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DILLA JOURNAL OF EDUCATION

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Articles

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Message from the Editor-in-Chief

I am pleased to introduce the release of Volume 1, Issue 2 of Dilla Journal of Education, a peer-reviewed bi-annual publication of Dilla University. This issue presents a diverse collection of articles that delve into critical aspects of education within Ethiopia.

On behalf of the editorial board, I invite you to explore the research presented, which examines topics such as language learning strategies used by English major students at Dilla University, the understanding of basic elementary geometry concepts among Bachelor of Science graduates, and factors hindering female participation and teacher strategies in EFL classrooms in the Gedieo Zone. Additionally, this issue discusses cooperative training as a means of implementing a dual training model for sustainable employment opportunities, teachers' and supervisors' views on principal power in secondary schools, and educators' academic integrity at three selected universities in the southern region of Ethiopia.

It is my hope that this issue provides valuable insights, stimulates further discussion, and encourages continued research within the Ethiopian education landscape. I encourage you to engage with these articles and contribute to the ongoing dialogue surrounding educational improvement.

Finally, I extend my sincere gratitude to the authors for contributing their valuable research, to the reviewers for their rigorous and insightful feedback, and to the dedicated members of the editorial team for their tireless efforts in bringing this issue to fruition. Your commitment to scholarly excellence is highly appreciated.

Daniel Gebretsadik (PhD, Associate Professor)
Editor-in-Chief
Dilla Journal of Education

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Language Learning Strategy Use of Dilla University English Major Students

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Abstract

This study was conducted to describe the language learning strategies used by English major students at Dilla University. To this end, all thirty English major second-year students participated in the study. The study utilized a descriptive research design. Data were gathered using Oxford's Strategy Inventory for Language Learning (SILL) and interviews. Data from interviews were analyzed qualitatively, whereas data obtained through the questionnaire were analyzed using the Statistical Package for Social Sciences (SPSS) version 20. To analyze the data, descriptive and inferential statistics such as mean, standard deviation, one-way ANOVA, and post hoc tests were applied to determine whether there is a statistically significant mean difference among the groups' language learning strategies. The findings claim that high achievers outperformed their average and low achievers by employing more types and more frequent use of language learning strategies. In the meantime, it was confirmed that there exists a significant mean difference among high-, average-, and low-achieving students' language learning strategies.

1 Introduction

Research has shown that effective learning strategies are essential for facilitating the acquisition of a second or foreign language (L2) (Griffiths, 2013; Oxford, 2017). Due to advances in digital technologies and their applications, the English language has become an essential tool in the 21^{st} century. English is used to seek information, exchange ideas, and network and is now taught as a second or foreign language at all education levels in many countries around the world.

According to research findings, learning strategies support language learners both inside and outside of the classroom as they acquire the English language (Khamkhien, 2011; Oxford, 2011). Finding the most and least often employed strategies among L2 learners has been the focus of several studies (Foster *et al*., 2017; Phonhan, 2016; Rardprakhon, 2016). In general, language learners use a variety of learning strategies to learn English, and LSS is widely used by students (Habok & Magyar, 2018). Additionally, studies have indicated that proficient students are more likely to actively participate in LLS than their less proficient counterparts, use a larger range of methods, and choose a more appropriate strategy (Al-Qahtani, 2013; Habok & Magyar, 2018; Rao, 2016). However, other studies (Phonhan, 2016; Rardprakhon, 2017) have found no connection between proficiency levels and the application of LLS.

Several studies have been conducted to determine which LMS are most commonly used by language learners. According to certain studies, EFL learners tended to employ cognitive strategies more frequently than memory strategies (AlQahtani,

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2013; Charoento, 2017; Bonyadi *et al*., 2012; Khamkhien, 2011; Kunasaraphan, 2015; Srisupha, 2012; Tieocharoen & Rimkeeratikul, 2019). According to certain studies, language learners employed social strategies more frequently than other strategies (Suwanarak, 2015; Tieocharoen & Rimkeeratikul, 2019); other studies, however, reported that social strategies were the least frequently utilized by EFL students (Foster *et al*., 2017; Ghavamnia *et al*., 2011; Phonhan, 2016). It is conceivable that different people still use different learning strategies to learn English. Indeed, prior research has shown associations between LLS and a range of variables, including age, gender, and motivation.

Nowadays, in Ethiopia, an increasing number of university students are studying English in different programs as compared to the previous status. Perhaps this can be prompted by considering its national and international acceptance in the modern job market. However, the English language achievement equity, including proficiency, among these students still seems uncertain, which rings a bell to investigators in the country. Particularly, it is possible to discern this disparity with regard to Dilla University EFL learners. For instance, in the 2020 academic year, there were forty-two students enrolled in the first-degree program at this university. Nonetheless, their number dropped from 42 to thirty in the 2021 academic year because twelve of them left the university due to poor performance. In addition, among these thirty students, twenty-four of them scored less than 3.00 in their GPA. The unsatisfactory performance of students in the English language can be attributed to different factors. Teachers' methodology of teaching, quality of teacher training, quality of curricular materials, evaluation methods and processes, lack of continuous professional development (on-the-job training), and attitudes of both teachers and students are some of the factors that affect the performance of students (Cross, 1995).

In light of the foregoing factors, the purpose of this study was to describe the strategies employed by high-, average-, and low-achieving students at Dilla University in order to comprehend these students' special efforts in developing the target language. The study tries to answer the following research questions:

1. What language learning strategies do high-achieving, average-achieving, and low-achieving learners frequently use?
2. Is there a statistically significant mean difference among high, average, and low achievers in the language learning strategies they use?

2 Review of Related Literature

Language Learning Strategies

Numerous studies on LLS have been done over the years (Griffiths, 2013; Griffiths & Cansiz, 2015; Habok & Magyar, 2018; Khamkhien, 2011; Macaro, 2006; Oxford, 2011; Wu, 2008). These studies have shown that LLS improves students' ability to learn languages and their command of the English language. It has also been shown that a variety of elements, including language proficiency, study years, learning objectives, gender, personality traits, learning styles, field of study, aptitude, teaching methods, task specifications, national origin, learning contexts, affective elements, and age, can affect the learner's decision regarding the best approach.

The variety and frequency of learning strategies used are correlated with language proficiency levels. To be more precise, highly proficient learners typically use a wider variety of learning strategies than their less proficient peers (Al-Qahtani, 2013; Gerami & Baighlou, 2011; Giang & Tuan, 2018; Habok & Magyar, 2018), as well as more frequently (Foster *et al*., 2017; Gerami & Baighlou, 2011) and more effectively (Chen, 2009) than their lowly proficient peers. However, some research revealed no connection between LLS execution and language ability levels (Phonhan, 2016; Rardprakhon, 2016). Additionally, whereas some earlier research suggested a favorable relationship between language competence levels and LLS use, other research indicated the exact opposite (Chen, 2009; Gerami & Baighlou, 2011; Giang & Tuan, 2018; Habok & Magyar, 2018).

However, recent research has emphasized that the use of LLS promotes language learning proficiency (Al-Qahtani, 2013, Charoento, 2017, Rao, 2016, and Wu, 2008), and generally speaking, these studies showed that proficient learners were more likely

to be actively engaged in LLS, employ a wider variety of strategies, and select more appropriate strategies than their less proficient peers (Al-Qahtani, 2013; Habo, 2017). Learning techniques are also influenced by the educational environment, instructional materials, and cultural norms (Chamot, 2004; Oxford, 1989). For instance, students may choose individual rather than cooperative strategies in an educational system that emphasizes competitive tasks and learning environments that encourage competitiveness. According to Grainger (2012), the choice of LMS when learning a foreign language did, in fact, depend on the cultural setting and the learning situation.

The use of LLS is influenced by educational contexts and systems as well (Chamot, 2004; Grainger, 2012; Khamkhien, 2011). Zhong (2015) investigated the usage of learning techniques by two Chinese immigrant students over time and discovered a connection between the students' beliefs and their learning tactics. The study found that both Chinese migrant learners modified their learning theories and methods after encountering a novel method of language instruction in New Zealand. Learning techniques can change over time, especially following exposure to a new learning context and setting, as the study demonstrates the complicated relationship between learners' beliefs and learning strategies. According to other studies, the frequency and strategy preferences of learners are socially mediated and context-dependent (Habok & Magyar, 2018; Hashim *et al*., 2018; Tieocharoen & Rimkeeratikul, 2019). All of these results point to the possibility that learning environments and contexts have an impact on how frequently and which learning techniques are used.

Students that are highly motivated employ more techniques and do so more frequently than their less motivated peers (Al-Qahtani, 2013). In fact, motivated students use a wider variety of tactics and are also better equipped to choose the most effective ones (Oxford, 1990). In other words, motivation affects the learner's choice of approach in addition to the overall frequency of strategy implementation. This is consistent with prior research showing that motivation and LMS enable students to create a strategic learning plan (Griffiths, 2013; Kunasaraphan, 2015; Macaro, 2006; Taguchi, 2002). When compared to discrete methods, motivation does, in fact, shape one's strategic plans and aid in combining metacognitive awareness with larger learning objectives. Additionally, incentives encourage students to finish their assignments. Griffiths (2013) claimed that motivation comes from both the inside and the outside.

