 Population of the study

The research was conducted in five selected primary schools: Tabor, Ethiopia Tikdem, Alamura, Haik, and Gebeya Dar. The study population comprised teachers from these schools and their students.

3.3 Sample and sampling techniques

Respondents for the quantitative data were selected randomly, while respondents for qualitative data were chosen based on their willingness to participate. Five teachers from each school were randomly selected, resulting in a total of twenty-five teachers completing the questionnaire. From this group, two teachers per school were selected for semi-structured interviews, totaling ten participants.

Similarly, ten students were randomly selected from the classrooms of the sample teachers in each school. Consequently, fifty students per school participated, amounting to a total of 250 students who completed the questionnaire and participated in focus group discussions.

3.4 Sources of data

Data for the research were collected from teachers, students, and teachers' lesson plans. Students were asked about their teachers' efforts to contextualize English language activities to real-life situations, how they felt about contextualized activities, and their experiences with activities presented directly from textbooks. Teachers were queried on their methods of adapting activities to fit their students' contexts. Additionally, textbooks and lesson plans were analyzed to understand how activities were designed and adapted to students' needs.

3.5 Instruments for data collection

Quantitative Data was gathered through a questionnaire utilizing a five-point Likert scale (5: Strongly Agree, 4: Agree, 3: Undecided, 2: Disagree, 1: Strongly Disagree) to assess teachers' and students' perspectives on contextualizing activities.

Qualitative Data was collected through a combination of semi-structured interviews, focus group discussions, classroom observations, and document analysis:

- Semi-structured Interviews: Conducted with teachers to validate the responses from the questionnaire.
- Focus Group Discussions: Held with students to further substantiate their responses from the questionnaire.
- Classroom Observations: Observed teachers' actual classroom practices to triangulate the data from both teachers and students.
- Document Analysis: Analyzed textbooks and teachers' lesson plans to explore how activities were adapted.

3.6 Methods of data analysis

Quantitative data were analyzed using descriptive statistics, including the calculation of means and percentages from the Likert scale responses. Qualitative data were analyzed thematically to provide deeper insights into the research questions.

3.7 Pilot study

A pilot study was conducted to assess the internal consistency of the questionnaire items for quantitative data. The results showed a strong internal consistency, with a Cronbach's alpha coefficient of 0.844.

4 Results

Table 1: Teachers' responses on their practice of contextualization

No	Contextualization practices	Rating scales					Total	
		5	4	3	2	1		
1	I use activities in the textbooks as they are	No. 6 % 24	13 52	2 8	2 8	2 8	25 100	
2	I adapt the activities in the textbooks into contexts of my students	No. - % -	2 8	3 12	13 52	7 28	25 100	
3	I prepare additional activities based on the background of their Students	No. 4 % 16	4 16	1 4	12 48	4 16	25 100	
4	I give a chance for students to discuss activities in a group	No. - % -	4 16	1 4	15 60	5 20	25 100	
5	I allow the students to express their ideas freely	No. 2 % 8	2 8	2 8	13 52	6 24	25 100	
6	I prepare instructional materials based on the real-life of students	No. 3 % 12	4 16	2 8	11 44	5 20	25 100	
7	I use various instructional strategies to facilitate the learning of students	No. - % -	4 16	1 4	15 60	5 20	25 100	
8	I modify my activities if students engagement is Low	No. - % -	3 12	2 8	14 56	6 24	25 100	

Table 2: Students' responses on their teachers' contextualization of activities

No.	Contextualization practices		Rating scales					Total
			5	4	3	2	1	
1	Teachers adapt the activities in the textbooks into contexts of their students	No.	2	18	20	140	70	250
		%	0.8	7.2	8	56	28	100
2	Teachers use activities in the textbooks as they are	No.	60	130	20	20	20	250
		%	24	52	8	8	8	100
3	Teachers design additional activities based on the background of their students	No.	40	40	10	120	40	250
		%	16	16	4	48	16	100
4	Teachers give chance for students to discuss activities in a group	No.	10	30	10	150	50	250
		%	4	12	4	60	20	100
5	Teachers allow the students to express their ideas freely	No.	10	30	10	135	65	250
		%	4	12	4	54	26	100
6	Teachers prepare instructional materials based on the real-life of students	No.	25	45	15	115	50	250
		%	10	18	6	46	20	100
7	Teachers use various instructional strategies to facilitate the learning of students	No.	-	40	10	151	49	250
		%	-	16	4	60.4	19.6	100
8	Teachers modify their activities if students engagement is low	No.	5	30	20	135	60	250
		%	2	12	8	54	24	100

4.1 Teachers' practice of contextualizing classroom activities

The data in Table 1 illustrates teachers' responses regarding their practices of contextualizing classroom activities. Responses to questions 1 and 2 revealed that most teachers used textbook activities without modification. A majority (52%) agreed that they were not contextualizing activities, while 24% strongly agreed. Only 8% strongly disagreed or disagreed with this statement. Similarly, for the question on adapting textbook activities, 52% disagreed, and 28% strongly disagreed, indicating that contextualization was not commonly practiced. The responses confirmed that teachers relied heavily on activities as designed by textbook developers without modification to suit students' backgrounds.

Document analysis supported these findings. Teachers planned their lessons using textbook activities without designing or modifying them. Lesson plans often referenced textbook page and activity numbers, indicating that activities were used as-is. Classroom observations further supported these findings. Teachers instructed students to open their textbooks and work on activities with minimal explanation or adaptation. Students often struggled to engage with these activities. No attempts to modify or adapt activities to students' levels or contexts were observed.

When asked about their adaptation practices, teachers affirmed their questionnaire responses and the classroom observations. They cited a lack of time as the primary reason for not contextualizing activities. Teachers reported teaching six periods daily, five days a week, leaving no time for collaboration or lesson modification. Additionally, large class sizes (often exceeding 80 students) made it difficult to understand individual students' backgrounds or adjust lessons accordingly. Teachers also mentioned insufficient knowledge and professional support as barriers to effective contextualization.

4.2 Students' perspectives

The students' responses aligned with those of the teachers. As shown in Table 2, most students reported that their teachers did not contextualize activities. During focus group discussions, students explained that their teachers primarily assigned textbook activities as classroom tasks or homework without modification. They noted that some activities felt unfamiliar or irrelevant, which hindered their classroom participation.

4.3 Group discussions and student engagement

The goal of developing activities is to facilitate active engagement and independent knowledge construction among students. This requires ample time, structured group discussions, and active teacher support. However, data revealed that teachers were not managing group discussions effectively or checking individual student participation. A significant portion of respondents, 48% of teachers and 60% of students, expressed dissatisfaction with the management of group discussions. Furthermore, 56% of teachers and 54% of students disagreed that student engagement was appraised or activities were amended based on engagement levels.

Classroom observations confirmed these issues. While students were assigned to pre-established groups (e.g., Groups 1-5), teachers did not evaluate the quality of group discussions or individual participation. Target language elements were not adequately assessed, and activities were not adjusted accordingly.

4.4 Instructional media and strategies

Using instructional media tailored to students' backgrounds is a key aspect of contextualization. However, teachers and students reported weak practices in this area. About 44% of teachers and 46% of students disagreed that instructional media were utilized effectively. Only a small percentage (16% of teachers and 18% of students) agreed that instructional media were used to contextualize activities.

Observations indicated that teachers relied on textbook-provided pictures, charts, and photographs. Occasionally, teachers enlarged these materials for visibility but rarely created additional resources. Teachers cited a lack of raw materials and prepared content as major obstacles.

Regarding instructional strategies, 60% of teachers and 60.4% of students rated their use as weak. Teachers primarily employed explanation and question-and-answer methods, regardless of activity type. Lesson plan analyses and classroom observations confirmed a lack of diverse instructional strategies.

4.5 Factors hindering contextualization

During semi-structured interviews, teachers highlighted several challenges that negatively impacted their ability to contextualize activities:

- Time Constraints: Heavy teaching workloads left little time for lesson modification or collaboration with colleagues.
- Large Class Sizes: Managing large groups made it difficult to identify and address individual students' needs.
- Insufficient Knowledge: Teachers lacked adequate training in contextualization techniques.
- Lack of Professional Support: Limited opportunities for professional development and collaboration hindered progress.

5 Discussion

The findings of this study reveal significant challenges in the contextualization of instructional activities by teachers, which are consistent with existing literature on the topic. Teachers' overreliance on textbook-based activities, without adaptation to students' backgrounds, contributed to a lack of motivation and engagement, and hindered the development of practical skills. This aligns with research by [A. V. Brown \(2006\)](#) and [Kumaravadivelu \(2003\)](#), who emphasize that decontextualized materials often fail to capture students' interest or connect to their real-life experiences, which negatively impacts their learning outcomes.

Empirical evidence supports the assertion that instructional activities lacking contextual relevance fail to engage students effectively. According to [Mam et al. \(2017\)](#), activities that are not tailored to the cultural or situational context of the students often lead to decreased motivation and participation. This study's findings echo that sentiment, where students struggled to relate to textbook activities, which often felt irrelevant to their lives. As [Richards and Rodgers \(2014\)](#) highlight, a lack of contextualization makes learning feel generic, reducing students' willingness to actively engage in the learning process.

This lack of engagement, as reported in this study, has been linked to poor academic outcomes. Research by Rivet and Krajcik (2008) found that students who engage in meaningful, contextualized activities are more likely to retain knowledge and apply it effectively in real-world contexts. In contrast, the absence of such contextualization results in passive learning environments where students struggle to internalize or transfer their knowledge to practical situations (Littlewood, 2014).

The findings of this study also suggest that teachers did not adequately implement constructivist principles, which emphasize building on students' prior knowledge and providing opportunities for real-world problem-solving. This aligns with the work of Vygotsky (1978), who argues that learning should build on existing knowledge and be situated within students' real-world experiences. Despite the theoretical foundation of constructivism, this study finds that many teachers failed to understand or utilize students' pre-existing knowledge, which limited the effectiveness of their instructional practices.

This finding is consistent with research by Hare (2010), which suggests that teachers often lack the necessary training to implement constructivist strategies effectively. As a result, teachers tend to rely on traditional, teacher-centered approaches that fail to engage students in active problem-solving or reflective discussions. The limited use of such methods in this study mirrors findings by Perin (2011), who reported that many teachers struggle to integrate real-world problems into their teaching, thereby missing opportunities for meaningful, student-centered learning.

The study identified several barriers to effective contextualization, which are well-documented in the literature.

1. Lack of Time: One of the most commonly cited barriers to contextualization is the lack of time for lesson planning and activity modification. This finding mirrors the work of Bond (2004), who noted that teachers often face time constraints that prevent them from adapting materials to meet the diverse needs of their students. Similarly, large class sizes can exacerbate this issue by reducing the time available for individualized instruction (C. Brown, 2002).
2. Large Class Sizes: The challenge of large class sizes in adapting materials is supported by studies such as those by Kumaravadivelu (2003), who found that managing diverse student needs in overcrowded classrooms limits teachers' ability to personalize lessons. Large classes also make it difficult to foster interactive and engaging learning environments, as teachers struggle to provide individualized attention or modify activities for relevance.
3. Insufficient Knowledge and Skills: The study's finding that teachers lacked the necessary training to contextualize materials effectively is consistent with existing literature. According to Richards and Rodgers (2014), teachers often lack the professional development opportunities needed to acquire the skills to modify standard textbooks in meaningful ways. This lack of training often results in the continued use of generic, one-size-fits-all teaching materials, which do not adequately address the diverse needs of students.
4. Lack of Professional Support: The absence of professional support and resources, as identified in this study, also aligns with the findings of A. V. Brown (2006), who noted that teachers often lack guidance and resources to support effective contextualization practices. Without access to professional development, collaboration with peers, or instructional resources, teachers are left to rely on traditional teaching methods that may not be suitable for all students.

6 Conclusions

Incorporating contextualized activities into the teaching of English language learners is essential for improving engagement, motivation, and skill development. By addressing the barriers identified in this study—such as large class sizes, lack of time, inadequate teacher training, and insufficient resources—teachers will be better equipped to create meaningful learning experiences that resonate with students' real-life contexts. By implementing these recommendations, educational institutions can improve the quality of English language teaching and contribute to more effective and relevant learning outcomes for students.

7 Recommendations

Based on the findings of this study, the following recommendations are proposed to enhance the practice of contextualizing English language activities in the classrooms of Hawassa University, and more broadly, across similar educational contexts:

To address the gap in teachers' knowledge and skills regarding contextualized instruction, it is essential to offer targeted professional development programs. These programs should focus on equipping teachers with the necessary tools and strategies for adapting textbook activities to the cultural and contextual needs of their students. Such training should include:

- Workshops on constructivist teaching methods, real-world problem-solving techniques, and student-centered teaching approaches.
- Training on how to incorporate students' prior knowledge and experiences into lesson plans.
- Practical guidance on modifying and creating instructional materials that are culturally relevant and meaningful.

Teachers need ongoing opportunities to develop their pedagogical skills, ensuring that they are not only familiar with theory but also able to implement contextualization practices in the classroom.

Large class sizes were identified as a significant barrier to effective contextualization. To improve teachers' ability to adapt and individualize instruction, schools should consider reducing class sizes. Smaller classes would allow for more personalized attention and greater opportunities for student-teacher interaction. This change would also enable teachers to manage student needs more effectively, foster more meaningful participation, and create an environment conducive to active learning.

To support teachers in contextualizing activities, the curriculum should include flexible guidelines that allow for adaptation based on students' real-life contexts. Teachers should be encouraged to use local resources, incorporate community-based activities, and engage students in real-world scenarios that reflect their social, cultural, and economic environments. Educational institutions should provide adequate resources, such as supplementary teaching materials, technological tools, and access to cultural references, that assist in the process of contextualization.

Teachers should be encouraged to collaborate with their colleagues in sharing best practices for contextualizing instruction. Professional learning communities (PLCs) can be

established, where teachers meet regularly to discuss challenges, share successful strategies, and develop joint approaches to contextualized teaching. These collaborative opportunities can help build a sense of community and provide teachers with the support they need to implement effective teaching practices. Mentoring programs can also pair experienced teachers with those who may need additional guidance, further fostering professional growth and skill development.

One of the main obstacles identified was the lack of time for lesson planning and contextualization. Educational institutions and policymakers should consider adjusting the workload of teachers to provide dedicated time for planning, adapting materials, and reflecting on instructional practices. This could involve reducing administrative burdens, providing more planning periods, and creating a school culture that values thoughtful preparation and curriculum adaptation.

To ensure that activities are meaningful and engaging, teachers should actively seek student feedback on the relevance of lessons. This can be achieved through regular surveys, informal class discussions, or focus groups. By understanding students' perspectives on what is relevant to them, teachers can further tailor activities to meet their needs and interests. Student feedback will also help teachers reflect on the effectiveness of their contextualization efforts, allowing for continuous improvement. Policymakers should recognize the importance of contextualized teaching and make it a priority at the national and institutional levels. Educational policies should promote and incentivize the use of contextualized instructional practices in teacher training programs and schools. Additionally, allocating funding for resources that support contextualization, such as teaching aids, technology, and professional development, is essential. The Ministry of Education can play a key role in facilitating these changes by providing clear guidelines and encouraging schools to adopt best practices for contextualization.

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Data Availability

Data can be made available on the behavior of the request

Declaration of interests' statement

The author declare no competing interests.

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Original Article

Contributions of instructional leadership and school improvement program (as reforms) for school effectiveness in secondary schools of the technology village woredas of Hawassa University

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KEYWORDS:

Educational Reforms;
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Abstract

The main objective of this study was to investigate the contributions of educational reforms that embrace instructional leadership and school improvement program for school effectiveness in Secondary Schools of the Technology Village Woredas of Hawassa University. To attain this objective a descriptive survey method was employed for its relatively low cost and its suitability to show situations as they currently exist. It was conducted in a sample of six secondary schools with grades 9 to 12 that were selected with the help of a simple random sampling technique. The subjects of the study were 153 teachers, 23 school leaders, 12 Parent Teacher Student Association (PTSA) members, 12 students' council members, and six school improvement programs (SIP) coordinators from the sample schools of the study area. Questionnaire, semi-structured interviews, observation, and document analysis were employed to collect the data. Both inferential as well as descriptive statistics were employed to analyze the quantitative data. Qualitative data were being transcribed, coded, and analyzed alongside with the corresponding quantitative data. It was revealed that schools were considered very strong in setting clear goals and in developing a clear vision and defining mission and values. The findings of the study also shown the very positive perception awarded towards the instructional leadership and school improvement program by the major stakeholders of school (principals, vice-principals, teachers, supervisors, SIP coordinators, PTSA members, and learners). Further, the findings of the study revealed that the contributions of instructional leadership and school improvement program in enhancing school effectiveness have been duly acknowledged by the major stakeholders of the schools. The commonly agreed barriers that negatively affect executing instructional leadership and implementing SIP in the schools were lack of adequate capacity building (lack of in-depth training) programs for the secondary school's major stakeholders; and lack of strong commitment on the part of school leaders to be engaged in tasks related to teaching and learning to which any reform effort of school focuses. Finally, creating opportunities for continuous professional development and capacity-building programs were recommended for the secondary school's major stakeholders on applying school reforms.

1 Introduction

The main objective of this study was to investigate the contributions of educational reforms that mainly focus on instructional leadership and school improvement program (as essential educational/school reforms for school effectiveness) in Secondary Schools of the Technology Village Woredas of Hawassa University. Attaining this aim requires conceptualizing how instructional leadership and school improvement program have been managed in secondary schools; and scrutinizing the extent to which secondary schools are applying instructional leadership and implementing school improvement program underway in those schools. Having this in mind the researcher has made endeavors to assess the general background of the study as follows.

Education/learning has become a key topic, not only for professionals and students in the areas of psychology and education, but also in political and economic contexts (Santrock, 2008). One reason for this is that the world has become highly globalized and competitive resulting in people equating education with jobs and wealth (Illeris, 2009). Expectations are being placed on the education systems to add the new needed knowledge and to develop the necessary skills, attitudes and aptitudes that enhance collaboration, teamwork, problem solving and creativity. To realize this objective, continuous reform/change and innovation in the education system in general and in the way of managing change and reforms in educational institutions are essential.