It is crucial for academics and practitioners to comprehend how students use strategies because it may offer helpful insights into how languages are learnt and how learning techniques are employed to develop language, particularly in EFL circumstances.

Oxford's Taxonomy

Oxford (1990), cited in Paredes (2010), developed a novel system of language learning strategies based on earlier studies on learning techniques. Oxford (1990) split LMS into two categories: direct learning techniques and indirect learning approaches. The specialized use of language is one of the memory, cognitive, and compensatory mechanisms that make up direct learning. Three different indirect learning methods that support and direct language learning without directly using the language are metacognitive, emotional, and social strategies (Oxford, 1990).

Direct Strategies

Direct learning strategies come in three different varieties: memory techniques, cognitive strategies, and compensatory strategies. Memory strategies help students connect ideas or things in their second language, but they may not always call for in-depth knowledge (Oxford, 2003, $p.13$). Students can learn and recall information in a logical order using a variety of memory-related techniques (e.g., acronyms), while other techniques help students, a learn and recall information by using sounds (e.g., rhyming), images (e.g., a mental image of the word itself or its meaning), a combination of sounds and images (e.g., the keyword method), body movement (e.g., total physical response), and, mechanical means (e.g., flashcard) (Oxford, 2003). The learner is able to immediately apply the linguistic material through taking notes, making arguments, and using other cognitive strategies.

Indirect Strategies

As was already said, Oxford's (1990) indirect learning strategies can be categorized under the social, emotional, and metacognitive categories. The management and facilitation of language acquisition typically do not directly involve the target language. Social strategies enhance interaction and increase empathy since they entail exchanges between and among people (Canale, 1983), as is described in Parades (2010). An example of a social strategy is asking the speaker to repeat themselves, paraphrase, talk more slowly, and so on. The emotional demands of the learner, such as the self-assurance and tenacity required for learners to actively engage in language learning, are the focus of affective approaches. For instance, laughing at one's own mistakes can help reduce fear (Vlckova *et al*., 2013).

Metacognitive strategies include all three of these aspects of the language learning process: planning, observing, and evaluating (Fewell, 2010). The opportunity to practice in-conversation skills in real-world situations is actively sought for or created by learners (for example, by joining a discussion group) (Paredes, 2010). Despite disagreements over the definition of LLS, these methods aid language learners in taking control of their education, enhancing their competency, and—most importantly—becoming autonomous (Vandergrift, 2002; Paredes, 2010).

According to Ellis (994), Oxford's SILL is regarded as the most thorough classification of LLS and has been extensively utilized for gathering data on numerous language learners throughout the world (Green & Oxford, 1995; Wharton, 2000; Hsiao & Oxford, 2002; Lan & Oxford, 2003). This instrument has been translated into other languages and is standardized. It was widely used by researchers to gather data on a sizable population of primarily foreign language learners, and it was also utilized in studies that correlated the usage of strategies with factors like gender, competence level, learning styles, culture, and length of language study (Green & Oxford, 1995; Wharton, 2000). Given that this research examines the impact of strategy on gender, academic year, and length of English study.

3 Methods

3.1 Research Design

The current study employed a descriptive case study research design. This is due to the fact that many problems in education are best examined by using this method. Moreover, it plays a significant role in the description, explanation, and interpretation of present situations, events, and trends, which are vital topics of interest.

Since it is a descriptive research design, a mixed approach was implemented. This is due to the fact that the combined use of quantitative and qualitative research methods provides an expanded understanding of research problems (Creswell, 2009). What's more, mixed methods are inclusive, pluralistic, complementary, and more convenient than quantitative or qualitative methods alone (Johnson & Onwuegbuzie, 2004). Accordingly, the current researcher preferred to employ such a sort of method, for he felt that the mixed approach provided a better grasp of the research problem.

3.2 Target Population and Sampling

This study, conducted at Dilla University, sought to investigate the strategies employed by high, average, and low achievers. Just like the setting, the subjects were purposefully selected by the researcher because the present investigator assumed that the students had better awareness of language learning strategies than freshmen at the university. The total population that took part in this study was thirty EFL students, based on a comprehensive sampling technique. All participants in this study were first-degree learners. High, average, and low achievers were identified among these participants based on their three semester cumulative results. Students who managed to score between 2 and 2.5 points in their English language learning were considered low achievers, and the students whose grade ranged from 2.5 to 3.00 points were called average achievers in this study. The high achievers are the ones who were able to achieve a 3.0 or higher GPA in their English language learning. The ages of these students ranged from 19 to 22 years old. Participants have nearly the same year of English learning experience. They studied English beginning in primary school and progressing

through tertiary school. All participants in this study neither entered language schools nor lived in English-speaking countries.

3.3 Data Gathering Instruments

Two research instruments were employed in this study to gain the required information from the respondents and assess their strategy use. These were a self-report questionnaire for ESL/EFL learners (SILL) and a semi-structured interview.

The self-report questionnaire (SILL)

In order to measure the strategy use of the target population, Oxford's (1990) Strategy Inventory for Language Learners (SILL) was adopted for this study owing to the following important reasons: Firstly, this tool actually allows the collection of information on a variety of issues in a relatively short time that is both cost-effective and easy for analysis. Secondly, it allows comparisons of answers among respondents. Thirdly, this type of method reaches many more people. Moreover, SILL is "the most comprehensive instrument to date" (Ellis, 1994, $p.539$); Oxford's classification is "more systematic in linking individual strategies as well as strategy groups" (Oxford, 1990, $p.14$).

In the SILL, language learning strategies fall into six major categories: memory, cognitive, compensation, metacognitive, affective, and social, in which they enable the assessment of EFL learning strategies. The items were created using five-point likert-scales (closed-ended), which reveal the frequency of use of learning strategies (as 1 = "Never True of Me"; 2 = "Usually Not True of Me"; 3 = "Somewhat True of Me"; 4 = "Usually True of Me"; 5 = "Always True of Me").

The internal consistency and reliability of the self-report questionnaire were checked. Cronbach's alphas for *metacognitive strategies, cognitive strategies, memory strategies, social strategies, compensation strategies*, and *affective strategies* were 0.85, 0.893, 0.761, 0.899, 0.725, and 0.633, respectively. This indicates that all items of individual strategies form a scale that has reasonable internal consistency and reliability for multiple-item scales.

Interview

A semi-structured interview was used in order to substantiate the information gained via the questionnaire. To obtain detailed information from subjects, the researcher conducted semi-structured interviews. By the same token, it permits a free response. Since the purpose of this interview was to supplement the data collected through the self-report questionnaire, it was designed on the basis of the questionnaire. For this reason, the contents of the interview were almost identical to the contents of the questionnaire. Three students from each of the three groups, low, average, and high achievers, were purposefully chosen for the interview.

3.4 Data Analysis Techniques

The organized data was entered into a computer and analyzed using the Statistical Package for the Social Sciences (SPSS) version 20 program. The analysis was performed for individual and average summated scale items by high-achieving learners, average-achieving learners, and low-achieving learners. The results attained from SPSS analysis were categorized according to the six main strategies: memory, cognitive, compensation, metacognitive, affective, and social, along with their descriptive and inferential statistics results and respective items.

In each principal category, students' preferences for each individual and summarizing scale item were computed by mean. Then, high-achieving learners, average-achieving learners, and low-achieving learners' major strategy preferences were put in a rank order; then, mean and percentages were used in comparisons of the six main strategies preferred by the three achievers. Finally, a one-way ANOVA was run to look for significant differences in the use of main strategies by high-achieving students, average-achieving students, and low-achieving students at $p.05$. A statistically significant difference was calculated at the $p - value$ of .05 in this study and discussed on the basis of their three semesters' cumulative results.

At this point, it is important to realize that the one-way ANOVA is an **omnibus** test statistic and cannot tell us which specific groups were statisti-

cally significantly different from each other, only that at least two groups were. A post hoc test was used to determine which specific groups differed from each other.

4 Results and Discussion

The major objective of the present study was to identify the frequency of language learning strategies that high-, average-, and low-achieving students use. To this end, a self-report questionnaire and interview were used.

Table 1: Metacognitive Strategy use

Achievement		Metacogniti veStrategy1	MetaStrg2	MetaStrg3	MetaStrg4	MetaStrg5	MetaStrg6	MetaStrg7	MetaStrg8	MetaStrg9	MetaStrg10
Low	Mean	2.12	2.53	2.88	2.76	2.65	2.94	2.47	2.53	2.65	2.88
	SD	.781	1.281	1.269	1.348	1.222	1.298	1.281	1.231	.931	1.317
	Skewness	-.219	.432	.039	.658	.079	-.073	.378	-.077	.828	.057
	N	17	17	17	17	17	17	17	17	17	17
Medium	Mean	2.71	3.14	3.86	4.43	2.86	2.86	3.00	3.43	2.43	3.43
	SD	.951	1.464	1.215	.787	.900	1.464	1.000	1.272	1.813	.976
	Skewness	-.863	.109	-.414	-1.115	.353	-.109	-1.400	.222	.983	.277
	N	7	7	7	7	7	7	7	7	7	7
High	Mean	3.67	3.33	4.17	4.50	4.67	3.83	4.00	4.33	4.33	4.00
	SD	.816	1.211	1.169	.548	.516	.983	1.549	1.211	1.033	1.549
	Skewness	.857	.075	-1.586	.000	-.968	-1.438	-.968	-1.952	-.968	-1.936
	N	6	6	6	6	6	6	6	6	6	6
Total	Mean	2.57	2.83	3.37	3.50	3.10	3.10	2.90	3.10	2.93	3.23
	SD	1.006	1.315	1.326	1.383	1.296	1.296	1.373	1.398	1.363	1.331
	Skewness	.131	.231	-.262	-.335	-.096	-.299	.106	-.109	.391	-.272
	N	30	30	30	30	30	30	30	30	30	30

Items 1 to 10 were set to explore how often high, average, and low achievers use metacognitive strategies to deal with their English shortcomings. The results indicated that the frequency of metacognitive strategy use for low achievers ranges from 2.21 to 2.94. Item 1 ("If I can't think of an English word, I use a word or phrase that means the same thing") was the least used strategy, and Item 6 ("I try to find as many ways as I can to use my English") was the most frequently used strategy. Item 2 with the mean score of 2.53, "When I can't think of a word during a conversation in English, I use gestures," Item 8 with the mean score of 3.00, "I have clear goals for improving my English skills," and Item 10 with the mean score of 2.88, "I think about my progress in learning English," were the strategies low achievers commonly used. According to the results in the above table, it can be concluded that low achievers were medium strategy users. According to Oxford (1990), these students need strategy training to maximize their language learning.