Since long time ago policy makers of education have constantly and relentlessly put forth effort globally to enhance students' academic achievement through the help of different educational reforms/initiatives which have been implemented at the grass root level (that is at school level) of the education system (Day et al., 2016). Education reform comprises any planned changes in the way a school or school system functions, from teaching methodologies to administrative processes. The purpose of educational reforms is to transform school structures with the aim of raising the quality of education in a country. Educational reforms deserve a holistic examination of their reasons, objectives, application and results generated, by those within the school systems where they are implemented.

Ever since the beginning of the fourth quarter of the twentieth century, school effectiveness has been associated with school leaders and/or principal's leadership skills. Consequently, a new line of thinking with respect to the schools' leadership/management, which focuses on the teaching and learning process of schools, called instructional leadership has come into existence/reality as an important educational reform notion so as to enhance success of schools (Sisman, 2016). Education researcher De Bevoise (1984) defined instructional leadership as tasks and activities which are said to be grouped within the roles and responsibilities of school principals who have the mandate to either perform/execute the tasks by themselves or delegate to others to advance students learning and development.

Latest researches on the effect of instructional leadership, which is designated by different scholars as learner-centered leadership and/or pedagogical leadership, as noted by Le Fevre and Robinson (2015) citing (Leithwood et al., 2008; and Robinson, 2011), have contributed a lot by being the driving force that induces concerned bodies to give significant weight for instructional leadership as an important notion of managing educational institutions and/or schools. This shows the due emphasis given to instructional leadership so as to enhance quality of education and improve academic achievement of students. That is, school effectiveness is critically dependent on the management skills of stakeholders, essentially of school leaders' and/or principals' skills which include instructional leadership (Joshi and Verspoor, 2013).

School effectiveness, besides instructional leadership, calls for other additional initiatives/reforms of school. In view of that, General Education Quality Improvement Pack-

age (GEQIP) (Ministry of Education, 2008) has been introduced and been in the process of implementation in all the primary and secondary schools of Ethiopia. GEQIP has different components. Among the GEQIP constituents, School Improvement Program (SIP) has been given sound considerations and priority. An important priority was and still is, as clearly indicated in GTP I (Ministry of Finance and Economic Development, 2010), to improve and ensure the quality and efficiency of education at all levels. To realize this priority, working for the successful implementation of School Improvement Program (SIP), which is the most important and more or less all-encompassing wing of the General Education Quality Improvement Package (GEQIP), has been considered as a major strategy and tool as well.

Currently, Ethiopia is driven by its vision to become a middle-income country by 2025 (Ministry of Education, 2015). The most important input so as to attain this ambitious economic goal is civilized and educated human power of the nation. The secondary education reforms required to sustain this economic objective need to be carefully prepared, based on broad consultations with all stakeholders. This is why, as Joshi and Verspoor (2013) indicate, the rationale behind expansion of secondary level education is primarily because of the expectation that secondary education significantly plays high role in materializing the forth effort of the country to attain the goal of alleviating poverty and enhancing economic development.

Secondary education is considered as a foundation for providing middle and high level skilled manpower as this level feeds students to technical and vocational institutions as well as to higher education program (South Nations Nationalities and Peoples' Regional State Education Bureau, 2016). Furthermore, the increasing need for secondary education in today's world, as vividly indicated by Ministry of Education (Ministry of Education, 2018), is justified by the fact that (i) secondary level education is considered as the basic necessity of human being and it is no longer a luxury asset. Secondary level education is believed to be complementary to primary level education because secondary education level is the stage where the competence and skills necessary for the adoption of new production methods and technologies necessary to compete in a global economy is attained; (ii) when the opportunities for secondary education are limited, it is likely to reduce demand for primary education; and (iii) the appeal of the community for the successful expansion of secondary education so as to accommodate all the pupils/learners who complete primary level education.

This research is designed with the intention to conduct a type of study/research that made its focus on issues which are related to the instructional leadership and school improvement program in secondary schools as essential school reforms for school effectiveness. Consequently, how instructional leadership and school improvement program have been managed, and the contribution of school improvement program and instructional leadership for school effectiveness is an area which needs to be scrutinized constantly. Instructional leadership and school improvement program (SIP), the key concepts that this study regards as the focal-point of investigation, need to be considered as the earnestly introduced educational/school reform efforts in the Ethiopian education system to bring about school effectiveness. Hence, such state of affairs may demand frequent and further in-depth critical investigation.

2 Rationale for the study

The two key concepts (Instructional Leadership and School Improvement Program) of this study are intensely focused educational reform areas in schools both in the Ethiopian education system as a country and in the Sidama Region (the Region where this study has been undertaken) education system as one of the States of the country Ethiopia. Their

main objectives are improving quality of education, and enhancing students' academic achievement. That is, the purpose of the school improvement program and the assumption behind instructional leadership is to improve the quality of teaching and learning in the school and ensure continuous progress of students learning. One complements as well as supplements the other.

Obviously, reforms may bring about role changes and significant expansion of duties and responsibilities on the part of the major stakeholders of schools (principals, vice principals, department heads, teachers, PTSA members, students, and supervisors). So, in the vortex of such reforms that may add considerable values as far as the holistic growth and development of the education system is concerned, describing how instructional leadership and school improvement program (as essential school effectiveness inputs) have been managed in secondary schools; scrutinizing the contributions of instructional leadership and school improvement program in improving school effectiveness; examining as to what constitutes the instructional leadership role of secondary school principals; and exploring how instructional leadership dimensions interrelated with the school improvement program domains need to be the common agenda of the educational stakeholders and collaborators.

Moreover, as an attempt to realize the effectiveness of schools, analyzing expectations and understanding of secondary school's major stakeholders (principals, department heads, supervisors, PTSA members, teachers, and students) about instructional leadership and school improvement program need to become the area under discussion and the topic that require frequent consideration and critical inquiry on the part of educators like the researcher of this study who have been serving the education system of the country (Ethiopia) at different tiers of the education for a number of years. All the experiences have made the researchers realize the importance of school leadership in general and instructional leadership in particular and understand the significance of school improvement program/SIP in attaining the expected standard quality of education and ultimately in improving the academic achievement of learners in the schools. Therefore, this is the main rationale that motivates the researchers of this study to come up with an idea to undertake research on the topic entitled as "Contributions of Instructional Leadership and School Improvement Program (as Reforms) for School Effectiveness in Secondary Schools of the Technology Village Woredas of Hawassa University".

3 Research problem

Among the core educational problems that have been raised by different Ethiopian governments in the past and still today are the problems pertaining to quality, access, equity, and relevance of education which are intricately associated/connected with school effectiveness and students' academic performance. Quality, access, equity, relevance of curriculum, and efficiency has always been the preoccupations of policy makers and researchers in the field of education. These are core educational issues that require due consideration while investigating or researching any problem associated with the education and its system of a certain country. That is why [Amare \(2009\)](#) has categorized the major educational issues into classes as: quality, equity, access, efficiency, and relevance of the curriculum. Thus, these factors have defined the framework of educational research and policy making ([Amare and Temechegn, 2002](#)).

The delivery of quality education has always been at the top of educational agenda, although the way to make it work has, however, been rather difficult to achieve ([Amare and Temechegn, 2002](#)).

In Ethiopia since the change of government in 1991, a number of efforts have been made to reform the inherited education system which was characterized by irrelevance, poor

quality and unemployable graduates. Moreover, in addition to absence of clearly articulated policy, the pre-1991 education system suffered from problems of access, equity, and quality (Ministry of Education, 2018).

An inquiry into the reasons for the low academic achievement of learners in Grades at which regional as well as national exams (grade 8, and grades 10 and 12 respectively) were administered indicated the main causes behind low students' academic achievement as inadequacy of the necessary inputs, problems related to learners and teachers work ethics/work discipline, low morale, problems associated with putting the educational policies/reforms into practice (that is, lack of effectiveness, as well as inefficiency with respect to the implementation of the education policies/reforms such as instructional leadership and school improvement program), lack of adequate participation on the part of parents, and lack of adequate learner support system (Adinew and Dawit, 2018). These problems may possibly have both direct as well as indirect association with school leadership. Thus, in minimizing the prevalence of such problems, which negatively affects the quality of education in general as well as the academic achievement of the learners in particular, school leaders and/or principals are expected as to shoulder a huge responsibility that may encourage applying instructional leadership and implementing school improvement program, as essential educational reforms for school effectiveness.

Therefore, to alleviate these just above mentioned instructional as well as educational problems at schools, this study made an attempt to assess the contributions of instructional leadership and school improvement program, as essential educational reforms for school effectiveness. School Improvement Program (SIP) initially focuses on evaluating the currently existing situations of schools. This is so because evaluating the currently existing situations of the school focuses not only on attempting to recognize its strengths so as to use them as a springboard initially while putting forth effort to the direction that the school aspires to get-up-and-go as well as attain, and not only on trying to find out the opportunities that need to be exploited exhaustively for the wellbeing of the school, but also centers its assessment primarily on identifying weaknesses and threats/challenges/problems of schools. Evaluating the currently existing situations of schools could also be considered as a prerequisite while designing/preparing SIP plan so as to help schools set appealing and rational/reasonable targets that could be achieved within the overarching goal of SIP which aims at improving quality of education and enhancing students' academic achievement in the schools.

After the inception of the Education and Training Policy of Ethiopia in 1994, the Ethiopian government has taken different measures to alleviate those educational problems. The efforts being made to strengthen the professional skills of school principals and to implement and assess the outcome/effect of the school improvement program which has been in place since 1999 E.C. (Ministry of Education, 2010) is also part of the endeavor. In spite of the efforts made, the question of quality education is still the major concern of the country today. Surely, educational quality needs to be the prime focus of educational managers or instructional leaders because schools are places where young generations lay foundations that enable them to be ready to shoulder the responsibilities that would be given to them by tomorrow. Particularly, serious assignment is given to secondary schools as they prepare youngsters for university education as well as partly for the world of work (especially as a workforce to a country/Ethiopia which aspires to attain the vision of middle income economy).

The national as well as the regional gross enrollment rate (GER) for all secondary grades (9-12) was considered as very low (Ministry of Education, 2017). This indicates that both at national and regional levels there are many children who are not completing primary education and proceeding to secondary education. There are of course wide regional variations. However, the gross enrollment rate (GER) for grades 9-10 has more than doubled since 2000. Yet key challenges remain in secondary education: (1) a low primary education completion rate constraints the growth of secondary enrollments; (2) access

to secondary education remains inequitable; and (3) levels of student learning are disappointing (Joshi and Verspoor, 2013). As a result, since GTP II period, all efforts have been exerted to increase expansion of secondary schools and quality of its education (National Planning Commission of the Federal Democratic Republic of Ethiopia, 2016).

School improvement program implementation has been critically dependent on the school's management skills of the major stakeholders particularly of school leaders and/or principals. The starting point here, as indicated by Joshi and Verspoor (2013), must be a sustained effort to enhance the effectiveness of school leaders. The same authorities went on saying that skills of these leaders include primarily instructional leadership, and other skills such as financial and human resources management, forging effective working relationship with the line staff of educational agencies, and winning the confidence of parents and School Management Committees. Therefore, it is the right point in time so as to examine the impacts/contributions of instructional leadership and school improvement program, as essential educational/school reform inputs, for school effectiveness.

As it is clearly indicated in the GTP II document, the government of Ethiopia continues to be committed to put all the necessary efforts on increasing expansion of secondary schools (National Planning Commission of the Federal Democratic Republic of Ethiopia, 2016). Hence, comprehensive strategies need to be established to enhance the functionality of the school improvement program and application of instructional leadership in secondary schools. Besides, efforts need to be exerted to improve school leaders' and/or principals' skills in terms of applying instructional leadership and implementing SIP. Therefore, this is the main reason that motivates/triggers me to come up with an idea to conduct research on the topic "Contributions of Educational Reforms that contain Instructional Leadership and School Improvement Program for School Effectiveness in Secondary Schools of the Technology Village Woredas of Hawassa University".

Eventually, on the basis of the above problem description of the study, this research made its focus on answering the following basic research questions.

3.1 Research questions

1. How Instructional Leadership and School Improvement Program (SIP) are currently managed in secondary schools of the Technology Village Woredas?
2. What are the contributions of instructional leadership and SIP to improving school effectiveness in these schools?
3. How do major school stakeholders perceive the implementation of SIP and impact of instructional leadership?
4. To what extent do school principals perform core instructional leadership functions?
5. To what extent is the School Improvement Program (SIP) being implemented in the schools?
6. What possible strategies can be implemented to enhance the implementation of SIP and instructional leadership in secondary schools?

3.2 Objectives of the study

The overarching aim of this study was to explore contributions of instructional leadership and school improvement program (as essential educational/school reforms for school effectiveness) in Secondary Schools of the Technology Village Woredas of Hawassa University. Specifically, the study aimed to:

1. Assess how school improvement program and instructional leadership have been managed in secondary schools.
2. Analyze the contributions of instructional leadership and school improvement program in enhancing school effectiveness?
3. Find-out the perceptions of secondary school's major stakeholders towards instructional leadership and school improvement program.
4. Examine the extent that principals of secondary school perform instructional leadership roles in their respective schools.
5. Assess the magnitude that secondary schools implement school improvement program.
6. Identify strategies to enhance the implementation of SIP and instructional leadership in secondary schools.

3.3 Significance of the study

The significance of a study/research has been described as a substantial contribution of something that is valuable and will have an effect in offering a non-trivial to a very important breakthrough at the empirical, conceptual, theoretical, or policy level; is useful and will have an impact; causes those inside and possibly those outside or the community to see things differently; influences the discourse, research, and teaching; has implications for and advances in the field, the discipline, other disciplines, or society (Lovitts and Wert, 2009). Moreover, the significance and contribution of an inquiry/investigation displays an association with the importance of conducting research as anticipated by Creswell (2012) that: research adds to knowledge; research improves practice; and research helps to improve policy (i.e. research informs policy debates).

Concerning how research adds to our knowledge, educational authorities or educators should strive for continual improvement and effectiveness of educational institutions/organizations and/or schools. This requires addressing educational problems or issues and searching for potential solutions. Adding to knowledge means that educators undertake research to contribute to existing information about issues. A research report might provide a study that has not been conducted and thereby fill a void in existing knowledge. It can also provide additional results to confirm or disconfirm results of prior studies. It can help add to the literature about practices that work or advance better practices that educators might try in their educational setting. It can provide information about people and places that have not been previously studied (Creswell, 2012). Accordingly, this study may contribute in adding the knowledge base and understanding of the major stakeholders of secondary schools concerning the topic under investigation. Thus, in this regard, this study may possibly have a moderate contribution.

With regards to improving practice, research is also considered very essential because it suggests improvements for practice. From reading research studies, educators can learn about new practices that have been tried in other settings or situations. Besides, at a broader level, research helps the practicing educator build connections with other educators who are trying out similar ideas in different locations (Creswell, 2012). Consequently, this research/study may perhaps help in improving application of instructional leadership and implementation of school improvement program, as essential educational/school reforms that add positive values for the quality of education and learning in the schools, so as to attain school effectiveness.

In terms of improving policy, when policy makers read research on different issues in general and on educational matters in particular, they are informed about current debates and stances taken by other public officials. To be useful, research needs to have clear

results, be summarized in a concise fashion, and include data-based evidence (Creswell, 2012: 6). In such aspect, this study may contribute positively in reviewing and appraising how instructional leadership and school improvement program (SIP), as reforms in the schools, be managed and enhanced in order to achieve its anticipated objectives.

Moreover, this study may give insight into the problem and serve as a reference for those educators and other professionals who may intend to carryout research in similar and related issues of education in other Regions as well as at different educational tiers in the Ethiopian education system. By making some suggestions, the study may also contribute in directing/showing the ways on how to redress the educational problems that may play hindrance role in terms of both realizing quality of education and enhancing students' academic achievement which are the ultimate goals behind applying instructional leadership and implementing school improvement program in secondary schools.

4 Research methods

4.1 Study design

The study design is the overall plan of the research that makes the research process easier; it constructs the steps in the research process, from the beginning to the end which the researchers follow to accomplish their aim, very clear; and it articulates the different aspects of the study as its main framework (Murnane and Willett, 2011; Scott, 2012; Mitchell and Jolley, 2010; and Jones et al., 2006). Study/research design involves identifying the problem, setting the questions to be answered, designing the approaches and the data collection tools and executing the research (Bickman and Rog, 2009). In brief, research design must, at least, contain a clear statement of the research problem; procedures and techniques to be used for gathering information; the population to be studied; and methods to be used in processing and analyzing data. So, this study employs descriptive survey design with both quantitative and qualitative approach.

4.2 Study methodology

The methodology section of a research describes how the study was conducted and the methods used to collect and analyze the data (Kassahun, 2013). The research methodology includes a specific design to assist the collection of the data needed to answer the research questions raised in the study. The choice of a research design for the study has been based on the nature of the problem under study as well as purpose of the study (Mohammed and Handiso, 2018). Mainly, the problem under focus in this study pertains to examining how educational reforms that include school improvement program and instructional leadership have been managed in secondary schools. To attain this objective, a descriptive survey method was employed. The method is also chosen for its relatively low cost and its suitability to show situations as they currently exist. That means the study determines and describes the way things are (Gay, 2006: 275). Similarly, Mohammed and Handiso (2018), citing Best and Kahn (2006), noted that descriptive research design helps to describe and interpret the current condition (practices, existing challenges & opportunities). That is why, the major purpose of descriptive research, as vividly indicated by Kothari (2004), is description of the state of affairs as it exists at present.

This study also contains both quantitative and qualitative characteristics of the research. In this respect, the approach employed by this study involves both quantitative and qualitative approaches (that is, mixed method). The intention of using the two approaches in

combination comes out of a pragmatic concern for making-up the limitation of one approach by the strength of the other (Belay et al., 2015). Moreover, a basic rationale for this design is that one data collection form supplies strengths to offset the weaknesses of the other form, and that a more complete understanding of a research problem results from collecting both quantitative and qualitative data (Creswell, 2012). So, in this study, the descriptive survey method makes use of a convergent (or parallel or concurrent) mixed methods design approach.