The frequency of metacognitive strategy use among average learners ranges from 2.43 to 4.43. The most frequently used metacognitive strategy for average achievers is Item 4, with a mean score of 4.43 ("I try to find out how to be a better learner of English"), and the least frequently used strategy was Item 8, with a mean score of 2.43 ("I have clear goals for improving my English skills"). The mean scores of Items 1, 2, 5, 6, 7, and 9 were 2.71, 3.14, 2.86, 3.00, and 2.43, respectively. This indicated that the average learner's frequency of metacognitive strategy use is in the range of medium strategy users, which calls for strategy training. This category of students used Items 3 and 4 most frequently, with a mean of 3.86 and 4.43, respectively.

The frequency of metacognitive strategy use for high achievers ranges from 3.23 to 4.67. Item 10, with a mean score of 3.23, "I think about my progress in learning English," was the least frequently used, and Item 5, with a mean score of 4.67, "I notice my English mistakes and use that information to help me do better," was the most frequently used strategy for high achievers. The mean scores for items 1, 3, 5, 6, 7, 8, and 9 were 3.67, 3.86, 4.50, 4.67, 3.83, 4.00, 4.33, and 4.33, respectively. The results indicated that high achievers use metacognitive strategies most frequently.

Table 2: Cognitive Strategy use

Achievement		Cogntv Strg11	Cogntv Strg12	Cogntv Strg13	Cogntv Strg14	Cogntv Strg15	Cogntv Strg16	Cogntv Strg17	Cogntv Strg18	Cogntv Strg19	Cogntv Strg20	Cogntv Strg21
Low	Mean	2.35	2.29	2.41	2.82	2.71	2.82	2.59	3.00	2.65	2.59	2.65
	SD	.996	1.105	.870	1.468	1.047	1.074	1.004	1.369	1.115	1.004	.996
	Skewness	.031	.280	.306	.344	-.809	.392	.147	-.166	.501	-.273	1.258
	N	17	17	17	17	17	17	17	17	17	17	17
Medium	Mean	2.57	2.86	2.71	2.71	2.57	3.71	3.57	2.57	2.71	2.86	2.71
	SD	1.397	.900	1.254	.951	1.272	1.113	1.272	1.512	1.113	1.215	1.254
	Skewness	1.079	-1.569	.740	-.863	-.222	-.249	-.222	.620	-.249	1.147	1.450
	N	7	7	7	7	7	7	7	7	7	7	7
High	Mean	3.67	4.50	4.50	4.33	3.67	4.17	3.83	4.50	4.50	4.67	4.83
	SD	1.506	.548	.837	.816	1.751	1.169	.753	.548	.837	.516	.408
	Skewness	-1.270	.000	-1.537	-.857	-.919	-1.586	.313	.000	-1.537	-.968	-2.449
	N	6	6	6	6	6	6	6	6	6	6	6
Total	Mean	2.67	2.87	2.90	3.10	2.87	3.30	3.07	3.20	3.03	3.07	3.10
	SD	1.269	1.279	1.242	1.373	1.279	1.208	1.143	1.424	1.273	1.258	1.296
	Skewness	.358	-.052	.433	-.021	-.158	.003	.010	-.301	.149	.089	.515
	N	30	30	30	30	30	30	30	30	30	30	30

Items 11 to 21 were set to explore how often the high, average, and low achievers use cognitive strategies when they learn English. The results revealed that the frequency of cognitive strategies used by low achievers ranges from 2.29 to 3.00. Item 12: "I first skim an English passage (read over the passage quickly then go back and read carefully)" was the least frequently used strategy, while Item 18: "I say or write new English words several times." was the most frequently used. Item 14 with the mean score of 2, Item 16 with the mean score of 2.82, and Item 15 with the mean score of 2.71 were the most frequently used cognitive strategies by low achievers next to Item 18 with the mean score of 3.00. Therefore, it can be concluded that low achievers are low cognitive strategy users. According to Oxford (1990), these students badly need strategy training to improve their English language ability.

Average learners' cognitive strategy use ranges from 2.57 to 3.71. The most frequently used cognitive strategy for average achievers is Item 15, with a mean score of 3.71 ("I watch English language TV shows spoken in English or go to movies spoken in English"), and the least frequently used strategy was Item 17, with a mean score of 2.57 ("I say or write new English words several times"). Items 13, 19, and 21, with a mean score of 2.71, and 16 and 18, with a mean score of 3.57, were the least frequently used cognitive strategies next to Item 18 by average achievers. The result indicated that average learners' frequency of cognitive strategy use is in the range of medium and high strategy users.

The frequency of cognitive strategy use for high achievers ranges from 3.67 to 4.83. Item 21 with a mean score of 4.83 "I start conversations in English" was the most frequently used cognitive strategy used by high achievers. However, items 11, 15, and 20 ("I read for pleasure in English," "I try to talk like a native English speaker," and "I make summaries of information that I hear or read in English," respectively) were the least used cognitive strategies in comparison with other strategies. The result indicated that high achievers are good strategy users.

The result of the interview revealed that high achievers could clearly identify the types of strategies they frequently deploy in learning the target language. They noted that they usually use strategies such as watching TV or films spoken in English, reading for pleasure, practicing the language, making summaries of the information they read and hear, saying or writing new English words several times, writing messages and letters in English, etc. The high achievers responded that they mostly grasp

new words based on context. They also noted that they sometimes use dictionaries to look up unknown words or ask for their meanings in order to understand the reading text. Therefore, the interview results were in line with the findings from the questionnaire.

Table 3: Memory Strategy use

Achievement		Memory Strg22	Memory Strg23	Memory Strg24	Memory Strg25	Memory Strg26	Memory Strg27	Memory Strg28
Low	Mean	2.35	2.41	2.82	2.76	2.59	2.29	2.24
	SD	1.115	.870	.883	.970	.870	1.047	.970
	Skewness	.113	.306	-.237	.066	.339	.439	.399
	N	17	17	17	17	17	17	17
Medium	Mean	2.29	2.43	2.71	2.71	3.00	3.43	3.14
	SD	.951	1.134	.951	1.496	1.155	1.618	1.773
	Skewness	.863	-.235	-.863	.256	-.909	-.317	-.297
	N	7	7	7	7	7	7	7
High	Mean	3.67	3.17	3.00	3.50	3.50	4.50	4.17
	SD	1.366	.983	1.673	1.225	.837	1.225	.753
	Skewness	-.523	-.456	.384	.490	-1.537	-2.449	-.313
	N	6	6	6	6	6	6	6
Total	Mean	2.60	2.57	2.83	2.90	2.87	3.00	2.83
	SD	1.221	.971	1.053	1.155	.973	1.486	1.367
	Skewness	.361	.041	.165	.207	-.198	.203	.148
	N	30	30	30	30	30	30	30

Items 22 to 28 were aimed at finding out how frequently the high, average, and low achievers implement memory strategies to remember what they learn regarding the target language. The result revealed that the frequency of memory strategy use for low achievers ranges from 2.24 to 2.82. Item 28 ("I use new English words in a sentence so I can remember them") was the least used strategy, and Item 24 ("I remember a new English word by making a mental picture of a situation in which the word might be used") was the most frequently used strategy. Item 27, with a mean score of 2.29, and Item 22, with a mean score of 2.35, were the least frequently used strategies next to Item 28, "I use new English words in a sentence so I can remember them." However, Item 25, with a mean score of 2.71, "I remember new English words or phrases by remembering their location on the page, on the board, or on a street sign," and Item 26, with a mean score of 2.59, "To understand unfamiliar English words, I make guesses," were the most frequently used memory strategies by low achievers next to Item 24. Generally, low achievers are considered to be low memory strategy users.

Average learners' memory strategy use ranges from 2.29 to 3.43. The most frequently used memory strategy for average achievers is Item 27, with a mean score of 3.43 ("I connect the sound of a new English word with an image or picture of the word to help me remember the word"), and the least frequently used strategy was Item 22, with a mean score of 2.29 ("I review English lessons often"). The data revealed that average achievers' use of memory strategies was not different from that of low achievers.

The frequency of memory strategy use for high achievers ranges from 3.00 to 4.50. Item 27, with a mean score of 4.50, "I connect the sound of a new English word with an image or picture of the word to help me remember the word," was the most frequently used memory strategy used by high achievers. However, Item 23, with a mean score of 3.17, "I think of relationships between what I al-

ready know and new things I learn in English," and Item 24, with a mean score of 3.00, "I remember a new English word by making a mental picture of a situation in which the word might be used," were the least frequently used memory strategies.

The findings from the interview were also in line with the findings from the questionnaire. Respondents were asked to describe their memory strategy when learning English. It was confirmed that the more successful learners being interviewed in this study noted that they deploy different sorts of strategies to recall English lessons and words. The seven types of m are reviewing the lessons frequently, creating a mental picture of a situation in which the word might be used, making connections between what they already know and new things they learn in English, using new English words in a sentence so that they can remember them easily, remembering their location on the page, on the board, or on a street sign, writing words on a piece of paper or on their hand and studying the words while they walk, sit, and so on. On the other hand, the two average achievers said that they somewhat utilize three specific strategies (linking the sound of a new English word with an image or picture of the word, internalizing what they have taught, and reviewing their English lessons) to help them memorize things in learning the target language. Low achievers, for their part, stated that they rarely use special strategies to recall English lessons and words. The statistical data and the frequency level demonstrate the dominance of the high achievers over the average and low achievers in employing memory strategies.

Table 4: Social Strategy use

Achievement		Social Strg30	Social Strg31	Social Strg32	Social Strg33	Social Strg34
Low	Mean	2.18	2.82	2.47	2.76	2.24
	SD	1.074	1.131	1.179	1.033	1.200
	Skewness	.293	.388	.469	.146	.962
	N	17	17	17	17	17
Medium	Mean	2.14	2.71	3.86	2.71	3.00
	SD	1.215	1.113	1.215	1.496	1.155
	Skewness	.414	1.784	-.414	.256	.909
	N	7	7	7	7	7
High	Mean	4.83	5.00	5.00	4.17	4.17
	SD	.408	.000	.000	1.169	1.169
	Skewness	-2.449	.	.	-1.586	-1.586
	N	6	6	6	6	6
Total	Mean	2.70	3.23	3.30	3.03	2.80
	SD	1.466	1.331	1.466	1.273	1.375
	Skewness	.280	.198	-.139	.041	.386
	N	30	30	30	30	30

Items 30 to 34 were designed to attain data on how frequently high, average, and low achievers employ social strategies to accelerate their progress in English. The result revealed that the frequency of social strategy use for low achievers ranges from 2.18 to 2.82. Item 31: "If I do not understand something in English, I ask the other person to slow down or say it again." was the most frequently used strategy, and Item 30: "I try to learn about the culture of English speakers." was the least frequently used strategy.

Average learners' social strategy use ranges from 2.14–3.86. The most frequently used social strategy for average achievers is Item 32, with a mean score of 3.86 ("I ask questions in English"), and the least

frequently used strategy was Item 30, with a mean score of 2.14 ("I try to learn about the culture of English speakers"). The data revealed that average achievers' use of social strategies was not different from that of low achievers.

The frequency of social strategy use for high achievers ranges from 4.17–5.00. Item 31 and 32 received a 5.00 mean score. "If I do not understand something in English, I ask the other person to slow down or say it again" and "I ask questions in English" were the most frequently used social strategies used by high achievers. However, Item 33, with a mean score of 4.17, "I ask English speakers to correct me when I talk," and Item 34, with a mean score of 4.17, "I practice English with other students," were the least frequently used social strategies, though the range is high for strategy usage.

Table 5: Compensation Strategies use

Achievement		Compensation Strategy 35	Compensation Strategy 36	Compensation Strategy 37
Low	Mean	2.47	2.47	2.00
	SD	.943	1.007	1.000
	Skewness	-.158	.091	.425
	N	17	17	17
Medium	Mean	2.57	2.71	2.43
	SD	.787	1.604	1.272
	Skewness	1.115	.305	1.581
	N	7	7	7
High	Mean	3.67	4.33	4.33
	SD	1.211	1.211	.516
	Skewness	-.075	-1.952	.968
	N	6	6	6
Total	Mean	2.73	2.90	2.57
	SD	1.048	1.373	1.331
	Skewness	.387	.192	.411
	N	30	30	30

Items 35 to 37 were designed to attain data on how frequently high, average, and low achievers employ compensation strategies to accelerate their progress in English. The result revealed that the frequency of compensation strategy usage for low achievers ranges from 2.00 to 2.47. Item 37, "I make up new words if I do not know the right ones in English," was the least frequently used strategy, and items 35, "I try to guess what the other person will say next in English," and item 36, "I read English without looking up every new word," with a mean score of 2.47, were the most frequently used strategies, though the mean scores were very close to low stratagem usage.

Average learner compensation strategy use ranges from 2.43 to 32.71. The most frequently used compensation strategy usage for average achievers is Item 36, with a mean score of 2.71 for "I read English without looking up every new word," and the least frequently used strategy was Item 37, with a mean score of 2.43 for "I make up new words if I do not know the right ones in English." The data revealed that average achievers' use of compensation strategies was not different from that of low achievers.

The frequency of compensation strategy usage for high achievers ranges from 3.67 to 4.33. Item 36 and 37, with a mean score of 4.33, "I read English without looking up every new word" and "I make up new words if I do not know the right ones in English," respectively, were the most frequently used compensation strategies used by high achievers. However, Item 35, with a mean score of 3.67, "I try to guess what the other person will say next

in English," was the least frequently used compensation strategy, though the range is high in strategy usage.

The results from the interview revealed that the high achievers were able to identify about three compensation strategies, such as using gestures, synonyms, paraphrasing, and so on. On the contrary, both the average achievers and the low achievers managed to refer to fewer language learning strategies. This clearly depicts that the more effective learners statistically surpass the other two groups in employing compensation strategies.

Table 6: Affective Strategy use

Achievement		Affective Strategy 38	Affective Strategy 39	Affective Strategy 40
Low	Mean	2.24	2.47	2.41
	SD	1.251	.943	1.064
	Skewness	.798	-.158	.084
	N	17	17	17
Medium	Mean	2.71	3.00	3.57
	SD	1.496	.816	1.134
	Skewness	.256	.000	-.725
	N	7	7	7
High	Mean	3.33	4.50	3.50
	SD	1.211	.548	1.225
	Skewness	.075	.000	-.490
	N	6	6	6
Total	Mean	2.57	3.00	2.90
	SD	1.331	1.145	1.213
	Skewness	.411	.000	-.045
	N	30	30	30

Items 38–40 were set up to collect data on how frequently the target population of this study applies affective strategies. The result revealed that the frequency of affective strategy usage for low achievers ranges from 2.24 to 2.47. Item 38, "I try to relax whenever I feel afraid of using English," was the least frequently used affective strategy, and Item 39, with a mean score of 2.47, "I notice if I am tense or nervous when I am studying or using English," was the most frequently used strategy, though the mean score was very close to low strategy usage.

Average learners' affective strategy usage ranges from 2.71 to 3.57. The most frequently used affective strategy for average achievers is Item 40, with a mean score of 3.57. "I give myself a reward or treat when I do well in English" was the most frequently used strategy. However, Item 38, with a mean score of 2.71, "I try to relax whenever I feel afraid of using English," was the least used affective strategy.

The frequency of affective strategy usage for high achievers ranges from 3.33 to 4.50. item with a mean score of 4.50 "I notice if I am tense or nervous when I am studying or using English." was the most frequently used affective strategy used by high achievers. However, Item 38, with a mean score of 3.33, "I try to relax whenever I feel afraid of using English," was the least frequently used affective strategy, which is in the category of medium strategy usage.

The findings from the interview also support the results from the questionnaire. Respondents in the interview were asked to describe the types of language learning strategies they often utilize to control their anxiety when they speak in front of

people, such as during presentations. In this regard, according to the high achievers in the interview, recognizing their anxiety, encouraging themselves, talking to someone else about their feelings, and trying to relax during using English are the four types of strategies that they mostly use to reduce their negative feelings when using English. One average performer in the interview responded that she usually tries to think about her strong side when using English. The other respondent said that she sometimes tries to relax while using English. Low achievers reported that listening to music or religious songs, sharing their feelings, and praying to their creator are three types of strategies they frequently use by the time they have an English presentation. This demonstrates the superiority of the high achievers over the average achievers, as well as the low achievers, in applying affective strategies.