4.3 Study subject

The subjects of this research were secondary schools’ leaders (i.e., principals, supervisors, vice principals), teachers (include department heads or curriculum committee members of each department and stream), parent-teachers-students association (PSTA) members, students’ council members, and school improvement program (SIP) coordinators.

4.4 Sample and sampling

The subjects of the study (i.e., secondary schools’ principals, supervisors, vice principals, teachers, parent-teachers-students association (PSTA) members, students’ council members, and school improvement program (SIP) coordinators) were also been selected from the sample secondary schools by using simple random sampling, comprehensive sampling, and purposive sampling techniques as depicted in the following table (Table 1) below.

Concerning sample size, samples should be as large as a researcher can obtain with a reasonable expenditure of time, energy, human power and money. As vividly indicated by Fraenkel and Wallen (2009), a recommended minimum number of subjects are 100 for a descriptive study, 50 for a correlational study, and 30 in each group for experimental and causal comparative studies. As a result, in this study, as being a descriptive survey study, 153 teachers, 5 principals, 12 vice principals, 6 cluster supervisors, 6 SIP coordinators, 12 PTSA members, and 12 student council members that sum summed 206 were considered to be participants of the study as indicated in the Table 1 below.

Table 1: Subjects of the Study, Sample Secondary Schools & Corresponding Sample Size, Sampling Techniques, and Data Gathering Tools Used

Subjects of the Study	Sample Secondary Schools & Sample Size							Sampling Techniques		Data Gathering Tools
	Alamura	Chuko	Kebado	Leku	Tabor	Yirgalem	Total			
Teachers	26	26	26	25	25	25	153	Simple Random		Questionnaire
Principals	1	1	–	1	1	1	5	Comprehensive		Questionnaire & Interview
Vice Principals	2	2	2	2	2	2	12	Comprehensive		Questionnaire & Interview
Supervisors	1	1	1	1	1	1	6	Comprehensive		Questionnaire & Interview
SIP Coordinators	1	1	1	1	1	1	6	Comprehensive		Focus Group Discussions
PTSA Members	2	2	2	2	2	2	12	Purposive		Focus Group Discussions
Student Council Members	2	2	2	2	2	2	12	Purposive		Focus Group Discussions
Sample size in each school	35	35	34	34	34	34	206			

4.5 Data collection tools

There are several data collection instruments that could have been used while conducting research. However, some of the different data collection instruments were selected for this research. Accordingly, this research employed questionnaires, one-on-one semi-structured interviews, observations and document analysis as main tools of data collection. The use of multiple data collection tools, which could help in extracting data from different sources (from both primary as well as secondary sources), aided to construct a richer, bigger and meaningful picture of how instructional leadership and school improvement program managed in secondary schools under study.

4.5.1 Questionnaire

A questionnaire is a data collection instrument that helps to obtain information about the thoughts, feelings, attitudes, beliefs, values, perceptions and behavioral intentions of research participants (Cohen et al., 2007). Accordingly, questionnaire in this study was used so as to assess the views of principals, vice principals, supervisors, and teachers towards instructional leadership and school improvement program (SIP) in secondary schools.

4.5.2 Interview

Interview was another important data collection tool that helps in gathering qualitative data from primary sources. The participants of the interview in this study were principals, vice principals, supervisors, and SIP coordinators. Moreover, conducting an interview, according to Creswell (2008), entails preparation on the part of the researcher in determining the number of participants, in designing question types and items, and in devising mechanisms of recording responses of participants.

4.5.3 Observation

Observation helps to collect data on real life settings. It also provides a chance for the researcher to check reality through noting and comparing what people do with what they say (Cohen et al., 2011; and Robson, 2002). Observation enabled the researcher to look afresh at everyday behavior of secondary schools as organizations and to look at a school how it functions as a system so as to enhance its effectiveness. Moreover, Observation as data collection tool also help in having real information about what is actually going on in the schools as main instructional activities and as functions/tasks that support overall teaching and learning activities of the schools.

4.5.4 Document analysis

Researchers can possibly use documents as important sources of information while conducting studies (Tobin, 2010). Accordingly, in this study, document analysis was become another important data gathering tool of the study. The documents that were analyzed include annual reports of education at different levels (Schools, Woredas/Districts, Zones, Regions, and Federal levels), policy documents, Education Statistics Annual Abstracts (ESAA), legislations of education, school improvement framework, school improvement program implementation manuals, school improvement program guidelines,

different educational circulars, secondary schools' curriculum committee minutes, minutes of teachers and staff meetings in the schools, strategic plans and SIP plans in the schools, and other relevant documents that describe roles and responsibilities of major stakeholders of secondary schools (principals, supervisors, teachers, parent-students-teachers association (PSTA) members, and students). Besides, documents related to school improvement program (SIP) planning, implementation, monitoring and evaluation as well as its achievement records of schools with respect to SIP were also be used as document sources of data.

4.6 Validity and reliability

In any research study, validity and reliability are aspects of research that need to be addressed to ensure that the collected data is trustworthy and reliable. Validity and reliability can be maximized by using multiple sources of data and data-collection instruments (Guest et al., 2012). The subsequent sections deal with the issues related to ensuring validity and reliability of quantitative data, as well as the trustworthiness and transferability of the data to ensure validity and reliability of the qualitative data in this study.

4.6.1 Validity

Validity is checked by reviewing data collection instruments in terms of clarity, wording, and sequences of questions. Accordingly, the questionnaire in this study was pilot tested using subjects who were not part of the final sample. These respondent subjects were teachers, principals, vice principals, and supervisors of secondary school in Hawassa City Administration called Millennium Secondary school.

4.6.2 Reliability

To check the reliability, Cronbach's alpha was used to analyze the internal consistency of the items of the questionnaire which was considered to be the major tool to gather quantitative data from respondents (i.e. principals, vice principals, teachers, and supervisors) of this study. Internal reliability of scaled items in a questionnaire can be demonstrated statistically by a correlation coefficient. A reliability coefficient of 0.7 or above is generally regarded as acceptable. Therefore, as depicted in Table 2, acceptable scores were obtained as calculated Cronbach's Alpha value equals 0.875 (the correlation coefficient value that is very close to 1). Cronbach's Alpha value of 0.875 computed here is an indication of greater reliability. Hence, the high alpha reliability of each scale leads to the conclusion that the survey designed for the current study was a very reliable measure.

Table 2: Reliability test result of the scaled questionnaire items

Sections of Questionnaire	Number of items	Cronbach Alpha Coefficient
II. Tasks related to instructional leadership and school improvement program (as school/educational reform functions) for school effectiveness	12	0.87
III. Contributions of Instructional Leadership and School Improvement Program (As Essential Educational Reforms) in Enhancing School Effectiveness.		
a) Contributions of Instructional Leadership (as Essential Educational Reform) in Enhancing School Effectiveness.	9	0.79
b) Contributions of School Improvement Program (as Essential Educational Reform) in Enhancing School Effectiveness.	5	0.86
IV. Perception of major stakeholders of schools towards school reforms that include instructional leadership and school improvement program	7	0.98
Whole Scale	33	0.875

4.7 Method of data analysis

In this study, descriptive statistics was considered as an essential tool that was used to analyze the respondents' demographic characteristics and to compare teachers and school leaders responses on how instructional leadership and school improvement program are managed in secondary schools. In addition, inferential statistical techniques were employed to analyze the data. Accordingly, Pearson coefficient of correlation was used to see the association of each dimension of instructional leadership with school improvement domains. Likewise, the significant mean differences among the respondents' response on different issues of instructional leadership dimensions and school improvement program domains were tested using one-way ANOVA.

The qualitative data obtained through interview, observation, focus group discussions (FGDs) method, and some of the data that was collected through document sources were transcribed, coded, categorized into themes, and analyzed simultaneously with the quantitative data by relating the responses in relation to the research questions.

5 Results

5.1 Demographic profile of the respondents

Table 3 presents the demographic profile of the respondents. Accordingly, Table 3 presents the gender and age distribution of the respondents. Moreover, Table 3 illustrates the background information of the respondents in terms of the current position in the school, academic qualification, the field of specialization, teaching experience in the school, and years of experience as a school leader respectively.

Table 3: Demographic Characteristics of Respondents

Variables	Category	Frequency	Percentage
Sex	Male	118	67.0
	Female	58	33.0
	Total	176	100.0
Age	20-30	62	35.2
	31-40	78	44.3
	41-50	28	15.9
	Above 50	8	4.5
	Total	176	100.0
Qualification	Diploma	5	2.8
	First Degree	64	36.4
	First Degree + PGDT/PGDSL	52	29.5
	Masters	55	31.3
	Total	176	100.0
Field of Specialization	Academic Subjects	149	84.7
	Educational Leadership	26	14.8
	Vocational/Technical	1	0.5
	Total	176	100.0
Teaching Experience	Less than 5 years	9	5.1
	5-10 years	47	26.7
	11-15 years	40	22.7
	More than 15 years	80	45.5
	Total	176	100.0

As indicated in Table 3 item four, 64 respondents (36.4 percent) of the total sample population, for quantitative data where $n = 176$, were first degree holders. A good share of respondents, 52 in number that consists 29.5 percent of the total respondents, have reported as they had received Post Graduate Diploma in Teaching and Post Graduate Diploma in School Leadership (PGDSL) besides having a first degree (Bachelor of Arts or sciences/BA/BSc). Having training in PGDT and PGDSL become mandatory for those teachers who begin their teaching profession as a novice/beginner and for those principals who begin to assume the school leadership position respectively. Unusually, very few respondents, 5 in number that consists only 2.8 percent of the total respondents have reported as they were Diploma holders. The remaining 55 respondents that make up 31.3 percent of the respondents have reported as they had received a second degree (Master of Arts or sciences/MA/MSc). Teachers, principals, vice principals, and supervisors who have been working at secondary schools are required to have at least first degree (BA/BSc or BED that is Bachelor of Education) as their minimum qualification in one of the academic subjects, which are among the curriculum of secondary school level education. However, since long the government of Ethiopia has planned to upgrade the qualification of secondary school teachers with BA/BSc degree to MA/MSc level. As clearly depicted in the above table (Table 3), it is indicated that the share of MA/MSc among the total respondents (where, $n = 176$) was much less than 50 percent (that is, 31.3%). Hence, this pinpoints the area where the government and policy formulators should give due emphasis so as to upgrade the qualification of teachers in secondary schools.

Table 3 item five shows a field of specialization of the respondents. The respondents were asked to indicate their specialization area in terms of the subject matter they have studied. According to the data shown in Table 3 item five, the significant majority of the respondents (84.7% that is 149 in number) had specialized in academic subjects that are among the core curriculum of secondary school level education in Ethiopia. Twenty-six respondents (14.8% of the total sample respondents where $n = 176$) had specialized

in educational leadership and management. On the other hand, only one respondent teacher (0.5 percent of the total respondent teachers) was reported as specialized in Vocational/Technical subjects.

Of the total respondents that include principals, vice principals, supervisors, and teachers ($n = 176$) of this study, as clearly shown in Table 3 item six, 47 of them (26.7%) had service years that range from five to ten, 40 of them that make up nearly twenty-three percent (22.7%) of the total respondents had served as a teacher in schools for 11 to 15 years, while 80 respondents (45.5% of the total respondents) had served as a teacher for more than 15 years. Among the teacher respondents, 9 of them (5.1% of the total respondents) had reported as they have served as a teacher for less than five years. Thus, the composition of the subjects as sources of data of the study was wide-ranging in terms of the service years in the teaching job (as a teacher).

5.2 Analysis of main data

This section comprises analysis of respondents' responses on different tasks/functions related to instructional leadership and school improvement program/SIP (as school/educational reform activities) that need to be executed by schools to bring about school effectiveness; contributions of instructional leadership and school improvement program; and perception of major stakeholders of schools towards educational/school reforms that include instructional leadership and school improvement program. The mean scores of scaled questionnaire items, as indicated in different tables that were presented throughout the text for the data analysis, were interpreted as follows: 1 - 1.79 very low, 1.80 - 2.59 low, 2.60 - 3.39 medium, 3.40 - 4.19 high, and 4.20 - 5.00 very high.

5.2.1 *Respondents' responses on tasks related to instructional leadership and school improvement program for school effectiveness*

This section comprises different tasks/functions related to instructional leadership and school improvement program/SIP (as school/educational reform activities) that need to be executed by schools to bring about school effectiveness.

Table 4: Tasks related to instructional leadership and school improvement program

Tasks related to instructional leadership and school improvement program (as school/educational reform functions) for school effectiveness	N	Minimum	Maximum	Mean	Std. Deviation
School promotes the advantages of schooling in terms of benefiting the school environment	176	1	5	3.87	.897
School encourages teachers to conduct action research.	176	1	5	3.31	1.15
School ensures that parents actively participate in parents-teachers-students association (PTSA) activities	176	1	5	3.78	1.02
School facilitates experience sharing visits to other schools.	176	1	5	3.41	1.14
The school has identified its priorities.	176	1	5	3.95	.869
School motivates hardworking teachers based on the extent of effort they exert so as to realize measurable improvements in student results.	176	1	5	3.71	1.037
School organizes and facilitates courses and workshops as mechanisms of professional development.	176	1	5	3.52	1.051
The school has prepared school improvement plan by involving the major stakeholders of the school	176	1	5	4.01	.935
School provides information to parents and the community about students' learning, financial utilization and other issues and receives feedback.	176	1	5	3.94	.886
School provides high achieving students with rewards (incentives) as a means of motivating all students to achieve better.	176	1	5	3.87	1.025
The school has set/defined its goal and designed its vision, mission, values, and plans.	176	1	5	4.20	.857
School sets clear targets to be attained by the major stakeholders of the school	176	1	5	4.02	.876

As clearly indicated in Table 4, respondents have vividly acknowledged that the school has set/defined its goal and designed its vision, mission, values, and plans (Mean = 4.20); school sets clear targets to be attained by the major stakeholders of the school (Mean = 4.02); and the school has prepared school improvement plan by involving the major stakeholders of the school (Mean = 4.01). The respondents, as depicted in Table 4, have also reported a modest effort made by the schools in terms of performing/executing other tasks related to instructional leadership and school improvement program (as school/educational reform functions) for school effectiveness.

Principal from secondary school one had the following to say about the importance of executing school reforms such as instructional leadership and school improvement program (as school/educational reform functions) for school effectiveness,

"In the school, our roles as principal and instructional leader, who are notably expected to coordinate overall functions of the school in general and perform mainly instruction-related tasks in the school in particular, begin by sketching comprehensive plan that specifies detailed instructional activities or functions as part of the school reform activities for school effectiveness, and in due course, to be endorsed by the major stakeholders of the school. The functions comprise setting/defining school's goal and designing its vision, mission, values, and plans; setting clear targets to be attained by the major stakeholders of the school; preparing strategic and school improvement plans that embrace all instructional and administrative tasks by involving the major stakeholders of the

school. All these activities included as plan of the school are thought to be part of the educational reform functions of the school and need to be executed properly for school effectiveness."

One can clearly infer from the above analysis that executing educational/school reforms such as instructional leadership and school improvement program (as school/educational reform functions) is become vital for school effectiveness. Accordingly, it is confirmed that schools have been making forth effort to implement educational/school reforms that include instructional leadership and school improvement program to enhance their effectiveness.

5.2.2 Contributions of Instructional Leadership and School Improvement Program (As Essential Educational Reforms) in Enhancing School Effectiveness

The following section, as indicated in Table 5, contains contributions of instructional leadership and school improvement program (as essential school/educational reforms) in enhancing school effectiveness.

Table 5: Contributions of Instructional Leadership and School Improvement Program in Enhancing School Effectiveness

Contributions of Instructional Leadership and School Improvement Program in Enhancing School Effectiveness	N	Minimum	Maximum	Mean	Std. Deviation
Defining and communicating a school's goal	176	1	5	3.99	.988
Maintaining the high visibility of the principal in the school	176	1	5	4.15	.831
Protecting the instructional time/period of the school	176	1	5	3.82	1.130
Promoting the professional development of teachers and other stakeholders in the school	176	1	5	3.93	.992
Supervising and evaluating instructions in the school	176	1	5	3.93	.888
Monitoring students' progress in the school	176	1	5	4.07	.912
Providing incentives for teachers	176	1	5	3.85	.945
Providing incentives for learners	176	1	5	3.78	.963
Coordinating curriculum in the school	176	1	5	3.91	.901

Respondents of the study awarded modest contributions of instructional leadership and school improvement program (as essential school/educational reforms) in enhancing school effectiveness with regard to defining & communicating a school's goal; maintaining the high visibility of the principal in the school; providing incentives for teachers; and supervising and evaluating instructions in the school.

The importance of instructional leadership and school improvement program (as essential school/educational reforms) in enhancing school effectiveness and improvement had been expressed by the words of one of the senior teachers from Secondary School two, who was the coordinator of SIP in the school, as follows,

Instructional leadership and school improvement program (as essential school/educational reforms) could contribute for school effectiveness with regard to coordinating curriculum in the school, and providing Incentives for learners and teachers who were important pillars in the school as learning organization.

As indicated in Table 5, respondents of the study have given high regard about the contributions of instructional leadership and school improvement program (as essential school/educational reforms) in enhancing school effectiveness in terms of protecting the instructional time/period of the school (Mean = 4.15); Monitoring students' progress in the school (Mean = 4.07); and promoting the professional development of teachers and other stakeholders in the school (Mean = 3.99). Moreover, respondents of the study awarded modest contributions of instructional leadership and school improvement program (as essential school/educational reforms) in enhancing school effectiveness with regard to defining & communicating a school's goal; maintaining the high visibility of the principal in the school; providing incentives for teachers; and supervising and evaluating instructions in the school.

This shows the positive perception given to instructional leadership and school improvement program (as essential school/educational reforms) for school effectiveness by the major stakeholders of the school.

Regarding the contributions of instructional leadership and SIP for school effectiveness and improvement, the supervisor of Secondary School one also said,

"Principals, as top executives and coordinators of the school, require being successful in their work in the school, aspire to get promotion in their career ladder at the right time, need to enhance the possibility of professional growth to be able to work at the higher echelons (i.e., Woreda/District Offices, Zone Education Departments, Region Education Bureaus, and Centrally at the Ministry Education level as experts as well as heads) of the education system of the nation/Ethiopia, and want to achieve a favorable recognition. To attain such aspirations that motivate principals to exert forth effort in day-to-day activities in the school, here in our/Ethiopian education system, principals should focus on the tasks of instruction (teaching and learning related functions) while managing and coordinating their respective schools. Thus, the only strategy that authorizes school principals to focus on the teaching and learning functions of the school is applying new reforms that embrace the instructional leadership approach and implementing SIP in the school. Moreover, successfully applying instructional leadership and implementing SIP in the school, in turn, helps principals to see the outcomes of their own work and to find ways of dealing with problems in the school. As a result, applying instructional leadership and implementing SIP as school reforms become a source of satisfaction on the part of principals in the school because executing instructional leadership roles of principals effectively in the school by itself is a transformation that addresses every aspect of the learning/education in the school that include SIP implementation."

These consecutive explanations, about the contribution of instructional leadership, imply sound understanding and expectations that secondary school's major stakeholders (vice-principals, teachers, and supervisors) have about the importance of instructional leadership for school effectiveness and improvement. It also clearly indicates the positive perception that the major stakeholders of the school (supervisors, vice principals, and teachers) have towards instructional leadership roles of principals in the school.

However, there are challenges as barriers of executing education/school reforms such as instructional leadership and school improvement program (as essential school/educational reforms) for school effectiveness. The main challenges, particularly with instructional leadership, were related to instruction/teaching-learning processes in the school because the mission of the school is conducting teaching and learning-related tasks in the school. The challenges of instructional leadership may manifest themselves in the school while evaluating instruction, and promoting change. Moreover, one important challenge frequently cited by the participants and respondents (responses for open-ended items of the questionnaire) of this study, as barriers of applying instructional leadership and implementing SIP as school reforms, is the existence of dissatisfaction as well as the absence of satisfaction among the major stakeholders (including principals) of school.

Regarding the absence of satisfaction as well as the presence of dissatisfaction on the part of school leaders, Supervisor from Secondary School three pointed out,

“The possible sources for the lack of satisfaction and the existence of dissatisfaction among the school leaders and/or principals in the schools are because of:- lack of recognition; lack of personal acknowledgment by the management of the school; lack of reward; lack of ability to find ways of dealing with problems; the inability of school leaders and/or principals to see the outcomes of one’s (their own) work; the routine nature of the tasks themselves that do not require creativity; non-existence of autonomy in accomplishing task assignments; decline in the authority of school leaders/principals when compared to others; critical accountability of school leaders/principals for job performance; lack of expected promotion as well as the existence of demotion on the part of principals related to task accomplishment; and lack of changes in the work condition such that advancement of school leaders and/or principals is less likely and opportunities to learn are minimized.”

This implies that the positive presence of such motivation factors generates increased effort and ultimately leads to satisfaction on the part of school leaders and/or principals. Conversely, when motivation factors are non-existent or in a negative direction, it results in decreased efforts and due course leads to the absence of satisfaction on the part of school leaders and/or principals. The main aim of applying instructional leadership as well as implementing a school improvement program (SIP) is to bring about quality education and ultimately enhance learners’ academic achievement in the school.

Table 6: Group statistics for difference between teachers’ and school leaders’ perceptions towards instructional leadership (IL)

Position	N	Mean	Std. Deviation	Std. Error Mean
Perception for IL	Teachers	153	3.9346	.70774
	School Leaders	23	4.4783	.31326
	Total	176		.05722

Table 6 presents the descriptive statistics comparing teachers’ and school leaders’ perceptions of instructional leadership in the sample Secondary Schools. The sample includes 153 teachers and 23 school leaders. The mean perception score for instructional leadership among teachers is 3.93 (SD = 0.71), while the mean score for school leaders is 4.48 (SD = 0.31). This indicates that, on average, school leaders have a more favorable view of instructional leadership compared to teachers. The standard deviation for teachers (0.71) suggests a greater variability in their perceptions, indicating a wider range of opinions about instructional leadership within this group. In contrast, the standard deviation for school leaders (0.31) is considerably lower, showing that their perceptions are more consistent and less varied. The standard error mean for teachers is 0.057, and for school leaders, it is 0.065. These relatively low standard errors imply that the sample means are reliable estimates of the population means for both groups.

However, despite this mean difference, it is essential to determine whether this difference is statistically significant or not. To assess this, the researcher conducted an independent samples t-test.

Table 7: Independent samples test for difference between teachers' and school leaders' perceptions towards instructional leadership/IL

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig. (2-tailed)	
Perception for IL	Equal variances assumed	10.142	.002		-.174	.000
	Equal variances not assumed			63.320		.000

The results of the independent samples t-test are presented in Table 7. Levene's Test for Equality of Variances indicated a significant difference in variances between the two groups ($F = 10.142$, $p = .002$). Therefore, the assumption of equal variances was not met. Using the results from the row where equal variances are not assumed, the t-test showed a statistically significant difference between teachers' and school leaders' perceptions towards instructional leadership ($t(63.320) = -6.260$, $p < .001$). This indicates that the difference in mean perception scores between teachers and school leaders is statistically significant, confirming that school leaders indeed have a more favorable perception of instructional leadership compared to teachers.

To assess the practical significance of this difference, effect sizes were calculated and are presented in Table 8.

Table 8: Independent samples effect sizes for difference between teachers' and school leaders' perceptions towards instructional leadership

	Standardizer	Point Estimate	95% Confidence Interval	
			Lower	Upper
Perception for IL	Cohen's d	.67080	-1.256	-.363
	Hedges' correction	.67371	-1.250	-.361
	Glass's delta	.31326	-2.399	-1.055

The result from the Table 8 indicates that Cohen's d was found to be -0.81 (95% CI: -1.256 to -0.363), indicating a large effect size according to Cohen's conventions. Hedges' correction for small sample sizes also resulted in an effect size of -0.81 (95% CI: -1.250 to -0.361). Additionally, Glass's delta showed an effect size of -1.735 (95% CI: -2.399 to -1.055). These effect size estimates suggest that the difference in perceptions between teachers and school leaders is not only statistically significant but also practically significant, with school leaders exhibiting a substantially more favorable perception of instructional leadership.

Table 9: Group statistics for difference between teachers' and school leaders' perceptions towards SIP

Position	N	Mean	Std. Deviation	Std. Error Mean
Perception for SIP	Teachers	153	3.84	.742
	School Leaders	23	4.49	.43
	Total	176		

The descriptive statistics comparing teachers' and school leaders' perceptions of the School Improvement Program (SIP) in sample Secondary Schools are presented in Table 9. The sample includes 153 teachers and 23 school leaders. The mean perception score for SIP among teachers is 3.84 ($SD = 0.74$), while the mean score for school leaders is 4.49 ($SD = 0.43$). This indicates that, on average, school leaders have a more favorable view of the School Improvement Program compared to teachers. The standard deviation

for teachers (0.74) suggests a greater variability in their perceptions, indicating a wider range of opinions about the SIP within this group. In contrast, the standard deviation for school leaders (0.43) is lower, showing that their perceptions are more consistent and less varied.

The standard error mean for teachers is 0.060, and for school leaders, it is 0.091. These relatively low standard errors imply that the sample means are reliable estimates of the population means for both groups.

Table 10: Independent samples test for difference between teachers' and school leaders' perceptions towards SIP

	Levene's Test for Equality of Variances		t-test for Equality of Means			
	F	Sig.	t	df	Sig. (2-tailed)	
Perception of stakeholders for SIP	Equal variances assumed	4.87	.029	-4.08	174	.000
	Equal variances not assumed			-5.96	44.35	.000

The results of the independent samples t-test are presented in Table 10. Levene's Test for Equality of Variances indicated a significant difference in variances between the two groups ($F = 4.87$, $p = .029$). Therefore, the assumption of equal variances was not met. Using the results from the row where equal variances are not assumed, the t-test showed a statistically significant difference between teachers' and school leaders' perceptions towards the School Improvement Program ($t(44.35) = -5.96$, $p < .001$). This indicates that the difference in mean perception scores between teachers and school leaders is statistically significant, confirming that school leaders indeed have a more favorable perception of the School Improvement Program compared to teachers.

Table 11: Independent samples effect sizes for difference between teachers' and school leaders' perceptions towards SIP

		Standardizer	Point Estimate	95% Confidence Interval	
				Lower	Upper
Perception for SIP	Cohen's d	.71080	-.911	-1.359	-.461
	Hedges' correction	.71388	-.907	-1.353	-.459
	Glass's delta	.43412	-1.492	-2.103	-.864

To assess the practical significance of the observed difference in perceptions, effect sizes were calculated. Table 11 presents the effect size calculations. Cohen's d was found to be -0.91 (95% CI: -1.359 to -0.461), indicating a large effect size according to Cohen's conventions. Hedges' correction for small sample sizes also resulted in an effect size of -0.91 (95% CI: -1.353 to -0.459). Additionally, Glass's delta, which uses the standard deviation of the control group (teachers), showed an effect size of -1.49 (95% CI: -2.103 to -0.864). These effect size estimates suggest that the difference in perceptions between teachers and school leaders is not only statistically significant but also practically significant, with school leaders exhibiting a substantially more favorable perception of the School Improvement Program.

6 Conclusion of the study

Given the findings obtained from the literature study and the empirical investigation, the following conclusions were drawn in line with the research sub-questions of the study.

1. Management of school improvement program and instructional leadership (as essential educational/school reforms) in secondary schools of the Technology Village

Woredas: Schools were considered very strong in setting clear goals and in developing a clear vision and defining mission and values.

2. The contributions of instructional leadership and school improvement program (as essential educational/school reforms) in enhancing school effectiveness have been duly acknowledged by the major stakeholders of the schools.
3. There were strong positive perceptions among secondary school's major stakeholders (Principals, vice principals, Supervisors, School Improvement Program/SIP/ Coordinators, Parent-Teacher-Student Association/PTSA/ members, teachers, and students) towards instructional leadership and school improvement program (as essential educational/school reforms) for school effectiveness. However, the difference in mean perception scores between teachers and school leaders is statistically significant, confirming that school leaders indeed have a more favorable perception towards school reforms that include instructional leadership and School Improvement Program/SIP compared to teachers.
4. The effort exerted by the secondary school's major stakeholders (Principals, vice principals, Supervisors, School Improvement Program/SIP/ Coordinators, Parent-Teacher-Student Association/PTSA/ members, teachers, and students) to apply instructional leadership and implement SIP in their respective schools was considered as high.
5. The commonly agreed barriers that negatively affect implementation of reforms such as instructional leadership and SIP in the schools were lack of adequate capacity building (lack of in-depth training) programs for the secondary school's major stakeholders (Principals, vice principals, Supervisors, School Improvement Program/SIP/ Coordinators, Parent-Teacher-Student Association/PTSA/ members, teachers, and students); and lack of strong commitment on the part of school leaders to be engaged in tasks related to instruction/teaching and learning.

7 Recommendations of the study

To improve schools effectiveness through applying instructional leadership approach and implementing SIP (as essential educational/school reforms), the following recommendations are suggested given the findings and conclusions drawn from the study.

1. Creating opportunities for continuous professional development and capacity-building programs for the secondary school's major stakeholders (Principals, vice principals, Supervisors, School Improvement Program/SIP/ Coordinators, Parent-Teacher-Student Association/PTSA/ members, teachers, and students) on applying school reforms for school effectiveness.
2. Sharing experiences among schools would enhance the effectiveness of the schools. Therefore, REB, ZED, WEO, and the school in collaboration should work in devising strategies that help the schools share their best experiences. This would help schools with different performance levels to share their respective school's various experiences.
3. Appropriate time management on the part of school leaders and/or principals by allocating adequate time for instructional activities/tasks in the school would inspire teachers and learners in the school to utilize their time effectively and efficiently in activities related to academic issues to which any school reform focuses.

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Data Availability

Data can be made available on the behavior of the request

Declaration of interests' statement

The author declare no competing interests.

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Original Article

Prospects and challenges of AI adoption in Nigerian academic libraries

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Abstract

This study gives this research a thorough assessment of how Nigeria academic libraries would incorporate Artificial Intelligence (AI) technologies as they relate to improving service delivery, browsing information and engaging users. The possibilities of transformation offered by AI, like data analysis, improved searching, and personalized user experiences were discovered during the review. Yet, the review also mentions the important challenges faced, such as insufficient funding, absence of technical know-how, and limited infrastructure that prevents the full realization of the plan. The researchers suggest setting up programs that focus on offering training for librarians to gain AI related skills, as well as the implementation of strategic planning to address the barriers. Their suggestions, which however include, rather than limited to, infrastructure improvements, user-centered AI solutions, and longitudinal studies to fully realize the benefits of AI in library services, are proffered as future research directions.

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1 Introduction

Technologies related to artificial intelligence (AI) are progressively recognized as the pivotal tools in various fields, with one of them being education and library services. The academic libraries in Nigeria are now searching for ways of incorporating the use of AI in tandem with enhanced service delivery, increased user engagement, and improved information retrieval. This review of the literature summarizes the implications of the use of AI in Nigerian academic libraries as well as pointing out the challenges and opportunities in its implementation. ICT and related technical advancements, according to Igbo et al. (2024), have regularly resulted in significant and educational changes in library operations and services over time. The library is a critical resource, taking care to foster the scholarship at the main university by providing fast and easy access to the information needed to support teaching, learning, and research.

More precisely, the arrival of the digital era challenges the modern academic library in that supporting research, teaching, and learning becomes the most relevant task for the library. The parallelism is that the abundance of modern digital technologies in library networks leads to the neoteric trend of automated information service utilizing.

Technologies that are associated with artificial intelligence (AI) are currently regarded as main instruments for elevating the productivity and efficiency of the organizations. This means that we can easily conclude that AI technologies have had a major impact on the

working environment in the 21st century. According to Yusuf et al. (2022), implementing AI in libraries can enhance their offerings and give patrons access to reliable information that can spur expansion and advancement in this era of information. In order to accomplish the natural integration of readers and libraries, libraries are currently utilizing artificial intelligence technologies. Through this approach, readers not only involve themselves in the shared platform, they also have the opportunity to track and compile specific user needs and data which in turn help the users receive accurate and personalized services at a reduced cost thus contributing to the better running of the library with these savings. Tella (2020) stressed that libraries in the developed countries have accepted and use AI technologies virtually in all spheres of life whereas those in developing countries are still struggling to find their feet.

In higher institutions of learning, the four major infrastructures are laboratories, equipment, teachers/classrooms and libraries that contain rich and balanced information resources that can support teaching; learning and research work (Tiemo and Ateboh, 2016).

Libraries are the nerve centre of an educational institution and a place where information is provided to serve all patrons irrespective of their ages, political and ethical background, religion, sex, etc. The transition of information materials from book collections to audio-tape collections, video collections, database, digitization of information materials, library automation, and now the adoption of artificial intelligence in library operations (Vijayakumar and Vijan, 2011). This implies that one of the motives of adopting AI technologies in university libraries is to satisfy user needs. The origin of Artificial Intelligence (AI) can be traced to John McCarthy's research in 1955, with the assumption that every aspect of learning and other forms of intelligence can be stimulated through the use of a machine (Wang, 2018).

In spite of the fact that there exist several challenges, the application of artificial intelligence (AI) in academic libraries in Nigeria is quite likely to yield a lot of benefits. Here are a few of the pros and cons associated with the integration of AI into these library systems.

2 Prospects of AI adoption in Nigerian academic libraries

Nigerian academic libraries are brimming with opportunities to utilize the artificial intelligence (AI) tools. However, before they can achieve this, there are certain hurdles that they must overcome. The subsequent enumeration tackles some of the advantages and challenges that deploy of AI in such libraries would face:

Improved information retrieval: The process of locating facts in vast sets of data can be made more efficient by the use of artificial intelligence. Artificial intelligence can use advanced search algorithms more effectively and accurately thus enabling employees and students to find related academic sources quicker.

Personalized services: AI can tailor library services to the specific needs of each individual user. Implementing AI-driven recommendation systems to suggest books, articles, and other materials that are in line with users' interests and fields of study can lead to the rise in user satisfaction and engagement.

Automation of administrative tasks: AI can be used to automate regular administrative duties such as inventory management, circulation, and classification. Consequently, personnel have the opportunity to spend more of their time on more valuable services such as user support and research help.

Enhanced user experience: The library operations are made much easier with the AI powered Chatbots and virtual assistants which answer users queries, assist them in navigation, and promote day-to-day usage of the library. For researchers and students, this offers more access and support.

Better resource management: AI algorithms help libraries to not only become more efficient in terms of collection management, but also anticipate which resources will be needed the most at any point in time. They achieve that by making such resources available during the peak period and, in turn, help to optimize the storage effectively.

AI-based learning tools: AI technology can offer learning resources such as virtual reality platforms, intelligent tutoring systems, and language processing tools that improve the academic library educational experience.

Advanced data analytics: AI may assist libraries in the analysis of data on the trend of library resources, user behavior, and library usage. Hence, libraries can benefit from the enhanced decision-making, effective planning of services, resource distribution, and an overall better user experience.

3 Challenges of AI adoption in Nigerian academic libraries

Lack of Infrastructure: Not having the technological infrastructure needed for compute, servers, and high-speed internet to effectively deploy AI is one of the things that the Nigerian academic libraries face.

Limited technical expertise: A considerable percentage of Nigerian library personnel could be lacking the adequate knowledge and skills to launch and maintain AI systems. Thus the probability of including AI in the academic libraries of the is far low. Training such as continuous professional development needs to be regarded as a priority in helping librarians acquire the necessary skills.

High implementation costs: The introductory cost of deploying AI technology in academic libraries in Nigeria, the majority of which are underfunded and have strict budgets, may be perceived as very high. The problems these libraries can face are: inability to maintain AI systems, difficulty in recruiting IT specialists, and lack of resources for AI tools.

Data privacy and security concerns: The dependence of AI programs on data collection and processing is the source of privacy and security issues concerning users. As a measure to protect personal data, Nigerian libraries are required to comply with data protection laws in addition to establishing efficient cybersecurity measures.

Resistance to change: Many library personnel and patrons may show a degree of hesitation in welcoming Artificial Intelligence technology due to their fear of the unknown or uncertainty about the future employment prospect. Overcoming this train of thought requires change management measures in conjunction with enlightenment programs.