Table 7: Descriptive Statistics for Summeted Variables

Main Variables Vs Achievement		N	Mean	SD	Std. Error	95% CI for Mean		Min.	Max.
						Lower Bound	Upper Bound		
Metacognitive strategies	Low	17	2.6412	.80550	.19536	2.2270	3.0553	1.20	3.90
	Medium	7	3.2143	.28536	.10785	2.9504	3.4782	2.90	3.70
	High	6	4.0833	.44460	.18151	3.6168	4.5499	3.50	4.60
	Total	30	3.0633	.85681	.15643	2.7434	3.3833	1.20	4.60
Cognitive strategies	Low	17	2.6257	.69076	.16753	2.2705	2.9808	1.45	3.73
	Medium	7	2.8701	.54761	.20698	2.3637	3.3766	2.00	3.64
	High	6	4.2879	.43186	.17631	3.8347	4.7411	3.64	4.64
	Total	30	3.0152	.88690	.16193	2.6840	3.3463	1.45	4.64
Memory strategies	Low	17	2.4958	.57169	.13866	2.2019	2.7897	1.43	3.43
	Medium	7	2.8163	.86392	.32653	2.0173	3.6153	1.57	4.00
	High	6	3.6429	.54772	.22361	3.0681	4.2177	3.00	4.29
	Total	30	2.8000	.76665	.13997	2.5137	3.0863	1.43	4.29
Social strategies	Low	17	2.4941	.87783	.21291	2.0428	2.9455	1.00	4.60
	Medium	7	2.8857	1.02539	.38756	1.9374	3.8340	1.60	4.40
	High	6	4.6333	.29439	.12019	4.3244	4.9423	4.40	5.00
	Total	30	3.0133	1.16729	.21312	2.5775	3.4492	1.00	5.00
Compensation strategies	Low	17	2.3137	.69192	.16782	1.9580	2.6695	1.00	3.33
	Medium	7	2.5714	1.08379	.40963	1.5691	3.5738	1.67	4.67
	High	6	4.1111	.17213	.07027	3.9305	4.2918	4.00	4.33
	Total	30	2.7333	1.00725	.18390	2.3572	3.1094	1.00	4.67
Affective strategies	Low	17	2.3725	.78954	.19149	1.9666	2.7785	1.00	4.33
	Medium	7	3.0952	.46004	.17388	2.6698	3.5207	2.67	4.00
	High	6	3.7778	.68853	.28109	3.0552	4.5003	3.00	4.67
	Total	30	2.8222	.89157	.16278	2.4893	3.1551	1.00	4.67

The table 7 above provides some useful descriptive statistics, including the mean, standard deviation, and 95% confidence intervals for the dependent variables (*metacognitive strategies, cognitive strategies, memory strategies, social strategies, compensation strategies*, and *affective strategies*) for each separate group (low achievers, average achievers, and high achievers), and when all groups are combined (total). These figures are useful when we need to describe our data.

The mean metacognitive strategy use of high-

achieving students, average-achieving students, and low-achieving students was 4.0833, 3.2143, and 2.6412, respectively. This indicates that the high achievers use metacognitive strategies more than the average students do, and the medium achievers use these strategies more than the low achievers do. It can be generalized that there is high, medium, and low metacognitive strategy usage among the three groups, respectively.

The mean cognitive strategy use of high-achieving students, average-achieving students, and low-achieving students was 4.2879, 2.8701, and 2.6257, respectively. This implies that the high achievers utilize such types of LLSs better than the average person and the low achievers do. This leads us to conclude that there is high cognitive strategy usage for high achievers and low cognitive strategy usage for medium achievers and low achievers.

The mean memory strategy implementation of high-achieving students, average-achieving students, and low-achieving students was 3.6429, 2.8163, and 2.4958, respectively. This indicates that the high achievers employ them more than the average and the low achievers do. This implies that there is medium memory strategy usage for high achievers and low memory strategy usage for both medium achievers and low achievers.

The mean social strategy application of high-achieving students, average-achieving students, and low-achieving students was found to be 4.6333, 2.8857, and 2.4941, respectively. This means that the high achievers apply social strategies more than the average achievers, as well as the low achievers. This can be generalized to say that there is high social strategy usage among high achievers. Contrary to this, low memory strategy usage for medium and low achievers was observed.

The mean compensation strategy used by high-achieving students, average-achieving students, and low-achieving students was 4.1111, 2.5714, and 2.3137, respectively. This reveals that the high achievers use compensation strategies more frequently than the average employee and the low achievers do. This indicates the availability of high compensation strategy use for high achievers as opposed to both medium and low achievers.

The mean affective strategy utilization of high-achieving students, average-achieving students, and low-achieving students was 3.7778, 3.0952, and 2.3725, respectively. This infers that the high achievers surpass the average in using affective strategies, and the medium achievers use these strategies more frequently than the low achievers do. As a result, it is possible to conclude that high achievers and medium achievers use a medium affective strategy. Yet, it is low for low-achieving students.

Generally, as indicated in Table 7, the mean scores could be ranked in the following order of learning strategies used:

For high-achieving learners: 1^{st} = social learning strategies ($\bar{x}$ = 4.635, SD = 0.294), 2^{nd} = memory learning strategies ($\bar{x}$ = 4.633, SD = 0.294), 3^{rd} = cognitive learning strategies ($\bar{x}$ = 4.287, SD = 0.431), 4^{th} = compensation learning strategies ($\bar{x}$ = 4.111, SD = 0.172), 5^{th} = metacognitive learning strategies ($\bar{x}$ = 4.083, SD = 0.444), and 6^{th} = affective learning strategies ($\bar{x}$ = 3.777, SD = 0.688). On the basis of the data provided so far, social strategies, which are known as indirect strategies under Oxford's system, are the most frequently used strategies of all the six main language learning strategies with regard to high achievers. On the contrary, these learners use metacognitive and affective strategies least of all. This leads us to conclude that high achievers have better knowledge with respect to direct LLSs than indirect LLSs.

For average-achieving learners: 1^{st} = metacognitive learning strategies ($\bar{x}$ = 3.214, SD = 0.285), 2^{nd} = affective learning strategies ($\bar{x}$ = 3.095, SD = 0.460), 3^{rd} = social learning strategies ($\bar{x}$ = 2.886, SD = 1.025), 4^{th} = cognitive learning strategies ($\bar{x}$ = 2.870, SD = 0.547), 5^{th} = memory learning strategies ($\bar{x}$ = 2.819, SD = 0.863), and 6^{th} = compensation learning strategies ($\bar{x}$ = 2.571, SD = 1.083). In this case, it reveals that strategy usage is somewhat moderate. At the same time, the data indicate that unlike high achievers, average achievers more frequently apply indirect LLSs compared to direct LLSs.

For low-achieving learners: 1^{st} = metacognitive learning strategies ($\bar{x}$ = 2.641, SD = 0.805); 2^{nd}

= cognitive learning strategies ($\bar{x}$ = 2.626, SD = 0.690). 3^{rd} = memory learning strategies ($\bar{x}$ = 2.496, SD = 0.571), 4^{th} = social learning strategies ($\bar{x}$ = 2.494, SD = 0.877), 5^{th} = affective learning strategies ($\bar{x}$ = 2.373, SD = 0.789), and 6^{th} = compensation learning strategies ($\bar{x}$ = 2.314, SD = 0.691). It can be concluded that there was low strategy use.

Table 8: ANOVA Table

Variables		**Sum of Squares**	*df*	**Mean Square**	F	$Sig.$
Metacognitive strategies	Between Groups	9.432	2	4.716	10.738	.000
	Within Groups	11.858	27	.439		
	Total	21.290	29			
Cognitive strategies	Between Groups	12.445	2	6.223	16.207	.000
	Within Groups	10.366	27	.384		
	Total	22.811	29			
Memory strategies	Between Groups	5.837	2	2.919	7.032	.003
	Within Groups	11.207	27	.415		
	Total	17.045	29			
Social strategies	Between Groups	20.443	2	10.222	14.471	.000
	Within Groups	19.071	27	.706		
	Total	39.515	29			
Compensation strategies	Between Groups	14.566	2	7.283	13.237	.000
	Within Groups	14.856	27	.550		
	Total	29.422	29			
Affective strategies	Between Groups	9.438	2	4.719	9.359	.001
	Within Groups	13.614	27	.504		
	Total	23.052	29			

Table 8 shows the output of the ANOVA analysis and whether there is a statistically significant difference among our group means. We can see that the significance value for metacognitive strategies is 0.000 *(F (2, 29) = 10.738, p = 0.000)*, the significance value for cognitive strategies is 0.000 *(F (2, 29) = 16.207, p = 0.000)*, the significance value for memory strategies is 0.003 *(F (2, 29) = 7.032, p = 0.003)*, the significance value for social strategies is 0.000 *(F (2, 29) = 14.471, p = 0.000)*, the significance value for compensation strategies is 0.000 *(F (2, 29) = 13.237, p = 0.000)*, and thesignificance value for affective strategies is 0.001 *(F (2, 29) = 9.359, p = 0.001)*, respectively. The result revealed that there is a statistically significant difference in the mean of all six constructs of language learning strategy use among the three ability groups.

In order to identify the specific groups that differed, the post hoc test was used. The multiple comparisons depict which groups differed from each other.