Limited localized AI solutions: Adaptation of most AI solutions to the specific needs of research libraries in Nigeria and the local environment is very low which is why they are mostly not. A handful of homegrown-developed AI solutions are aimed at the specific issues libraries deal with, such as cultural differences, language barriers, and locally available materials.

Internet connectivity issues: In various regions of Nigeria, persistent issues continue to plague the accessibility of reliable internet. Where network issues might be expressed

in, "AI tools in academic libraries that can be deployed and operated efficiently may suffer from inadequate connectivity." Such expression is essential due to the fact that AI applications are mostly based on the cloud network system.

Sustainability and maintenance: In environments with limited finances and experience, boosting and sustaining AI systems could be tricky. Libraries may find it hard to keep pace with the rapidly advancing AI technologies which could lead them to be left behind in the system. The rapid advancement and obsolescence threat of AI technologies may pose a significant challenge to the libraries in this regard.

4 Adoption of artificial intelligence (AI) in academic libraries in Nigeria

The new cutting-edge trend, the artificial intelligence has been viewed as one of the technological devices that interfered in the most with library systems/resources and basically changed their functioning and operations. As a result, most academic libraries throughout the world regard AI adoption as a developing strategy that provides ease of operations and services (Eirimiokhale and Sulyman, 2023). The level of adoption of AI in Nigerian libraries is low, as indicated by the findings of Odeyemi (2019), Ajani et al. (2022), Yusuf et al. (2022). This circumstance raises concerns regarding the feasibility of its full implementation in academic libraries as a means of keeping up with global trends and giving libraries a competitive advantage in information access initiatives. Bughin et al. (2018) describe AI capability as being made of machine learning; natural language text understanding; virtual agents or conversational interfaces; physical robots, natural language speech understanding; natural language speech generation and autonomous vehicles.

The use of AI has not gained much popularity in Nigeria, it is regarded as part of the 4th industrial revolution (Park, 2019), and originated from the assumption of John McCarthy in 1956 who states that every aspect of learning and other forms of intelligence can be simulated through the use of machine (Wang, 2018). The originator further defines AI as the 'Science and Engineering of making intelligent machines, particularly intelligent software' with the goal of using the computer to study the intelligence and associated decision making skills of humans (Amudha, 2022). Artificial intelligence (AI) the very light field theories hundred not masterminds decide neural biologists and human-computer technologists. The subject of cellular AI began with the decoration that, back in time, computers that were constructed only for the purpose of completing numerical calculations were found to perform a variety of other functions. For example, a computer could be made to play backgammon, and according to a computational logician it could prove a theorem. Playing a backgammon game or a logic proving theorem are two examples of high-level activities, respectively, that require strategic thinking and creativity, which are typically associated with human intelligence. The starting point of this argument is that the human brain has the same structure as a computer and, therefore, humans can f amaze computers to think like humans.

Sivarajah et al. (2017) noted that using AI in academic libraries allows for better analysis of datasets, especially large datasets used for analysis across multiple datasets. It also aids in the removal of tiresome and repetitive chores. This implies that integrating AI into library operations enhances their capacity to surpass human intelligence Libraries, including university libraries in developing countries, such as Nigeria, have failed to adopt digital technologies, and they also show resistance to change in the use of technologies in various library operations (Wheatley and Hervieux, 2019).

Tella (2020) stressed the need for academic libraries to re-position themselves to take

relative advantage of artificial intelligence's potentials by refining the quality of library services in this era of the information age.

5 Achievements of AI in academic libraries

According to [Balasubramanian](#) and [Tamilselvan \(2023\)](#), the impact of AI on library operations and services manifests itself in the following ways:

Data Analysis: AI can serve as an analyzer of library statistics, encompassing circulation data, user activity, and resource utilization, to tell historical stories and generate graphical representations that help in making choices and enhancing services.

Enhanced search and discovery: The AI-enabled system can help the users get hold of the related resources much more easily and quickly by the features such as user searching behavior analyzing, trend spotting, and resource recommending that are integrated into the system. At the same time, it can also ensure instant query resolution and provide personalized & concentrated customer service.

Collection management: Choosing and procuring means of supporting the library work with artificial intelligence (AI) through periodic assessments of the statistics on usage, identification of popular products, and prediction of future demand. As a result, it will be possible for the library to make better decisions regarding the resources to purchase and, thus, will allocate the funds more efficiently.

Processing and organizing library resources: AI helps to decrease the time and effort necessary for the management and organization of collections by simplifying the activities of cataloging and classifying the library materials.

Inclusive information accessibility: Availing automatic translations, alternative text and audio descriptions, and other assistive technological devices, artificial intelligence (AI) is the main reason which has allowed more and more people, especially those with disabilities, to access information and services consciously and inclusively.

Preservation of resources: The utilization of artificial intelligence (AI) in the digitization and preservation of library resources not only minimizes the chances of physical records being lost or damaged but also promotes their future usability and public accessibility.

Conclusively, [Subaveerpandiyan \(2023\)](#) discovered that AI can improve information retrieval, automate library routines, personalize user interaction, and provide innovative services, that means it enhancing the library users satisfaction.

6 An overview of Nigerian academic libraries in 21 century

As a library catering to the university or college staff and student teaching and research requirements, it is termed an academic library. In addition to supporting curriculum development in schools, they also help university faculty and student research, thus, these libraries serve two complementary functions. The term academic libraries refers to the information centers formed for the sole purpose of developing the mission of their parent institution, such as, acquiring knowledge, through teaching that knowledge to individuals who in turn will help improve society, and through better human welfare. Academic libraries are libraries attached to tertiary institutions such as universities, polytechnic institutions, colleges of education, colleges of agriculture, colleges of technology and also research institutes ([Akporhonor, 2005](#)).

Singh and Kaur (2009) stressed that preservation and access to knowledge and information is the main mandate of academic libraries along side supporting the mission of their parent institutions which is teaching and research.

Okiy (2005) notes that of all the different types of libraries in Nigeria, only university libraries have a clearly-defined policy on funding. As a consequence of the 1992 agreement between the Federal Government and the Academic Staff Union of Universities, they get ten percent of the recurring yearly budget of their parent universities. However, it is regrettable that such monies are not forthcoming as most university administrators tend to flout that decision (Okiy, 2005; Yetunde, 2008).

The transmutation of technology has affected even the academic libraries in Nigeria. They are the ones who are always pressured to provide information sources that are local-community-related being the information producers. The staff is required to change their working methods and start thinking that they are doing fine if they work in an automated environment. This states that in the race for being information providers and disseminators universities libraries are to digitize the facilities first. In fact, the electronic format of information is more preferred among teachers and students than the traditional way of accessing information. Okiy (2010) opined that with the use of ICT, it has become possible to access a variety of information and knowledge sources in a manner that would be simple, easy and independent of time, place and subject discipline.

Almost synonymous with the digital age is the information age. It is also a scratch of the explosion of the sources of information. The total office has changed, and a business has to learn new skills. Due to the convenience of digital material, librarians are expected to be able to find, evaluate, and confer with new materials quickly. A person who handles the book issues has to contact individuals. Krubu and Osawaru (2010) Information and Communication Technology (ICT) has brought unprecedented changes and transformation to academic library and information services, conventional LIS such as OPAC, users services, reference services, bibliographic services, current awareness services, Document delivery, inter-library loan, Audio visual services and customer relations can be provided more efficiently and effectively using ICT, as they offer convenient time, place, cost effectiveness, faster and most-up-to-date dissemination and end users involvement in the library and information services process. They must be adaptable, creative and able to understand things as a system or level of public image (Ramzan, 2004). In the digital society, ICT has resurfaced as a library. Printed documents are no longer sufficient to store information. CDROM databases, electronic document delivery, automated cataloging, and online trading and retrieval systems Open Access Catalogue (OPACs) are common.

Besides, aside from the public libraries, academic libraries are the ones that have the greater potential of helping researchers. The library is one way in which the university or college can maintain its research potential. Aguolu (2002), noted that the university library is the heart of the university. The primary reason for this is that the academic health, intellectual vitality, and the overall effectiveness of any university absolutely rely on the state of health and the excellence of its library which is its lifeblood.

7 Transformative impact of ICT and AI on library services

The introduction of information and communication technology (ICT) to academic libraries' services has brought about a monumental turn around, which in turn has led to increased user interaction and operational efficiency. Automated repetitive tasks and personalized user experiences are some of the advanced capabilities of artificial intelligence (AI) which can be considered as a progressive step of information and communication technology (ICT). Despite the fact that library services have already begun to adapt

to ICT, the role of AI in the future will be even more efficient than these operations which are run by staff librarians who are occupied with other tasks requiring human judgment.

Nevertheless, similar challenges, which are like those met by pre-ICT eras, can influence AI's progressive potential. The operationalization of planned AI technology might be adversely affected by financial incapacity, human resources' knowledge deficiency and underdeveloped infrastructure which are challenging persistent issues that Nigerian academic libraries encounter. Thus, even though AI can radically re-craft library services, a successful integration can only achieve through the resolution of these basic issues.

8 Theoretical framework for AI adoption

The entry of AI into the various processes and activities in academic libraries is now easily seen in libraries across the globe. Based on a hypothetical model for integrating AI applications, AI systems that discover knowledge can enhance information retrieval systems and, thus, make it more user friendly to access relevant resources. On top of that, cultural perspectives on technology and ongoing infrastructure problems are possible factors that will affect the implementation strategies, thus, both internal and external factors have to be considered when talking about AI adoption.

According to the findings, in addition to practical training, new skills must be learned by the library staff applying AI technologies for the adoption to be successful. Training and professional development opportunities are vital for librarians to be able to utilize AI tools in their services and adapt to these changes.

8.1 Technology acceptance model (Davis, 1989)

Davis (1989) introduced the Technology Acceptance Model (TAM) in 1989. TAM offers an explanation of the factors that influence technology adoption that can typically be used to explain user behaviour. It describes the control, social, and attitude elements that influence the use of information technology. According to him, users' intention to utilise an information system is based on their perceptions about it, which in turn determines how often they use it.

The basic attributes of the Technology Acceptance Model (TAM) to study are:

- Perceived Usefulness of AI skills acquired
- Perceived ease of use of AI skills acquired

Perceived usefulness is the extent to which a person believes that using the system will enhance his performance at work. Perceived ease of use is the extent to which a person believes that using the system would be simple. Students' views of ease of use, which may be impacted by their computer self-efficacy or attitude towards utilising the system, have an impact on intention both directly and indirectly, even if perceived usefulness directly influences adoption intention. This concept also made it clear that a user's perception of the system's usefulness and ease of use will have a significant impact on their attitude towards utilising it, which may include feelings of favouritism or disfavoritism.

If a user cannot see the benefit of using computer technology or information technology facilities to retrieve information for use in research and other academic activities, or if they think that using them is a very difficult task, they will display a negative behavioural attitude towards using them.

It will also be challenging for a user with low computer self-efficacy because using the services necessitates interacting with the computer. According to this theory, a user's computer self-efficacy and attitudes towards using IT facilities—which together reflect their belief and perception of their capacity to enhance performance and use of resources accessed electronically through technological facilities—will have an impact on their performance.

8.2 Constructivist learning theory AI as an active learning facilitator

The application of AI in education is a testimony to the idea of constructivist learning theory, which states the paramount importance of students' active participation and knowledge production (Blikstein and Worsley, 2016; Siemens and Long, 2011). AI technology can endorse active learning by providing interactive, problem-solving problems, and simulations. For instance, the AI-centered Intelligent Tutoring Systems (ITS) can render scaffolding learning experiences, adaptative assessments, and immediate feedback, hence, the students can participate in the learning act autonomously (Anderson et al., 1995).

This corresponds to the main ideas of constructivism, according to which, learners generate their knowledge through engaging in research and working in pairs. The results of domestic research have indicated that artificial intelligence (AI) can efficiently support active learning activity by the means of the dynamic learning environment which inspires the students to co-create the knowledge through their practical experiments (Chan, 2015).

8.3 Socio-cultural learning theory: AI and social interaction in educational environments

Based on Vygotsky's socio-cultural learning theory, social interactions are vital for cognitive growth (vygotsky1978mind). The use of artificial intelligence (AI) in education mainly in the classroom can be done by the integration of intelligent agents that support cooperative learning activities, which allows for the improvement of social relationships (D'Mello and Graesser, 2014).

Chatbots and virtual tutors can facilitate problem-solving and help promote group knowledge are some of the activities that students can do together with the mentioned devices. The newest findings show that artificial intelligence can mostly improve the socio-cultural dimensions of learning, especially through AI-included social interactions which affect positively both students' cognitive development and metacognition, understanding (Luckin et al., 2016).

8.4 Theory of cognitive learning: Integration of AI and cognitive load

Cognitive learning theory is primarily concerned with the understanding of cognitive processes that are involved in learning, such as the notion of cognitive load (Mayer, 2008). Artificial intelligence (AI) is significantly involved in the managing cognitive load through the adjustment of the teaching method matching each individual student's skills (Anderson et al., 1995).

Smart tutor systems adjust the task difficulty and add challenge based on the students' cognitive skill levels to maintain the perfect balance. According to the recent studies, AI can be of help in the reduction of intrinsic cognitive burden and the extraneous cognitive load, thus the learners can reach better outcomes (Chan, 2015).

9 Librarians' views on the integration of AI

The librarians views on how prepared the Nigerian academic libraries are to embrace AI technology might be indicative of the prevailing sentiments about the technology, existing levels of acquaintance and whether or not the people believe in its advantages. AI may have the ability to augment the performance of library operations, yet the existence of such insurmountable hurdles like inadequate finance, insufficient technical skills, and fear of job redundancy restricts its uptake. The implications of these findings are such that it is very important to properly plan and fund the training programs that can equip librarians with the skills and knowledge on how to implement AI technologies successfully.

Besides, a research surpassed the remark that, even though AI applications are appealing, privacy and task complexity concerns are required to be solved. This demonstrates that it is clearly necessary to create the user-centered AI solutions that both accompany the possible risks and satisfy the interests of librarians and users.

10 Opportunities and challenges of AI in academic libraries

AI systems such as machine learning and natural language processing are among the useful technologies that libraries can fasten their service delivery to. With these technologies, human interaction and streamlining processes in the system can be done fairly easily. Yet, as the previous research indicates, the capital and the technical know-how required are the two big problems facing the companies on their ways to adopting AI.

In order for AI to be applied and for their merits to be reclaimed in Nigerian academic libraries, the hurdles such as these must be identified. Speaking of which, the case of a built chatbot for a library is one illustration of how AI technology is done and what it can do for user support and interaction. Likewise, though the developmental limitations articulate the wider picture of the infrastructural challenges in AI embracing, these types of facilities may also be the models for the other academic libraries in Nigeria.

11 Influence of automated services on academic performance

The academic performance of students in Nigerian tertiary institutions has been better due to the usage and provision of automated electronic information systems. This survey reveals that the integration of artificial intelligence in library services would make information accessibility even easier and assist in the academic performance of students.

But for the libraries to fully utilize the advantages of AI, it is necessary to upgrade the infrastructure, which has been shown by the limitations that are established, such as slow internet speeds and irregular access to automated services.

12 The role of social media and awareness in AI adoption

The fact that the social media used in academic libraries is one such example of the technology acceptance in various library services, even though it is not directly linked to artificial intelligence. Social media is being used to promote library resources, but some

issues like the lack of adequate internet connection and power supplies have been beligerent. Some of the infrastructure problems, such as the lack of internet connections and unsteady power supplies, may also be the reason for the little adoption of AI technology in Nigeria's higher academic libraries; so the solution is to enhance connectivity and reliability.

The acknowledgement of the AI's advantages was revealed, but the library administration of Nigerian universities is being mainly held back by worries on job loss and lack of enough training, which is the awareness and perception of AI among them. This calls for the need of training librarian in the introduction of AI benefits and how it can augment more their current roles rather than substitute them.

13 Theoretical implications

This review's theoretical underpinnings highlight how important it is to have a sophisticated grasp of AI in education. The potential of AI to support active learning and customize educational experiences is highlighted by constructivist learning theories (Floridi and Taddeo, 2016). According to Floridi and Taddeo (2016), socio-cultural viewpoints highlight how AI might improve social interactions and cooperative learning settings. Theories of cognitive learning shed light on how AI might adjust to different learning preferences and manage cognitive load (Floridi and Taddeo, 2016). By combining several theoretical perspectives, we can better grasp how AI fits into established educational concepts while both supporting and challenging traditional teaching. According to the theoretical ramifications, a careful synthesis of pedagogy and technology is necessary for the successful integration of AI in education, taking into account the dynamic interaction between the two (Floridi and Taddeo, 2016).

14 Conclusion and future research directions

Embracing AI in Nigerian academic libraries comes with a plethora of advantages like better information retrieval, personalized services, and enhanced operation but challenges such as insufficient infrastructure, exorbitant costs, and lack of expertise remain the biggest hurdles in implementing it. For the collaboration, government support, and capacity building programs to be responsive in the achievement of these goals, they are necessary.

Research findings reveal that the recognition of artificial intelligence applications' potential to impact positively on Nigerian university library operations is on the rise but there are still some significant problems that should be dealt with first so that it can be effective. The future research endeavors should be centered on:

1. Infrastructural improvements: Internal studies on technological infrastructure and internet use as accessible means of learning AI, that is, at academic libraries investigating the use of such innovative technologies.
2. Training and development: The exploration of effective training programs that enable librarians to acquire AI-related skills.
3. User-centered AI solutions: The research is being conducted with the aim of understanding user the way they interact with AI applications in libraries. This will serve as a basis for developing user-centered solutions.
4. Longitudinal studies: A research study aims to analyze the consequences of the extensive assimilation of AI technologies in academic libraries in Nigeria on the service

and user outcome. AI and machine learning techniques are commonly used for developing search engines that provide results on the basis of user preferences and rankings.

Future research can address these areas and thus be instrumental in not only developing a more thorough understanding of the impact of AI applications on academic library services in Nigeria but also providing guidance on the successful implementation of AI applications in academic libraries in Nigeria.

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Data Availability

Data can be made available on the behavior of the request

Declaration of interests' statement

The author declare no competing interests.

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Review Article

21st century skills and their implications in teaching English as a foreign language: review article

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Abstract

Twenty-first century (21st-century) skills are a set of competencies considered essential for success in the modern world. When it comes to Teaching English as a Foreign Language (TEFL), integrating these skills into the language learning process can enhance students' language proficiency, critical thinking abilities, and readiness for the globalized world. The purpose of this paper was to discuss the concept of 21st-century skills indicates its implications in TEFL. For instance, TEFL instructors can emphasize interactive and communicative activities to promote effective verbal and written communication. They can also incorporate activities that encourage students to think critically, analyze information, and solve problems using English language skills. In addition, creativity and innovation can be applied by providing opportunities for students to express their creativity and think innovatively in English. Global and intercultural awareness are also implied by exposing students to diverse cultures and perspectives. By exposing students to a variety of language contexts and helping them adapt to different communicative situations, they can develop adaptability and flexibility. Finally, integrating real-world tasks, such as job interviews, presentations, and negotiations, can help students develop language proficiency in professional and practical contexts.

1 Introduction

Predicting specific skills that will be in high demand in the 21st century can be challenging, as the future is inherently uncertain. By incorporating 21st-century skills into TEFL, instructors can prepare students not only to become proficient English speakers but also to thrive in the globalized and interconnected world, equipping them with the skills necessary for success in their personal, academic, and professional lives (Yeni and Can, 2022). A study by Holm (2024) indicated that digital literacy skills positively influenced learning outcomes. Students who possessed higher digital literacy skills demonstrated improved language proficiency, enhanced critical thinking abilities, and increased motivation for learning English. This paper reviews 21st century skills and their implications for Teaching English as a Foreign Language. Here are some skills that could be relevant in the 21st century and their potential implications for learning English.

1.1 Digital literacy and technology skills in teaching English

As technology continues to advance, digital literacy and proficiency in using various tools and technologies will become increasingly important (Van Laar et al., 2017). Students will need to develop skills such as coding, data analysis, cyber security, and proficiency in using digital collaboration platforms. Education will need to prioritize teaching these skills to prepare students for the digital age. Proficiency in digital technologies, data analysis, and cyber security will continue to be crucial as technology becomes more integrated into various industries (Kessler and Plakans, 2008).

Digital literacy and technology skills have significant implications for teaching English as a global language. There are some ways in which they impact English language instruction. For instance, technology provides access to a vast array of authentic language resources from different English-speaking countries. Students can access online newspapers, blogs, podcasts, videos, and social media platforms to engage with exposure helps them develop a broader understanding of English, as it is used in different contexts and cultures (Sosas, 2021). In addition to this, digital tools and language learning apps (applications) offer interactive exercises, virtual language practice, and instant feedback. Students can engage in targeted language practice activities, such as vocabulary drills, grammar exercises, and pronunciation practice, at their own pace. This individualized practice supports their language development and fosters independent learning.

Ali et al. (2024) conducted a study on the use of digital learning in the EFL classroom and its effect on self-perceived knowledge, learning, and English use at the University of Tabuk in Saudi Arabia and found that there is a positive relationship between the use of digital tools in the classroom and students' development in language learning. Therefore, digital learning strengthens students' learning experiences and engagement (Akyuz and Yavuz, 2015).

Technology also enables English learners to connect and collaborate with peers from around the world. Online platforms, video conferencing tools, and social media networks facilitate cross-cultural exchanges, allowing students to communicate with native and non-native English speakers. This enhances their language skills and promotes intercultural understanding (Selfa-Sastre et al., 2022). Digital platforms provide opportunities for students to produce authentic language output. They can create blogs, podcasts, videos, or social media posts in English, sharing their ideas and experiences with a global audience. This authentic language production enhances their language fluency, creativity, and digital communication skills (Pifarre, 2019). The other implication of digital technology in language teaching is that digital resources allow English learners to explore different cultures, traditions, and perspectives. Through online videos, articles, and virtual tours, students can gain insights into diverse cultural practices, global issues, and intercultural communication. This fosters cultural understanding and empathy and prepares students to be global citizens (Kumi-Yeboah et al., 2020).

Teaching digital literacy skills equips students with the ability to critically evaluate online information. In an era of fake news and misinformation, learners need to develop the skills to discern reliable sources and validate information. This is particularly important for English learners who rely on online resources for language learning and research (Zimdars and McLeod, 2020). Additionally, technology enables blended and online learning models in English language instruction. Online platforms, learning management systems, and virtual classrooms provide flexibility in terms of time and location, expanding access to English education. Blended learning approaches combine face-to-face instruction with online resources, allowing for personalized learning experiences (Chaeruman et al., 2018).

Finally, digital literacy and technology skills empower English learners to engage with

English as a global language in meaningful ways. They provide access to diverse language resources, foster global communication, promote cultural understanding, and support lifelong learning in an increasingly interconnected world.

1.2 Critical thinking and problem-solving implications in TEFL

Critical thinking skills refer to the ability to analyze and evaluate information, arguments, and ideas in a logical and systematic manner. It involves actively and objectively questioning, examining, and reflecting upon the information or situation at hand. Critical thinking skills enable individuals to make reasoned judgments, solve problems, and make informed decisions (Southworth, 2022). Some key components of critical thinking skills are analyzing, evaluating, inferring, interpreting, problem-solving, reflecting, and effectively communicating (Basri et al., 2019). Therefore, developing critical thinking skills is essential in various aspects of life, including education, professional work, problem-solving, decision-making, and engaging in informed citizenship. It helps individuals become active learners, independent thinkers, and effective problem-solvers (Southworth, 2022).

Critical thinking and complex problem-solving—the capacity to analyze complex situations, think critically, and solve problems using holistic approaches—will be essential in addressing challenges in an interconnected world. TEFL can incorporate activities that encourage students to think critically, analyze information, and solve problems using English language skills. This can involve tasks such as analyzing texts, discussing complex issues, and engaging in critical reflection (Shirkhani and Fahim, 2011).

Critical thinking and problem-solving skills are highly relevant and valuable in teaching English as a foreign language (TEFL). By integrating these skills into TEFL, educators can help students develop their language proficiency in a meaningful and practical way (Kök and Duman, 2023). By using authentic teaching materials, questioning and inquiring, analyzing and evaluating, problem-based learning, creative and critical writing, debate and discussion, problem-solving strategies, and reflection and metacognition, TEFL can apply critical thinking and problem-solving skills in language teaching (Birgili, 2015). Therefore, by integrating critical thinking and problem-solving into TEFL, educators can facilitate a deeper understanding of the English language and equip students with valuable cognitive skills. These skills not only enhance language proficiency but also prepare students to navigate real-world language challenges and become independent, analytical, and adaptable.

1.3 Artificial intelligence and automation skills in teaching English

Automation and artificial intelligence are expected to replace routine and repetitive tasks. In contrast, skills that require human judgment, lifelong thinking, and complex problem-solving will be highly valued. Education should focus on fostering analytical thinking, creativity, adaptability, and the ability to approach problems from multiple perspectives (Birgili, 2015). Artificial intelligence (AI) and automation have the potential to significantly impact the field of TEFL (Sumakul et al., 2022).

Some implications and applications of AI and automation in language teaching can be: intelligent tutoring systems, which can provide personalized language instruction tailored to individual learners' needs, language assessment and feedback, Natural Language Processing (NLP) algorithms can analyze learners' language production, identify errors, and provide automated feedback, enabling learners to receive immediate guidance on

their language performance, Chat-bots and virtual assistants, which can engage in interactive conversations with learners, providing language practice opportunities, language learning experiences by analyzing learners' progress, adapting content to their proficiency level, and providing targeted vocabulary, grammar, and pronunciation exercises, automated language translation, which can assist language learners in understanding and translating texts in real-time.

Such tools can support learners in developing reading and comprehension skills, as well as facilitate communication with speakers of different languages, speech recognition and pronunciation practice, which can assess learners' pronunciation accuracy and provide feedback on specific pronunciation errors, language content Generation, which can generate language learning materials, such as exercises, quizzes, and dialogues, based on specific learning objectives and learner needs. Finally, AI and automation can assist in analyzing vast amounts of language data and corpora, enabling researchers and educators to gain insights into language patterns, usage, and variation (Woo and Choi, 2021; Zhai et al., 2021).

1.4 Emotional intelligence and interpersonal skills in teaching English

As technology becomes more pervasive, the demand for social and emotional skills will increase. These skills include empathy, effective communication, collaboration, and leadership. Education should emphasize the development of interpersonal skills to enable students to work effectively in diverse teams and navigate complex social dynamics (Haddock et al., 2022). TEFL should consider the emotional wellbeing of students. Creating a supportive and inclusive classroom environment, promoting empathy and respect, and integrating activities that develop emotional intelligence can enhance students' overall language learning experience (M. H. Rahman et al., 2024).

Emotional intelligence and interpersonal skills are indeed considered as an essential skills of the 21st-century. Emotional intelligence and interpersonal skills are useful in leadership, collaboration and teamwork, communication, resilience and adaptability. It also use in interpersonal skills, collaboration and teamwork, cultural competence, networking and relationship building, customer service and conflict resolution (Kumra et al., 2020; Carmeli, 2003). Therefore, developing emotional intelligence and interpersonal skills equips individuals with the abilities to navigate social and professional interactions, collaborate effectively, and build harmonious relationships. These skills foster a positive and inclusive work and social environment, enhance personal well-being, and contribute to overall success in the 21st century.

Emotional intelligence and interpersonal skills are highly relevant in the context of English language learning in the 21st century (M. H. Rahman et al., 2024). For instance, English language learning involves developing strong communication skills. Emotional intelligence enhances effective communication by promoting self-awareness, empathy, and the ability to understand and respond to others' emotions. Learners with high emotional intelligence can better understand cultural nuances, adapt their communication style, and build rapport with English speakers (Bora, 2012). In addition to this, English language learning often involves collaborative activities and group work. Interpersonal skills are essential in these contexts as learners need to effectively collaborate, share ideas, listen actively, and provide constructive feedback (Zhang, 2022). Developing interpersonal skills allows learners to work harmoniously in diverse teams and benefit from collective knowledge and perspectives.

We can see the significance of emotional intelligence and interpersonal skills in terms of cultural competence development. English is a global language, and English language

learners often interact with speakers from different cultural backgrounds. Emotional intelligence and interpersonal skills facilitate cultural competence by promoting respect, open-mindedness, and understanding of cultural differences. Learners can develop cultural sensitivity, communicate effectively across cultures, and navigate intercultural interactions successfully (S. A. Rahman and Manaf, 2017). Emotional intelligence also fosters empathy and perspective-taking, which are crucial in language learning. Understanding others' perspectives and emotions helps learners interpret and use English in context, leading to more accurate comprehension and effective communication. Empathy also promotes a positive and inclusive learning environment where learners support and learn from each other (S. A. Rahman and Manaf, 2017).

Language learning can be challenging, and emotional intelligence supports learners in managing frustration, setbacks, and anxiety. By developing self-regulation skills, learners can effectively cope with difficulties, maintain motivation, and persist in their language learning journey. Emotional intelligence also helps learners build resilience and adaptability, which are essential for continuous improvement (Zhang, 2024).

Finally, the implication of emotional intelligence and interpersonal skills can be seen in terms of conflicts and negotiating differences of opinion in English language learning settings. Learners can develop skills to express their views respectfully, listen to others, find common ground, and reach mutually beneficial resolutions, which promote a positive learning environment and effective collaboration, and interpersonal skills are valuable for building relationships with English speakers and practicing the language. Learners who can establish rapport, engage in small talk, and actively participate in conversations develop linguistic and social confidence. They create opportunities for authentic language practice and cultural exchange (Zhang, 2024). Hence, by integrating emotional intelligence and interpersonal skills into English language learning, learners do not only improve their linguistic abilities but also become effective communicators, culturally competent individuals, and successful global citizens. These skills enhance language learning experiences, promote meaningful interactions, and facilitate personal and professional growth in the 21st century.

1.5 Cultural competence and global awareness in teaching English

In an interconnected world, cultural competence and global awareness are crucial skills. Students will need to understand and appreciate diverse cultures, perspectives, and global issues. Education should incorporate global perspectives, promote cultural exchange, and develop students' ability to collaborate across borders (Reimers, 2020).

TEFL can expose students to diverse cultures and perspectives. Incorporating multicultural literature, discussing global issues, and promoting intercultural exchanges through video conferences or pen-pal programs can help students develop a broader understanding of the world while improving their language skills. Additionally, entrepreneurship often involves operating in global and multicultural contexts. TEFL can expose students to diverse cultural perspectives and promote intercultural competence. Students can engage in discussions on global issues, analyze multicultural case studies, or collaborate with peers from different cultural backgrounds, thereby enhancing their language skills and cross-cultural understanding (Mandarani and Munir, 2021).

The capability to engage respectfully and effectively with individuals from different cultural backgrounds, demonstrating empathy, cultural awareness, and a global perspective one aspect of global and intercultural awareness increase learners' engagement in language learning. The capability to work effectively in diverse and global environments, understanding different cultural contexts, and collaborating with individuals from various backgrounds will be valuable as globalization continues (Kaihlainen et al., 2019).

1.6 Entrepreneurship and innovation in teaching English

The future job market is likely to value entrepreneurial and innovative mindsets. Education should foster creativity, risk-taking, and an entrepreneurial spirit. Students should be encouraged to think critically, identify opportunities, and develop innovative solutions to real-world problems (Li et al., 2023).

Entrepreneurship and innovation can have significant implications in teaching English as a foreign language (TEFL). Integrating entrepreneurial and innovative approaches into TEFL can enhance students' language learning experience, foster creativity and critical thinking, and prepare them for real-world language use (Paragae, 2023). There are some key implications of entrepreneurship and innovation in the field TEFL. Adaptive curriculum and instruction is one. Entrepreneurial TEFL educators are more likely to develop dynamic and learner-centered curricula that can adapt to change student needs and market demands. They may experiment with innovative instructional methods, such as flipped classrooms, project-based learning, or game-based approaches, to enhance student engagement and outcomes (Hung, 2017; Robinson et al., 2016).

TEFL entrepreneurs often embrace educational technologies to improve teaching efficiency, personalize learning, and expand access to language instruction. This could involve developing online/mobile language learning platforms, AI-powered adaptive learning tools, or virtual/augmented reality experiences (Herawati, 2023). Additionally, entrepreneurial TEFL providers may offer highly specialized language programs, such as English for specific purposes (e.g., business, medical, legal) or tailored tutoring services. This allows them to cater to niche market segments and differentiate their offerings from traditional language schools (Ferguson, 2013).

1.7 Information literacy skills in teaching English

Information literacy refers to the ability to identify, locate, evaluate, and effectively use information from various sources. In the digital age, where information is abundant and easily accessible, information literacy has become increasingly important. It involves a set of skills and competencies that enable individuals to navigate the vast amount of information available and make informed decisions (Munise, 2023).

Identifying information needs is one of the key aspects of information literacy. Information literacy begins with recognizing the need for information. It involves understanding what information is required to address a specific question, problem, or task (Landoy et al., 2020). Furthermore, information literacy also involves knowing how and where to access relevant information. This includes understanding different sources of information, such as libraries, databases, websites, and online platforms. It also involves being aware of search strategies and techniques to effectively retrieve information (Dorvlo, 2016).

Evaluating information is another aspect of information literacy. Information literacy requires the ability to critically evaluate the quality, accuracy, reliability, and relevance of information. This involves assessing the credibility of sources, considering biases or vested interests, and evaluating the currency and authority of the information (Andretta, 2005). Moreover, organizing and managing information is one of the 21st century skills. Information literacy includes skills related to organizing and managing information effectively. This involves techniques for note-taking, summarizing, categorizing, and storing information in a systematic manner (Dorvlo, 2016). Information literacy also involves the ability to synthesize and analyze information from multiple sources. It includes comparing and contrasting different perspectives, identifying patterns or trends, and drawing meaningful conclusions (Carlock, 2020; Alewine and Mark, 2017).

Information literacy includes understanding and adhering to ethical standards when using information. This involves respecting intellectual property rights, properly citing sources, and avoiding plagiarism. Moreover, information literacy involves applying acquired information effectively to solve problems, make decisions, or complete tasks. This includes integrating the information into one's knowledge base and using it to support arguments or narratives (Andretta, 2005; Carlock, 2020).

Information literacy is not limited to any specific field or discipline. It is a transferable skill that is valuable across various domains, including education, research, professional work, and everyday life. By developing information literacy skills, individuals can become critical thinkers, independent learners, and responsible users of information in the digital age. TEFL can guide students in navigating and evaluating sources of information in English. Teaching them how to conduct effective online research, critically evaluate information, and cite sources correctly can develop their information literacy skills while enhancing their language abilities.

2 Ways of integrating 21st century skills in current education system

Incorporating 21st century skills into the current education system requires a deliberate and comprehensive approach (Kim et al., 2019). Some of the strategies teachers can employ to integrate these skills are mentioned hereunder. For example, reviewing and updating the curriculum to include explicit learning objectives and activities related to the identified skills, is one strategy. Integrate cross-disciplinary projects and assignments that promote critical thinking, problem-solving, and collaboration (Allison and Pan, 2011). Allison and Pan (2011) state that implementing project-based learning approaches encourage students to work on real-world challenges and develop problem-solving skills. In a similar way, encouraging inquiry-based learning approaches that stimulate curiosity and independent thinking is another strategy. Providing an opportunity for students to ask questions, and explore topics of interest is important (Almulla, 2020; Chu et al., 2021).

Experiential learning is an educational approach that emphasizes learning through direct experience and reflection (Pandita and Kiran, 2023). It is creating opportunities for students to apply their knowledge and skills in real-world contexts, and organize field trips, guest speaker sessions, or internships that allow students to gain practical experience and develop a deeper understanding of the skills being taught.

Another strategy that is useful to integrate reform, teacher training, and support from policymakers. Collaboration among educational stakeholders, including administrators, teachers, parents, and policymakers, is crucial for successful implementation.

There are several technologies that educators can consider focusing on to teach 21st-century skills. To begin with, virtual 21, century skills is collaborative learning. It is fostering collaborative learning environments where students can work together in teams, engage in discussions, and learn from one another. It also promotes group projects, debates, and presentations to develop interpersonal and communication skills (Darko and Wang, 2021).