Table 9: Multiple Comparisons

Dependent Variable	(I) Achievement	(J) Achievement	Mean Difference (I-J)	Std. Error	$Sig.$	95% CI	
						Lower Bound	Upper Bound
Metacognitive strategies	Low	Medium	-.57311	.29762	.065	-1.1838	.0376
		High	-1.44216*	.31469	.000	-2.0879	-.7965
	Medium	Low	.57311	.29762	.065	-.0376	1.1838
		High	-.86905*	.36870	.026	-1.6256	-.1125
	High	Low	1.44216*	.31469	.000	.7965	2.0879
		Medium	.86905*	.36870	.026	.1125	1.6256
Cognitive strategies	Low	Medium	-.24446	.27827	.387	-.8154	.3265
		High	-1.66221*	.29423	.000	-2.2659	-1.0585
	Medium	Low	.24446	.27827	.387	-.3265	.8154
		High	-1.41775*	.34473	.000	-2.1251	-.7104
	High	Low	1.66221*	.29423	.000	1.0585	2.2659
		Medium	1.41775*	.34473	.000	.7104	2.1251
Memory strategies	Low	Medium	-.32053	.28934	.278	-.9142	.2731
		High	-1.14706*	.30594	.001	-1.7748	-.5193
	Medium	Low	.32053	.28934	.278	-.2731	.9142
		High	-.82653*	.35844	.029	-1.5620	-.0911
	High	Low	1.14706*	.30594	.001	.5193	1.7748
		Medium	.82653*	.35844	.029	.0911	1.5620
Social strategies	Low	Medium	-.39160	.37743	.309	-1.1660	.3828
		High	-2.13922*	.39909	.000	-2.9581	-1.3203
	Medium	Low	.39160	.37743	.309	-.3828	1.1660
		High	-1.74762*	.46758	.001	-2.7070	-.7882
	High	Low	2.13922*	.39909	.000	1.3203	2.9581
		Medium	1.74762*	.46758	.001	.7882	2.7070
Compensation strategies	Low	Medium	-.25770	.33312	.446	-.9412	.4258
		High	-1.79739*	.35223	.000	-2.5201	-1.0747
	Medium	Low	.25770	.33312	.446	-.4258	.9412
		High	-1.53968*	.41268	.001	-2.3864	-.6929
	High	Low	1.79739*	.35223	.000	1.0747	2.5201
		Medium	1.53968*	.41268	.001	.6929	2.3864
Affective strategies	Low	Medium	-.72269*	.31889	.032	-1.3770	-.0684
		High	-1.40523*	.33719	.000	-2.0971	-.7134
	Medium	Low	.72269*	.31889	.032	.0684	1.3770
		High	-.68254	.39506	.095	-1.4931	.1280
	High	Low	1.40523*	.33719	.000	.7134	2.0971
		Medium	.68254	.39506	.095	-.1280	1.4931

*The mean difference is significant at the 0.05 level.

The data in Table 9 revealed that for *metacognitive learning strategies*, there was a statistically significant difference among groups as determined by a one-way ANOVA (F (2, 29) = 10.738, p = 0.000). A LCD post hoc test revealed that in the use of *metacognitive learning strategies*, the high-achieving learners were statistically significantly higher than the low-achieving learners (1.442 $\pm$ 0.314, p =.000) and the average-achieving learners (0.869 $\pm$ 0.368, p =.026). There was no statistically significant difference between the medium-achieving learners' and the low-achieving learners' groups (p = 0.065).

For *cognitive learning strategies*, a statistically significant difference was displayed among the groups as determined by a one-way ANOVA (F (2, 29) = 16.207, p = 0.000). A LCD post hoc test showed that in the use of *cognitive learning strategies*, the high-achieving learners were statistically significantly higher than the low-achieving learners (1.662 $\pm$ 0.294, p =.000) and the average-achieving learners (1.417 $\pm$ 0.344, p =.000). No statistically significant difference was observed between the medium-achieving learners' and the low-achieving learners' groups (p = 0.387).

For *memory learning strategies*, there was a statistically significant difference among groups as determined by a one-way ANOVA (F (2, 29) = 7.032, p = 0.003). A LCD post hoc test indicated that in the use of *memory learning strategies*, the high achievers were statistically significantly higher than the low achievers (1.147 $\pm$ 0.305, p =.001) and the average achieving learners (0.826 $\pm$ 0.358, p =.029). There was no statistically significant difference between the medium-achieving and low-achieving groups (p = 0.278).

For *social learning strategies*, there was a statistically significant difference among groups as determined by a one-way ANOVA (F (2, 29) = 14.471, p = 0.000). A LCD post hoc test revealed that in the use of social learning strategies, the high-achieving learners were statistically significantly higher than the low-achieving learners (2.139 $\pm$ 0.399, p =.000) and the average-achieving learners (1.747 $\pm$ 0.467, p =.001). There was no statistically significant difference between the medium-achieving learners' and the low-achieving learners' groups (p = 0.309).

Regarding the *compensation learning strategies*, it is possible to see the existence of a statistically significant difference among the three groups as determined by a one-way ANOVA (F (2, 29) = 13.237, p = 0.000). A LCD post hoc test demonstrated that regarding the utilization of *compensation learning strategies*, the high-achieving learners were statistically significantly higher than the low-achieving learners (1.797 $\pm$ 0.352, p =.000) and the average-achieving learners (1.539 $\pm$ 0.412, p =.001). There was no statistically significant difference between the medium-achieving learners' and the low-achieving learners' groups (p = 0.446).

For *affective learning strategies, it is possible to say that* there is a statistically significant difference among groups as determined by a one-way ANOVA test (F (2, 29) = 9.359, p = 0.001). A LCD post hoc test showed that with regard to the use of affective learning strategies, the low-achieving learners were statistically significantly lower than the average-achieving learners (-0.722 $\pm$ 0.318, p =.032) and the high-achieving learners (-1.405 $\pm$ 0.337, p =.000). There was no statistically significant difference between the average-achieving learners and the high-achieving learners' groups (p = 0.095).

To put it in a nutshell, the responses of the subjects to the interview questions point out that the more successful learners, in contrast with the average and the less successful learners have high language learning strategy utilization in learning the English language. Thus, the data gained from the interviews corresponds with the data obtained through the questionnaire.

5 Discussions

As can be observed from the students' responses in this study, it would seem reasonable to conclude that learners' use of language learning strategies in learning English is unsatisfactory. More specifically, the three groups (the high achievers, the average achievers, and the low achievers) did not equally utilize language learning strategies to develop their English language performance. At higher levels, low achievers use neither direct nor indirect LLS, indicating a lack of understanding of their strategy's application.

On the other hand, average achievers use only two strategies (the metacognitive and the affective strategies) at high frequency out of the six main language learning strategies. This means that average achievers lack good experience with the implementation of the three subcategories of direct strategies and social strategies under indirect strategies.

Unlike the two achievers, the high achievers utilize all six main language learning strategies, both direct and indirect, at a high frequency level. This indicates that the high achievers outperform their average and low counterparts by applying a wide range of language learning strategies, which apparently implies their better experience with their strategy use in English language learning. In supporting this, research on the utilization of foreign language learning strategies also reflects similar results in favor of more successful learners as higher and more frequent users (Al-Qahtani, 2013; Gerami & Baighlou, 2011; Giang & Tuan, 2018; Habok & Magyar, 2018; Foster *et al*., 2017; Gerami & Baighlou, 2011; Chen, 2009). Furthermore, it is in accord with research on language learning strategies that has particularly focused on the characteristics of good and bad learners. For instance, good learners provide reasons why they are efficient learners; their tactics are related to the type of learning task, and arrangements are made according to changing situations; they ask for support from their peers, teachers, or family when necessary; and they have confidence in their abilities to learn.

At the same time, a few studies reveal that metacognitive strategies were found to be employed predominantly by high achievers (Chamot, 2005; Lai, 2005; Vandergrift, 2003). Nevertheless, this study disproves this fact for the reason that social strategies are applied more frequently by high achievers in the first place. The current study also refutes the notion that more successful learners use monitoring strategies under metacognitive strategies more frequently (Vandergrift, 2003), because they use finding opportunities strategies under this principal category more frequently.

Generally, the present study recognizes that there is a strong connection between learners' language strategies and their language performance. Regarding the positive relationship between high use of LSS and language performance, literature also proves its existence (Oxford and Burry, 1995).

6 Conclusions

The general objective of this study was to explore the language learning strategies used by English majors. The data in the students' responses confirm that the high achievers, the average achievers, and the low achievers employ the six major language learning strategies at different frequencies. This could be ranked in the following order of strategy application:

High-achieving learners employ language learning strategies in the following order: social learning strategies, memory learning strategies, cognitive learning strategies, compensation learning strategies, metacognitive learning strategies, and affective learning strategies. It can be concluded that high-achieving Ethiopian English learners are good language learners.

Average-achieving learners employ language learning strategies in the following order: metacognitive learning strategies, affective learning strategies, social learning strategies, cognitive learning strategies, memory learning strategies, and compensation learning strategies. The data revealed that average learners were not better than low achievers in some strategies, such as memory, social, and compensation. This indicated that this group of learners needs language learning strategy training and close attention from their teachers.

Low-achieving learners also utilize language learning strategies in the order of: metacognitive learning strategies, cognitive learning strategies, memory learning strategies, social learning strategies, affective learning strategies, and compensation learning strategies. According to the data, this group of students is bad at using strategies and bad at achieving. Therefore, they should be given due attention in language learning strategy training.

Both high and average achievers revealed statistically significant mean differences in all language learning strategies excluding affective strategies as examined by one-way ANOVA. Meanwhile, it was found that a statistically significant mean dif-

ference existed between the high achievers and the low achievers in all major language learning strategies. However, no significant mean difference was discovered between average and low achievers. For this reason, it can be concluded that there was high strategy usage with regard to high-achieving learners, approximately medium strategy usage for medium-achieving learners, and low strategy usage for low-achieving learners. This actually purports that more effective students have better experiences using LLS as compared with medium achievers and low achievers.