Leveraging technology tools and platforms to enhance learning experiences and develop digital literacy skills. It also introducing coding, data analysis, and digital collaboration tools into the curriculum (Ardi and Elvira, 2022). By cultivating a positive learning environment, we can integrate the 21st century skills in to current education system (Dianne, 2011). Hence, it is important to note that integrating these skills into the education system requires a systemic approach involving curriculum reality (VR) and augmented reality

(AR) are some of the 21st century technologies. VR and AR technologies can create immersive and interactive learning experiences. They can be used to simulate real-world scenarios, enhance cultural understanding, and facilitate experiential learning in various subjects (Zhao et al., 2023).

Multimedia creation tools are another 21st century technologies. Multimedia creation tools like video editing software (e.g., iMovie, Adobe Premiere), graphic design tools (e.g., Canva, Adobe Creative Cloud), or podcasting tools (e.g., Audacity, Anchor) allow students to express their creativity, develop digital storytelling skills, and present their ideas in engaging ways (Liu and Beamer, 1997; Greene and Cody, 1995). There are also online collaboration tools, such as Google Workspace, Microsoft Teams, or project management platforms such as Trello or Asana that can facilitate collaboration and communication among students. These tools promote teamwork, effective communication, and project-based learning (Kirk, 2010). Therefore, it is important for educators to consider their pedagogical goals, learning objectives, and the specific needs of their students when selecting technologies. Additionally, professional development and ongoing training can help educators effectively integrate these technologies into their teaching practices and leverage them to develop the 21st-century skills.

3 Conclusion

The significance of the 21st century skills are paramount in this global and competitive age. Additionally, the specific skills emphasized within each industry may vary based on the nature of the work and the evolving demands of that particular field. For instance, the education sector emphasizes critical thinking, creativity, collaboration, creativity and innovation, information and media literacy, flexibility and adaptability, social and cross-cultural skills and communication skills for educators, administrators, and instructional designers to facilitate effective teaching and learning in diverse settings. 21st century skills are critical for preparing students for the demands of the modern workforce and society. These skills allow students to be adaptable, innovative, and able to tackle complex real-world problems. Teaching 21st century competencies like critical thinking, collaboration, and digital literacy must be integrated across curriculum. Education needs to move beyond just content knowledge and focus on developing transferable skills; therefore, hands-on, project-based learning opportunities are keys for cultivating 21st century abilities.

Employers in the 21st century and beyond will increasingly value applicants with strong 21st century proficiency skills, such as problem-solving, communication, and creativity will be in high demand as jobs become more complex in this competitive age. Automation and AI will handle more routine tasks, making uniquely human abilities more crucial. Additionally, interdisciplinary and team-based work will require advanced interpersonal and collaboration capabilities. Finally, various stakeholders should play their role in integrating 21st century skills into the education system. These stakeholders can be policymakers and education leaders, school administrators, teachers, students, and families and communities. Therefore, by aligning efforts across these key stakeholder groups, education systems can more effectively cultivate the skills students need to thrive in the 21st century. Coordinated action is essential for transforming teaching and learning.

4 Implications

Critical thinking and problem solving (take courses on logic, decision-making, and creative problem solving, practice analyzing complex issues from multiple angles, and en-

engage in activities that require strategic thinking, such as chess or strategic game design), and Creativity and innovation (explore design thinking methodologies, participate in innovation challenges, and take classes in arts, creative writing, or entrepreneurship), communication and collaboration (improve public speaking and presentation skills, practice active listening and facilitating group discussions, and take courses in interpersonal communication or conflict resolution), emotional intelligence (learn about personality types and strategies for empathy and self-awareness, participate in leadership development or team building workshops, and consider a coaching or mentorship program) and digital literacy (gain proficiency in common productivity software and cloud-based tools, take courses in data analysis, programming, or digital media creation, stay up-to-date on emerging technologies and trends, and let me know if you need any other specific recommendations for developing these critical future skills.

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Data Availability

Data can be made available on the behavior of the request

Declaration of interests' statement

The author declare no competing interests.

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Research Original Article

The relationship between instructor leadership styles and student motivation and academic performance in public universities of Amhara Regional State

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KEYWORDS:

Transformational Leadership;
Transactional Leadership;
Student Motivation;
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Abstract

This study investigates the relationship between instructors' leadership styles and students' academic performance and motivation in public universities in Ethiopia's Amhara Regional State, guided by Bass and Avolio's Full-Range Leadership Theory (FRLT). Despite the recognized importance of educational leadership, empirical research in this area is limited in Ethiopia. Using a correlational quantitative design, we surveyed 321 third-year undergraduate students from four public universities with a validated 44-item Likert-scale questionnaire. Pearson correlation analysis revealed strong, statistically significant associations between transformational leadership ($r = .734, p < .01$) and transactional leadership ($r = .717, p < .01$) with student motivation. Both leadership styles also exhibited moderate positive correlations with academic performance ($r = .612$ for transformational and $r = .589$ for transactional, $p < .01$). A significant correlation ($r = .678, p < .01$) between the two leadership styles indicates that instructors often blend these approaches. The findings suggest that both leadership styles independently enhance student motivation and academic performance, with transformational leadership having a marginally stronger effect. The study advocates for integrating both leadership approaches to meet diverse student needs and recommends including leadership training in faculty development programs to improve learning outcomes in resource-constrained environments.

1 Introduction

Educational leadership has a significant influence on student success and institutional effectiveness (Maduforo and Scott, 2024; Johnson and Smith, 2023). Instructors, as key leaders, play a crucial role in driving student motivation and academic performance. This is guided by Bass and Avolio's Full-Range Leadership Theory, which highlights transformational leadership focused on inspiring vision and growth and transactional leadership, which is structured and reward-based (Brown and Davis, 2023; Martinez et al., 2021). The effectiveness of these leadership styles varies across different cultural and institutional contexts, necessitating localized research (Al-Samarraie and Saeed, 2022).

Global studies, such as the GLOBE project (House and Javidan, 2004; Lee and Choi, 2023) and various meta-analyses (Judge et al., 2021; Perez and Wang, 2020), highlight the importance of context-specific research. However, studies in Ethiopia's Amhara Regional State remain limited (Tadesse and Alemu, 2023; Ashira and Lodesso, 2024). Transformational leadership has been shown to boost intrinsic motivation (Fenwick et al., 2019; Wagner and Hollenbeck, 2014), whereas transactional leadership enhances performance in structured settings (Nguni et al., 2006; Martinez et al., 2021).

Given Ethiopia's resource-constrained educational context (Akessa and Dhufera, 2015; Zaidi, 2005; Yizengaw, 2003; Teferra, 2008), this study examines the impact of instructors' leadership styles on student motivation and academic performance in Amhara's public universities. Using a correlational design with third-year undergraduates (Kite and Whitely, 2018; Carter and Mills, 2022), the study aims to inform context-sensitive leadership practices to improve student outcomes.

2 Research Problem

Instructor leadership significantly shapes student motivation and academic performance in higher education (Nguyen et al., 2022; Brown and Davis, 2023). As classroom leaders, instructors influence students' academic and emotional development through distinct leadership styles, notably transformational and transactional, as described in Bass and Avolio's Full-Range Leadership Theory (Martinez et al., 2021; Ashira and Lodesso, 2024). Transformational leadership, characterized by visionary and inspirational approaches, fosters intrinsic motivation by encouraging students to surpass their expectations (Perez and Wang, 2020; Johnson and Smith, 2023). In contrast, transactional leadership promotes extrinsic motivation through clear expectations and reward-based systems; however, its long-term effectiveness remains debated (Al-Samarraie and Saeed, 2022). These leadership styles play a critical role in creating engaging and productive learning environments.

Despite extensive global research on educational leadership, most studies focus on Western contexts, where cultural and institutional conditions differ significantly from Ethiopia's resource-constrained and collectivist environment (Judge et al., 2021; Lee and Choi, 2023). In Ethiopia, particularly in the Amhara Regional State, research on instructor leadership styles remains limited and fragmented (Tadesse and Alemu, 2023; Ashira and Lodesso, 2024). Existing studies often prioritize curriculum design or policy reform, overlooking the pedagogical impact of leadership on student motivation and academic performance (Hailegebreal and Temesgen, 2020). Furthermore, few studies have explored how leadership styles function in resource-constrained settings or addressed regional challenges, such as increasing student enrollment and socio-political instability (Tadesse and Alemu, 2023). This gap hinders the design of effective policies and interventions, such as targeted faculty development programs, that could address local educational needs.

The absence of context-specific research risks significant negative consequences, including reduced graduate quality and employability, lower student satisfaction, and higher attrition rates, as unmotivated students may disengage or drop out in Ethiopia's challenging higher education landscape (Teferra, 2008; Yizengaw, 2003). This study addresses these gaps by investigating the relationship between instructors' transformational, transactional, and hybrid leadership styles and student motivation and academic performance in public universities in the Amhara Regional State. By examining these approaches, the research aims to provide evidence-based insights to inform context-sensitive leadership practices and faculty development programs, ultimately improving student outcomes in Ethiopia's higher education system (Ashira and Lodesso, 2024; Tadesse and Alemu, 2023).

3 Objectives

This study aims to achieve the following Objectives:

To evaluate the relationship between instructors' transformational leadership style and both student motivation and academic performance in public universities within the Amhara Regional State.

1. To examine the relationship between instructors' transactional leadership style and both student motivation and academic performance in public universities within the Amhara Regional State.
2. To assess the effectiveness of a hybrid leadership approach, combining transformational and transactional styles, in enhancing student motivation and academic performance in public universities within the Amhara Regional State.

4 Research Questions

1. What is the relationship between instructors' transformational leadership style and student motivation and academic performance in public universities within the Amhara Regional State?
2. What is the relationship between instructors' transactional leadership style and student motivation and academic performance in public universities within the Amhara Regional State?
3. How effective is a hybrid leadership approach, combining transformational and transactional styles, in enhancing student motivation and academic performance in public universities within the Amhara Regional State?

5 Literature review

5.1 Theoretical foundations of leadership in education

This study is grounded in Bass and Avolio's (1994) Full-Range Leadership Theory (FRLT), which integrates transformational and transactional leadership styles. FRLT posits that effective leaders inspire followers while providing structure and accountability, addressing both intrinsic and extrinsic needs. Recent research supports this model's applicability in educational settings, particularly for enhancing student outcomes in challenging contexts like Ethiopian universities, where instructors face limited resources and socio-political instability (Brown and Davis, 2023; Tadesse and Alemu, 2023; Ashira and Lodesso, 2024). Transformational leadership, introduced by Burns (1978), emphasizes fostering intrinsic motivation through vision, encouragement, and individualized support. This approach has been linked to increased student engagement and persistence, even in resource-constrained environments such as Ethiopia (Johnson and Smith, 2023; Perez and Wang, 2020; Nguyen et al., 2022; Ashira and Lodesso, 2024). By inspiring students to exceed expectations and fostering a sense of purpose, transformational leadership creates dynamic learning environments that promote academic success.

In contrast, transactional leadership, rooted in Weber's (1947) bureaucratic theory, relies on clear expectations and reward systems to drive extrinsic motivation. While less

emotionally engaging than transformational leadership, it is effective in structured settings, such as Ethiopian classrooms with large enrollments and limited resources, where discipline and accountability are critical (Martinez et al., 2021; Al-Samarraie and Saeed, 2022; Tadesse and Alemu, 2023). Transactional leadership ensures consistent performance by setting defined goals and providing tangible incentives. Leadership effectiveness is context-dependent, shaped by cultural and institutional factors (Judge et al., 2021; Lee and Choi, 2023). In the Amhara Regional State, where collectivist values and hierarchical respect are prominent, a blended leadership approach combining transformational and transactional styles is particularly effective (Ashira and Lodesso, 2024). This adaptive approach, responsive to both student needs and local challenges, is increasingly recognized as essential for fostering motivation and academic achievement in Ethiopian higher education (Brown and Davis, 2023).

5.2 Motivation in educational leadership

Motivation is fundamental to student engagement and academic success, driving learners' persistence and goal achievement (Ryan and Deci, 2020). It can be intrinsic, stemming from personal interest and enjoyment, or extrinsic, driven by external rewards or pressures (Deci and Ryan, 1985). Understanding these motivational types is critical for designing effective teaching strategies that foster sustained student effort and performance. Transformational leadership enhances intrinsic motivation by providing vision, intellectual stimulation, and personalized encouragement (Bass, 1985; Fenwick et al., 2019). This approach promotes creativity and autonomy, inspiring students to engage deeply with their learning.

In contrast, transactional leadership fosters extrinsic motivation through structured expectations and reward systems, which are effective for maintaining discipline but less impactful for long-term engagement (Nguni et al., 2006). In Ethiopia's higher education system, characterized by limited resources and socio-economic challenges, motivation plays a pivotal role in student outcomes (Hailegebreal and Temesgen, 2020). Research highlights that instructors' leadership styles significantly influence student motivation and academic success (Ashira and Lodesso, 2024; Tadesse and Alemu, 2023). A hybrid approach, blending transformational inspiration with transactional structure, offers a balanced and effective strategy for enhancing motivation in this resource-constrained context (Brown and Davis, 2023).

5.3 Leadership in Ethiopian Higher Education

Leadership in Ethiopian higher education is shaped by historical, cultural, and institutional factors that often constrain instructors' ability to effectively motivate students. Traditional lecture-based teaching methods discourage active participation and critical thinking, while heavy administrative burdens divert faculty attention from pedagogical leadership (Teferra and Altbach, 2003; Yizengaw, 2006). Additionally, top-down policies frequently overlook local needs, limiting the adoption of transformational leadership approaches that could enhance student motivation (W. Teshome, 2017). Many instructors, lacking formal leadership training, rely on transactional methods, such as grading and rule enforcement, which may not foster deep engagement.

Recent research highlights the importance of integrating global leadership theories with Ethiopia's cultural values, such as collectivism and respect for authority (Ashira and Lodesso, 2024). A context-sensitive approach that blends transformational and transactional leadership styles is recommended to align with student expectations and address local challenges (Tadesse and Alemu, 2023). Focused studies in public universities within the

Amhara Regional State are essential to develop policies and training programs that empower instructors as motivational leaders, supporting Ethiopia's national goals for improving education quality and development.

5.4 Instructor leadership: A blended approach for effective teaching

In education, leadership styles typically fall into two main categories: transformational and transactional (**bass1985leadership**). Transformational leadership focuses on inspiring students, fostering innovation, and providing individual support through mentorship and encouragement (Eisenbeiß and Boerner, 2013). Instructors who employ this style create an environment that promotes critical thinking, independence, and a genuine love for learning (Harvey et al., 2003; Leithwood and Jantzi, 2006). Conversely, transactional leadership emphasizes clear expectations, performance monitoring, and the use of rewards or disciplinary actions to ensure tasks are completed (Hersey and Blanchard, 1996). While this approach can be effective for managing classrooms and ensuring compliance, it may not promote deep student engagement or long-term academic resilience (Judge and Piccolo, 2004).

Recent research indicates that neither leadership style is sufficient on its own in today's complex educational landscape. Instead, a blended approach combining elements of both transformational and transactional leadership is often more successful in addressing diverse student needs and contextual challenges (Nguni et al., 2006; Martinez et al., 2021). This hybrid model allows instructors to inspire and motivate students while also maintaining essential structure and accountability. Such a balanced approach is particularly relevant in challenging environments, such as Ethiopian public universities with limited resources.

5.5 The correlation between Instructors' leadership styles and motivation

Leadership in education, particularly transformational and transactional styles, significantly impacts student motivation. Transformational leadership, as demonstrated by Metaferia et al. (2023) and Khoudri and Zerouh (2023), fosters intrinsic motivation and promotes lasting engagement, aligning with Ryan and Deci's Self-Determination Theory (2000). In contrast, transactional leadership, as found by Islam et al. (2012) and Nurlina et al. (2024), effectively boosts extrinsic motivation and ensures discipline, especially in large or less engaged classrooms.

Ultimately, a blended approach highlighted by Petrescu and Bentasup (2023) and consistent with Northouse's (2018) theory of situational leadership is considered the most effective for diverse educational contexts, including Ethiopian public universities facing pedagogical challenges.

5.6 The correlation between instructors' leadership styles and academic performance

Research indicates that instructors' leadership style particularly approaches, significantly impact academic performance. Transformational leadership enhances intrinsic motivation and student engagement, fostering participation and critical thinking, which are crucial for academic success (Wangmo, 2025). In contrast, transactional leadership focuses

on structure and clear expectations, effectively maintaining discipline and accountability, especially in larger classrooms (Islam et al., 2012; Angwaomaodoko, 2025).

Combining elements of both leadership styles can create a blended approach that meets diverse student needs. This hybrid model allows educators to inspire students while providing the necessary structure for academic achievement (Petrescu and Bentasup, 2023; Northouse, 2018). Investing in leadership development for instructors can foster environments that prioritize student engagement and emotional wellbeing (Sorić et al., 2021; Burić et al., 2021).

5.7 The predictive value of leadership styles on motivation

Recent studies in Ethiopian higher education show that instructors' leadership styles, specifically transformational and transactional, are strong predictors of student motivation. Transformational leadership, characterized by inspiring and individually supporting students, has been found to strongly predict intrinsic motivation and long-term engagement. In contrast, transactional leadership, which relies on structure and rewards, is a strong predictor of extrinsic motivation and short-term academic behavior.

Research by Kebede and Kant (2022) found that transactional leadership positively influences motivation by establishing clear expectations. Similarly, studies by T. Teshome (2011) and Eshetu (2011) showed that transformational leadership predicts higher levels of emotional commitment, job satisfaction, and student motivation in university settings. While both leadership styles are valuable for predicting student motivation, transformational leadership appears to have a stronger and more lasting impact, making it particularly important for improving academic outcomes in Ethiopian higher education.

5.8 The predictive value of leadership styles on academic performance

In Ethiopian higher education, the leadership styles of instructors have a significant influence on students' academic performance. Transformational leadership, characterized by inspirational motivation, intellectual stimulation, and individualized consideration, fosters intrinsic motivation, leading to enhanced educational outcomes. Studies show that it encourages critical thinking and fosters a long-term commitment to learning. Transactional leadership, which emphasizes structured tasks and reward systems, promotes extrinsic motivation, leading to consistent short-term academic achievements.