Conflict of Interest

The author of this article has declared that there is no conflict of interest. He also confirmed that he has thoroughly read and approved the manuscript to be published in this journal.

Ethical Approval

Consent was sought form the research participants. Confidentiality was maintained in reporting information.

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Investigating the Understanding of Basic Elementary Geometry Concepts among Bachelor of Science Graduates in Mathematics Education

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Abstract

The purpose of this study was to investigate BSc-graduated mathematics teachers' understanding of some basic elementary geometry concepts. To conduct the study, a descriptive survey design and an inferential T-test were employed. The study included 53 participants—43 males and 10 females—who came to attend the Post Graduate Diploma in Teaching (PGDT) program at Dilla University Ethiopia in 2018–19 and were chosen using convenience sampling techniques. A 15-item achievement test on basic elementary geometry concepts in mathematics was used as an instrument for the study. The findings revealed that, out of 15 concepts, 1.55 and 1.85 were answered by female and male teachers, respectively. where they are perceived as difficult to understand and solve by BSc-graduated mathematics teachers. There was no significant difference between teachers in gender understanding and solving elementary basic concepts in geometry ($p = 0.372$ greater than $p = 0.05$ level of significance). As a result, it is recommended that extremely important BSc holders in mathematics teachers skill up through their professional development program, stakeholders and the MOE step up conscription efforts, and universities take action such as a workshop to fill the gap.

1 Introduction

1.1 Motivation and Background of the Study

Ethiopia is one of the developing countries in Africa in terms of science and technology, agriculture, industry, irrigation, and education. In such a country, the role of mathematics is very important in all aspects. The knowledge of the mathematician can be utilized in various fields. Mathematics is one of the great unifying themes in today's world of science. It is a language, a science, an art form, and a tool of tremendous power. Every area of mathematics has its own unique applications to different career options. For example, algebra is very important for computer science, cryptology, networking, and the study of symmetry in chemistry and physics. Analysis (including differential equations) is used in chemistry, biology, and physics, engineering, the motion of water (hydrodynamics), molecular structure, and option price modeling in business and economics models (Asnake, 2016).

Geometry is a device that is used a lot in science and art as well. As an illustration, it can be said that architects and engineers use geometric shapes a lot; geometrical characteristics are used quite a bit in physics and chemistry. Geometry helps students gain much more awareness about the world in which they live and appreciate its value. For example, the shapes of crystals and the orbits of space objects are geometric. Geometry is a tool that will help students have fun and even make them love mathematics (Serin, 2018). It is required that

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a teacher, who will be in charge of teaching and training students, have comprehensive knowledge and understanding of the geometry subject (Serin, 2018). Geometry is one part of the syllabus of high school courses. Worldwide the teaching of geometry has been the subject of several studies. According to Melo & Martins (2015), Geometry is still quite absent from the classrooms, especially in the early years.

1.2 Statement of the Problem

According to Melo & Martins (2015), the basic elementary geometry concepts are plane and space, which basically contain definitions and properties; polygons (general definitions, classifications, and properties; polygons' composition; relationship between triangle elements; congruence and similarity criteria; circumference relative position between two circumferences and between a straight line and a circumference; relationship between polygons and the circumference; measurement of base units length; plane figure area; prism volume; volume of cylinders, cones, and spheres; area of a surface; area of a surface.

A mathematics teacher's meaningful understanding of geometry could help them to develop confidence to teach their students and solve and appreciate real-life problems with their students. However, the literature reveals that high school mathematics teachers have a lot of misconceptions and a lack of understanding when teaching some geometric concepts. The predominance of teachers who are not qualified to teach could be one of the reasons for the poor academic performances of students in mathematics. Research shows us that the influence of teachers is the single-most important factor in determining students' achievement (Iheanachor, 2007). Iheanachor (2007) indicates that the impact of a teacher (for good or for bad) is cumulative; having a student with less exposure to qualified teachers, therefore, seems far less likely to achieve academic success than those with more.

It is also essential to carry out research on gender differences and achievement in basic elementary geometry. In recent research, gender differences and achievement in basic elementary geometry have piqued the interest of a number of researchers. According to some studies, females perform slower in mathematics, and mathematics is a masculine subject that only a few people study (Kurumeh & Iji, 2009). Some studies reported a significant difference in favor of male students by indicating that male students have higher mathematical reasoning ability or perform better than female students (Wushishi & Usman, 2013; Wushishi & Usman, 2013). As cited in Asnake (2016), Popola (2008) states that there is no significant difference in the mathematics achievement of male and female students. This study therefore investigated the understanding of BSc-graduated teachers and examined gender differences in some basic elementary geometry concepts.

1.3 Purpose of the Study

The main purpose of the study is to investigate mathematics teachers' knowledge or understanding of some basic elementary geometry concepts. The study focuses on the ability of mathematics teachers to teach high school geometry. Currently, the graduates of mathematics and natural science teachers are found to be the least competent to teach their subjects (MOE, 2016a), as cited in (Tirussew, Amare, Jeilu, Tassew, Aklilu, & Berhannu, 2018).

Students may lose the benefit of the investigative process in mathematics because mathematics teachers are the least competitive, which can be used to foster a relatively informal atmosphere in a mathematics classroom where communication and debate are encouraged. It has been stated that "mathematics classrooms were once envisaged as silent places" for communication between children (Quinnell, 2010).

Thus, it seems that teachers' roles in teaching geometry lessons in high school are immense. Teachers, on the other hand, appear resistant to applying themselves and the principles of geometry lessons. There is no research evidence for why the majority of Ethiopian BSc-graduated teachers feel uncomfortable with this method of teaching geometry lessons. As a result, more research on assessing the extent of understanding of basic geometry concepts among BSc-graduated teachers is required. Therefore, this study seeks an answer for the following research questions:

1.4 Research Questions

1. To what extent do BSc-graduated teachers understand and solve some basic elementary geometry concept questions?

2. Does the comprehension and ability to solve simple, elementary geometry problems differ significantly between male and female BSc graduates?

1.5 Objective of the Study

General Objective

The overall goal of this study is to determine how well BSc-graduated teachers understand basic elementary geometry concepts.

Specific Objectives

The specific objectives of the present study are:

1. to explore the extent to which BSc-graduated teachers understand and solve basic elementary geometry concept questions,

2. to assess the gender difference in understanding and solving basic elementary geometry questions among BSc-graduated teachers

1.6 Hypothesis

H_o: There is no significant difference between the two genders of BSc graduate teachers in understanding and solving some basic elementary geometry questions.

1.7 Significance of the Study

This study will benefit different parties. The study will benefit BSc in Mathematics graduating teachers by helping them become aware of the principles and practice of geometry lessons and implement them accordingly. Moreover, it will help them move one step ahead from where they are in their professional career. BSc in Mathematics-graduating teachers are also expected to reflect on their practice and test theories and hypotheses in practice so as to become reflective practitioners. Students also benefit from the quality instruction teachers deliver and improve their learning process, social skills, and achievement when teachers act in principled and informed ways.

2 Methods

2.1 Population and Sample

This research was carried out on BSc in Mathematics-graduated PGDT trainers. The study's population consists of mathematics-graduated teachers. There were 53 PGDT trainers who collected 43 males and 10 females by convenience sampling techniques; all of them have participated in the study.

2.2 Design of the Study

A quantitative case study was designed by the researcher to investigate the level of understanding of basic elementary geometry concepts among BSc-graduated mathematics teachers. Quantitative data was analyzed based on descriptive and inferential statistics.

Descriptive statistics: The data obtained from the participants was initially examined to get descriptive statistics of the percentage, mean, and standard deviation. Inferential Statistics:- Using the $t-test$, the data were analyzed to determine whether there is a significant difference between the genders on basic elementary geometry concepts. A significant difference between two genders has been tested at the 0.05 level of significance.

This research was designed to investigate the extent of BSc-graduated teachers' understanding of basic elementary geometry concepts.

Instruments: a test that was prepared by the researcher from Grade 8 and Grade 10 Mathematics textbooks, according to Ethiopian education system in 8^{th} grade levels basic geometry concepts such as Similar Plane Figures, Similar Triangles, Further On Circle, Angles in the Circle, Geometry and Measurements (Theorems on the Right Angled Triangle, Introduction to Trigonometry and Solids Figures) (Gebreyes & Basavaraju, 2016) and in 10^{th} grade levels basic geometry concepts such as Coordinate Geometry, Trigonometric function, Plane Geometry and measurement of surface area and volume of prism and cylinder, pyramid, cone and

spheres are included (Bansal, Rachel Mary, Mesay, Gizachew, & Tesfa, 2010), which all achievement test of concepts of elementary geometry are included in Grade 8 Mathematics and in Grade 10 Mathematics textbook with detailed notes. Seven open ended questions with fifteen items of achievement test were prepared. The achievement tests was constituted question one from plane figures, question two from Trigonometric function, question three from Angles in the Circle, question four from Plane Geometry, question five, six and seven with three items each were from measurement of surface area and volume of cone, pyramid and prism. And validity of the test was examined by two of his colleagues.

Correlation is the test-retest estimate of reliability; we can obtain considerably different estimates depending on the interval. To give an element of quantification to the test-retest reliability, statistical tests factor this into the analysis and generate a number between zero and one, with 1 being a perfect correlation between the test and the retest (Jack & Norman, 2009). Perfection is impossible and most researchers accept a lower level, 0.7, 0.8 or 0.9, depending upon the particular field of research. A test-retest was performed in a 30-minute interval to determine the reliability of test instruments, and the correlation was 0.998, indicating that the test instrument is reliable.