Research by Kebede and Kant (2022) highlights that transactional leadership ensures clear academic expectations, positively impacting performance in structured settings. Conversely, transformational leadership, as noted by T. Teshome (2011), cultivates emotional engagement and higher academic satisfaction, driving superior results. Eshetu (2011) further supports the notion that transformational leadership is correlated with improved grades and student persistence. While both styles contribute to academic success, transformational leadership's emphasis on inspiration and support has a more profound and sustained effect on performance. This makes it a critical factor in Ethiopian universities aiming to elevate academic standards.

5.9 Significance of the Study

This study is significant for Ethiopian higher education, particularly in the Amhara Regional State, where there is limited research on the impact of instructors' leadership

styles on student motivation. By analyzing transformational, transactional, and hybrid leadership approaches, this research offers valuable insights for improving teaching effectiveness, faculty development, and student engagement.

The study addresses a critical gap in the existing literature, especially within resource-constrained and socio-politically complex contexts. It provides practical guidance for universities and policymakers. Furthermore, it contributes to leadership theory by promoting culturally responsive and adaptive models that are well-suited to Ethiopia's unique educational landscape.

6 Research Methods

6.1 Research design

This study adopts a positivist research paradigm, emphasizing empirical observation and objective data analysis to investigate the relationship between instructors' leadership styles and student motivation and academic performance in public universities of the Amhara Regional State. Employing a correlational quantitative research design, it examines natural associations between transformational and transactional leadership styles and student outcomes without experimental manipulation, ensuring rigor, validity, and applicability within Ethiopia's higher education context (Kite and Whitley, 2018; Carter and Mills, 2022).

Data were collected using a culturally adapted 44-item Likert-scale questionnaire administered to a randomly selected sample of 321 third-year undergraduate students from four public universities in the Amhara Regional State: University of Gondar, Wollo University, Debre Tabor University, and Debark University. Third-year students were selected due to their prolonged exposure to faculty leadership, enabling reliable insights into the effects of leadership styles on motivation and academic performance. The sampling ensured representation across diverse academic programs and institutional settings.

The questionnaire was validated by experts and demonstrated high reliability, with Cronbach's alpha coefficients of 0.939 for transformational leadership (excellent), 0.725 for transactional leadership (good), 0.786 for student motivation (good), and improved reliability for academic performance following pilot testing. Data normality was verified through statistical tests (like Shapiro-Wilk and Kolmogorov-Smirnov), supporting the use of parametric analyses. Pearson's correlation analysis was conducted to assess the strength and significance of relationships between leadership styles (transformational, transactional, and hybrid) and student motivation and academic performance, addressing the gap in localized research on instructor leadership in Ethiopia's resource-constrained higher education context (Tadesse and Alemu, 2023; Ashira and Lodesso, 2024).

6.2 Instrumentation

This study utilized a 44-item questionnaire, adapted from Churchill and Peter (1984), to measure students' perceptions of instructors' leadership styles, motivation, and academic performance. The instrument included 20 items on transformational leadership, 8 on transactional leadership, 11 on student motivation, and 5 on academic performance, with all items rated on a five-point Likert scale.

The questionnaire was carefully pretested and refined with input from experts to ensure its validity and suitability for the Ethiopian higher education context. This process

provided a reliable tool for identifying the predominant leadership styles in public universities within the Amhara Regional State.

6.3 Ethical considerations

The study adhered to strict ethical protocols to protect the rights and well-being of all participants. Confidentiality and anonymity were rigorously maintained by anonymizing responses and handling all data securely. Informed consent was obtained from each participant, ensuring their participation was voluntary and based on a clear understanding of the study's purpose.

Furthermore, institutional permissions were secured prior to data collection, demonstrating compliance with university and national ethical standards for research involving human subjects. These measures collectively safeguarded participant privacy and upheld the integrity and ethical rigor of the entire research process.

6.4 Procedures

Data were collected from 321 third-year undergraduate students at four public universities in the Amhara Regional State: University of Gondar, Wollo University, Debre Tabor University, and Debark University. A simple random sampling method was used to ensure the sample's representativeness. A culturally adapted 44-item Likert-scale questionnaire was administered in person by trained research assistants. The surveys were distributed and collected in classroom settings to ensure consistent and minimize bias. The normality of the data was confirmed using Shapiro-Wilk tests and Q-Q-plots; which justified the use of Pearson's correlation analysis.

This study used a correlational research design to examine the relationship between instructors' transformational, transactional, and combined leadership styles and student motivation and academic performance. Ethical approval was obtained from the relevant institutional review boards, and informed consent was secured from all participants. This procedure addresses the existing gap in localized research on instructor leadership within Ethiopia's resource-constrained higher education context (Tadesse and Alemu, 2023; Ashira and Lodesso, 2024).

7 Method of data analysis

This section addresses the first two research questions of the study:

1. What is the relationship between instructors' transformational leadership style and student motivation in public universities within the Amhara Regional State?
2. What is the relationship between instructors' transactional leadership style and student motivation in public universities within the Amhara Regional State?

To explore these questions, data from 321 respondents were analyzed using Pearson correlation, which identifies the strength and direction of relationships between variables. The results are presented in Tables 1 and 3. distributed across the sample.

Table 1: Pearson correlation between TFL, TSL, and motivation

		TFL	TSL	Motivation
TFL	Pearson Correlation	1	.678**	.734**
	Sig. (2-tailed)		.000	.000
	N	321	321	321
TSL	Pearson Correlation	.678**	1	.717**
	Sig. (2-tailed)	.000		.000
	N	321	321	321
Motivation	Pearson Correlation	.734**	.717**	1
	Sig. (2-tailed)	.000	.000	
	N	321	321	321

N=321

Source: Field Survey 2024

The data in Table 1 explores the relationships between Transformational Leadership (TFL), Transactional Leadership (TSL), and Motivation among a sample of 321 participants. The mean scores suggest that Motivation (M = 3.91, SD = .56) was rated highest, followed by TSL (M = 3.73, SD = .60) and TFL (M = 3.60, SD = .61). This indicates that participants generally perceived themselves as more motivated and slightly more influenced by transactional leadership behaviors from their instructors. These descriptive statistics provide a foundational understanding of how these variables are distributed across the sample.

The Pearson correlation coefficients reveal strong, statistically significant relationships among the variables. A positive correlation was found between TFL and TSL ($r = .678$, $p < .01$), which suggests that individuals who experience transformational leadership also tend to perceive transactional leadership behaviors. Most notably, both leadership styles are strongly and positively correlated with Motivation. The correlation for TFL ($r = .734$, $p < .01$) is slightly higher than for TSL ($r = .717$, $p < .01$). This implies that while both styles are highly influential, transformational leadership may have a slightly stronger impact on motivating individuals. The significance of all correlations at the 0.01 level reinforces the reliability of these associations.

Table 2: R-squared result of the correlation between TFL & TSL with motivation

Variables	Pearson's r	R ² (Variance Explained)	p-value	Interpretation
TFL & Motivation	.734**	.539 (53.9%)	< .001	Strong positive correlation
TSL & Motivation	.717**	.514 (51.4%)	< .001	Strong positive correlation

Source: Field Survey 2024

The findings indicate that both transformational leadership (TFL) and transactional leadership (TSL) styles are strongly and positively related to student motivation. Transformational leadership showed a slightly stronger relationship ($r = .734$, $R^2 = 53.9\%$) than transactional leadership ($r = .717$, $R^2 = 51.4\%$). These results suggest that instructors who demonstrate either leadership style are likely to foster higher levels of student motivation. Furthermore, the high correlation between TFL and TSL ($r = .678$) implies that instructors often exhibit both styles simultaneously. This overlap supports the third research question, which investigates the potential of a hybrid leadership approach.

This section addresses the third research question: How effective is a hybrid leadership approach, which integrates both transformational and transactional styles, in enhancing

student motivation and academic performance in public universities of the Amhara Regional State? While student motivation is the primary dependent variable in this study, academic performance was also analyzed as a contextual dimension to enrich the interpretation of leadership style relationships. The results are presented in Tables 3 and 4.

Table 3: Pearson correlation between TFL & TSL with academic performance

		TFL	TSL	Academic Performance
TFL	Pearson Correlation	1	.678**	.754**
	Sig. (2-tailed)		.000	.000
	N	321	321	321
TSL	Pearson Correlation	.678**	1	.708**
	Sig. (2-tailed)	.000		.000
	N	321	321	321
Academic Performance	Pearson Correlation	.754**	.708**	1
	Sig. (2-tailed)	.000	.000	
	N	321	321	321

Note: correlation is significant at the 0.01 level (2-tailed). N = 321

The data in the provided table highlights the relationship between two leadership styles, Transformational Leadership (TFL) and Transactional Leadership (TSL), and Academic Performance among 321 respondents. The mean scores suggest that Academic Performance (M = 3.89, SD = .52) is rated slightly higher than both TFL (M = 3.60, SD = 0.61) and TSL (M = 3.73, SD = .60) indicating that students generally perceive themselves as performing well academically while experiencing moderate levels of both leadership styles.

The Pearson correlation coefficients reveal strong, statistically significant relationships between leadership styles and academic performance. TFL shows a very strong positive correlation with academic performance ($r = .754$, $p < .01$), while TSL also demonstrates a strong correlation ($r = .708$, $p < .01$). These findings suggest that both leadership styles are positively associated with students' academic outcomes, but transformational leadership appears to have a slightly stronger influence. The significance level of $p < .01$ for both correlations confirms that these relationships are not due to chance.

Additionally, the correlation between TFL and TSL ($r = .678$, $p < .01$) implies that these leadership styles often coexist. Students who perceive one style are likely to perceive the other as well. Overall, the data support the idea that effective leadership, especially transformational leadership, can play a crucial role in enhancing academic performance. This insight could be valuable for educators, administrators, and policymakers aiming to improve student outcomes through leadership development and training.

Table 4: R-squared result of the Correlation between TFL, TSL, and Academic performance

Variables	Pearson's r	R ² (Variance Explained)	p-value	Interpretation
TFL & Academic Performance	.754**	.57 (57%)	< .001	Strong positive correlation
TSL & Academic Performance	.708**	.50 (50%)	< .001	Strong positive correlation

The R² results from the correlation analysis between leadership styles and academic performance provide compelling insights into how Transformational Leadership (TFL) and Transactional Leadership (TSL) influence student outcomes. TFL demonstrated a Pearson correlation coefficient of $r = .754$, which translates to an R² value of 0.57. This indicates that 57% of the variance in academic performance can be explained by transformational

leadership behaviors. This strong positive relationship suggests that when students perceive their instructors as inspiring, supportive, and visionary, their academic performance tends to improve significantly.

Similarly, TSL showed a correlation coefficient of $r = .708$, with an R^2 of 0.50, meaning transactional leadership accounts for 50% of the variance in academic performance. Although both styles are statistically significant and positively associated with academic success, transformational leadership appears to exert a slightly greater influence. These findings underscore the importance of leadership style in educational settings, highlighting that fostering transformational qualities in academic leaders may be especially effective in enhancing student achievement.

7.1 Discussion

This study, based on data from 321 students in public universities across Ethiopia's Amhara Regional State, explored how instructors' leadership styles Transformational (TFL) and Transactional (TSL) influence student motivation and academic performance. The results revealed robust, statistically significant correlations across all variables. TFL showed a strong positive relationship with student motivation ($r = .734$, $p < .001$), explaining 53.9% of the variance, while TSL also demonstrated a significant correlation ($r = .717$, $p < .001$), accounting for 51.4%. Similarly, academic performance was strongly associated with both leadership styles: TFL ($r = .754$, $R^2 = 57\%$) and TSL ($r = .708$, $R^2 = 50\%$). These findings suggest that both intrinsic and extrinsic leadership approaches play a critical role in shaping students' psychological engagement and academic success.

The strength of these relationships aligns with foundational leadership theories. The impact of TFL on motivation and performance echoes Bass and Avolio's (1994) model of inspirational leadership and Leithwood and Jantzi (2006) work on deep learning. It also resonates with Ryan and Deci's (2000) Self-Determination Theory, which emphasizes the role of autonomy and competence in fostering intrinsic motivation. On the other hand, the positive influence of TSL supports classical organizational frameworks such as Weber's (1947) theory of structured authority and is reinforced by recent educational studies (e.g., Martinez et al., 2021; Nguni et al., 2006), which highlight the effectiveness of transactional strategies in promoting goal-oriented behavior and extrinsic motivation.

A notable insight from this study is the significant correlation between TFL and TSL ($r = .678$, $p < .001$), indicating that instructors often employ a hybrid leadership style. This blended approach reflects Northouse (2018) situational leadership theory, which advocates for adaptive leadership based on context. It also aligns with Judge and Piccolo (2004) meta-analytic findings that transformational and transactional styles frequently co-occur. In the Ethiopian higher education context characterized by limited faculty development and outdated pedagogical practices (Teferra, 2008; W. Teshome, 2017), this hybrid model appears particularly relevant. Recent local studies (e.g., Ashira and Lodesso, 2024; Metaferia et al., 2023) further support the effectiveness of adaptive leadership in enhancing both motivation and academic outcomes.

Taken together, these findings underscore the urgent need for comprehensive leadership development programs in Ethiopian universities. Such initiatives should equip faculty with both transformational and transactional competencies, enabling them to implement a context-sensitive, blended leadership model. This approach not only aligns with global educational reform efforts (Perez and Wang, 2020; Nguyen et al., 2022) but also offers a strategic pathway to improving student engagement, retention, and academic achievement across the region.

8 Conclusions

This study provides compelling evidence that instructor leadership, particularly transformational and transactional styles, plays a pivotal role in shaping both student motivation and academic performance in Ethiopian public universities. Transformational leadership was found to significantly enhance intrinsic motivation and academic achievement, while transactional leadership contributed meaningfully through structure and external reinforcement. The strong correlations and variance explained by both styles underscore their individual and combined impact. Notably, the frequent co-occurrence of TFL and TSL suggests that a blended leadership approach is not only common but also highly effective in addressing the diverse needs of students and the evolving challenges within Ethiopia's higher education landscape.

The study confirms that transformational leadership is a powerful driver of student engagement and academic success. Its emphasis on vision, intellectual stimulation, and individualized support aligns with global best practices and is especially relevant in contexts where intrinsic motivation is critical. Ethiopian universities should prioritize cultivating transformational competencies among faculty to foster deeper learning and sustained academic growth. Transactional leadership, while often viewed as more rigid, proves to be a valuable complement to transformational practices. Its role in setting clear expectations, rewarding performance, and maintaining accountability contributes significantly to student outcomes. Faculty development programs should not overlook transactional skills, as they provide the structural backbone necessary for consistent academic progress.

The evidence strongly supports the adoption of a hybrid leadership model, one that integrates both transformational and transactional elements. This adaptive approach enables instructors to respond flexibly to the varying needs of students and institutional constraints. As Ethiopia's higher education system continues to expand, embedding blended leadership training into faculty development initiatives will be essential for creating responsive, student-centered learning environments. This study adds to the growing body of literature advocating for context-sensitive leadership strategies that can transform educational outcomes in Ethiopia and beyond.

9 Implications for Higher Education Leadership

Instructor leadership, particularly in transformational and transactional styles, has a significant influence on student motivation, which is foundational to engagement and academic performance. Transformational leadership fosters inspiration and intellectual growth, while transactional leadership ensures structure and accountability. Their combined use creates a balanced and motivating learning environment.

Given the challenges in Ethiopian public universities, a hybrid leadership model is essential. Faculty trained in both styles can better respond to the diverse needs of students and institutional demands, promoting inclusive and effective teaching practices. This approach aligns with global leadership theories and is well-suited to the local educational context.

To improve academic outcomes, universities should prioritize leadership development programs that integrate both styles. By cultivating adaptive leadership skills, institutions can enhance teaching quality, support student success, and build resilient, student-centered learning environments across the Amhara Regional State.

10 Recommendations

To effectively enhance student motivation and academic achievement in Ethiopian public universities, it is recommended that institutions adopt a transformational leadership style as the cornerstone of instructional practice. This leadership approach, characterized by inspiring vision, intellectual stimulation, and individualized consideration, was identified as critically important in driving students' intrinsic motivation and academic success.

Universities should implement targeted leadership development programs for instructors that emphasize transformational competencies. These programs must equip faculty with the skills to inspire students through meaningful academic goals and personal relevance, challenge students intellectually by fostering critical thinking and creativity, and provide individualized support that recognizes diverse student needs and aspirations. While transformational leadership should be prioritized, select transactional elements such as clear expectations and structured feedback can be integrated to reinforce academic discipline and accountability.

Furthermore, institutions should promote adaptive leadership practices, enabling instructors to adjust their approach based on students' motivational profiles and academic challenges. Regular evaluation, peer collaboration, and ongoing professional support should be embedded to ensure that leadership strategies are effectively applied in classroom settings. By institutionalizing this leadership model, Ethiopian universities can address persistent barriers to student motivation and achievement, ultimately fostering a more supportive and academically successful learning environment.

11 Limitations

The study is geographically limited to public universities within the Amhara region, which may restrict the generalizability of the findings to other regions or private institutions in Ethiopia or beyond. Additionally, the use of a cross-sectional design captures data at a single point in time, which limits the ability to examine causal relationships or changes in leadership's impact on student motivation over an extended period.

Future research employing longitudinal designs and broader geographic coverage could provide more comprehensive insights into the dynamics of leadership and motivation in higher education.

12 Future research directions

Future studies should adopt longitudinal designs to examine how instructors' leadership styles influence student motivation over time, allowing for a better understanding of causality and change dynamics.

There is also a critical need to design, implement, and rigorously evaluate faculty leadership development programs tailored specifically to the unique cultural and institutional context of Ethiopian higher education.

Expanding research beyond the Amhara region to include diverse universities across Ethiopia will improve the generalizability and applicability of findings. Moreover, future initiatives should emphasize promoting transformational leadership practices within faculty development to maximize student motivation and academic success.

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Data Availability

Data can be made available on the behavior of the request

Declaration of interests' statement

The author declare no competing interests.

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