2.3 Data Analysis Technique

The prepared tests were distributed by the researcher and then collected for analysis. Thus, the collected data were organized, interpreted, and analyzed using a percentage, mean, standard deviation, and $t-test$ of the test, followed by analyses from which summaries and conclusions were drawn. A numerical value was multiplied by corresponding values assigned to the degree of agreement. To obtain the rating, the sum of the products of the value and frequency was divided by the total number of respondents. Then all rating means within a category were added and then divided by the number of cases to determine the ground mean. An interpretation was made based on the ground mean, and conclusions were drawn on the fundamental questions. The standard deviation was used to show how far responses had been scattered from the grade mean. To assess the significant difference between two genders' deviations from basic elementary geometry concepts, a $t-test$ was conducted and a detailed analysis was made.

2.4 Presentation and Analysis of Data

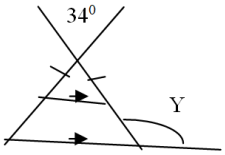
In this section, the analysis and interpretation of data are presented, along with the major findings.

2.5 Characteristics

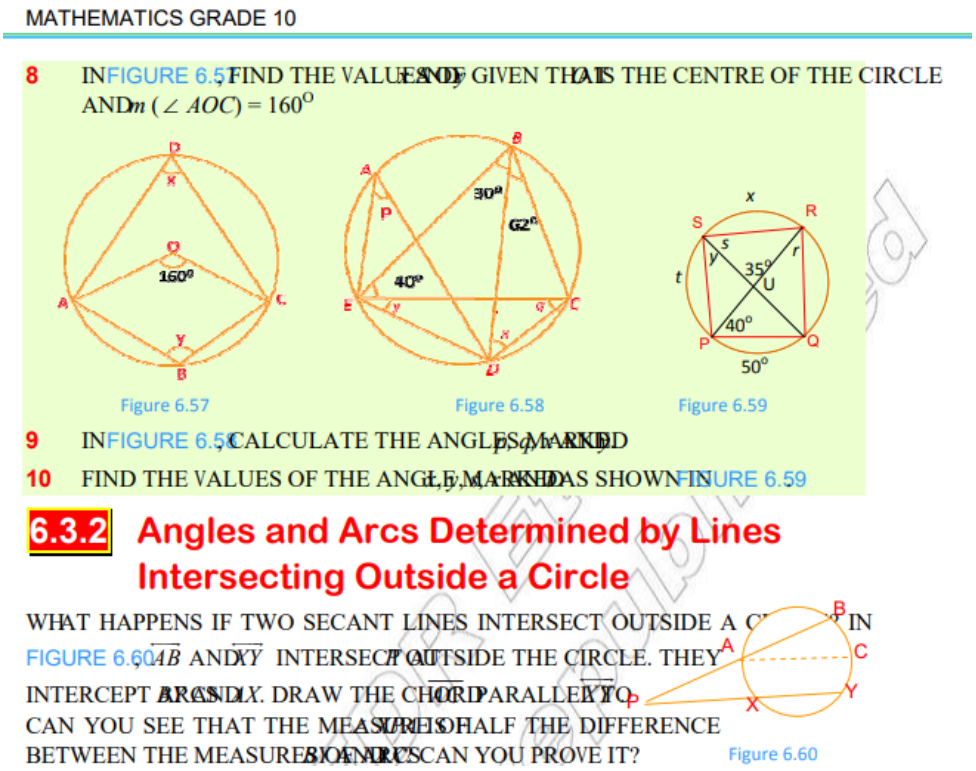
A characteristic of the subjects is that they are BSc-graduated mathematics teachers who take the training for PGDT in 2019 at Dilla University. BSc-graduated mathematics teachers were given some basic, elementary geometric questions. Analyses of BSc-graduated mathematics teachers' responses to the question items are presented as follows:

- **For question number one**: To what extent BSc graduated teachers understand and solve the following basic elementary geometry concept question?

Table 1: BSc teachers' understanding and ability of analysis basic angle and line properties

Item Q1	Male				Female				Total			
	Incorr		Corr		Incorr		Corr		Incorr		Corr	
	f	%	f	%	f	%	f	%	f	%	f	%
1. From the following figure, find the value of Y 	40	93.1	3	6.9	8	81.8	2	18.2	48	90.7	5	9.3

As it can be seen from Table 1, it provides information on the degree of male and female BSc-graduated teachers of mathematics who can solve basic elementary geometry angle questions. When asked to find the value of tem, one (93.1%) of the male mathematics teachers and one (81.8%) of the female mathematics teachers, for a total of 90.7%, did not correctly answer that it it to $y = 107^0$. Even though all the required properties that help to sole the equation—vertically opposite angle, base angle of an isosceles triangle, and supplementary angle—are mostly used in grades eight and ten, for instance, in grade ten the following problems need the above concepts to solve them.


MATHEMATICS GRADE 10

8 IN FIGURE 6.57, FIND THE VALUE OF GIVEN THAT IS THE CENTRE OF THE CIRCLE AND $m(\angle AOC) = 160^O$

Figure 6.57 Figure 6.58 Figure 6.59

9 IN FIGURE 6.5 CALCULATE THE ANGLES MARKED

10 FIND THE VALUES OF THE ANGLES MARKED AS SHOWN IN FIGURE 6.59

6.3.2 Angles and Arcs Determined by Lines Intersecting Outside a Circle

WHAT HAPPENS IF TWO SECANT LINES INTERSECT OUTSIDE A CIRCLE? IN FIGURE 6.60, $\overline{AB}$ AND $\overline{XY}$ INTERSECT OUTSIDE THE CIRCLE. THEY INTERCEPT ARCS AX AND BY. DRAW THE CHORD $\overline{BX}$ PARALLEL TO $\overline{XY}$. CAN YOU SEE THAT THE MEASURE OF $\angle P$ IS HALF THE DIFFERENCE BETWEEN THE MEASURES OF ARCS AX AND BY? CAN YOU PROVE IT?

Figure 6.60

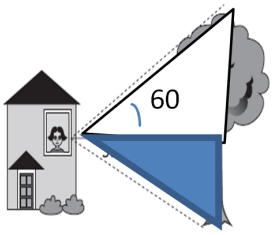
(Bansal*et al.*, 2010)

Figure 1: Sample problems in Grade 10 geometry lesson

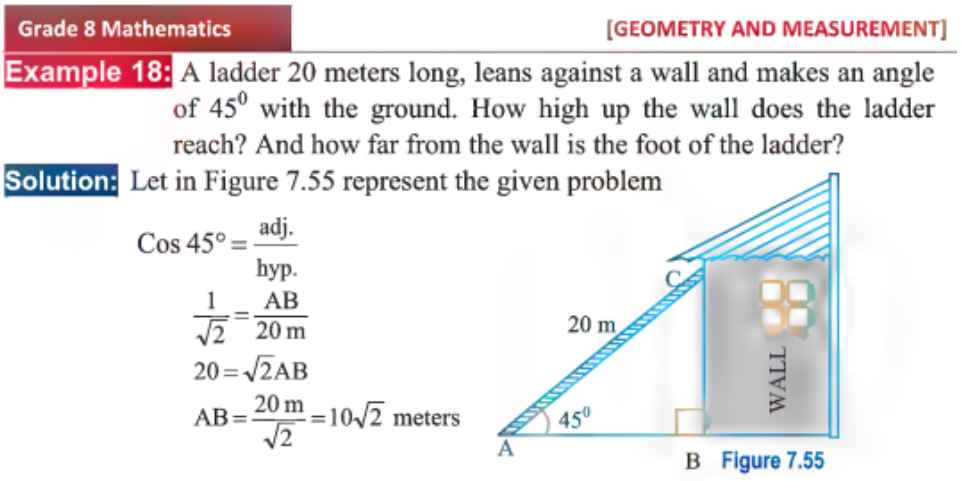
This demonstrates that BSc in mathematics teachers do not understand one or more of the following concepts: equality of vertically opposite angles, congruency of the base angle of isosceles triangles, and the sum of the straight angle is 180^0.

- **For question number two**: To what extent BSc graduated teachers understand and solve the following basic elementary geometry concept question?

Table 2: BSc Mathematics teachers' ability to synthesis simple geometric concept with trig in real world

Item Q2	Male				Female				Total			
	Incorr		Corr		Incorr		Corr		Incorr		Corr	
	f	%	f	%	f	%	f	%	f	%	f	%
Lula is standing in the building and looking out of a window at a tree. The tree is 20m away from Lula. Lula's line of sight to the top of the tree creates a 60^0 angle elevation, and her line of sight to the base of tree creates a 30^0 of depression. What is the height of the tree? 	43	100	0	0	10	100	0	0	53	100	0	0

As it can be seen from Table 2, it provides information on the degree of male and female BSc-graduated teachers of mathematics who can solve basic elementary geometry elevation questions. When asked to find the height of the tree, 100% of male mathematics teachers and 100% of female mathematics teachers, i.e., 100% of the total mathematics teachers, did not correctly answer that the height of the tree is 20m $\tan(60^0)$ + 20m $\tan(60^0)$ = $\frac{80\sqrt{3}}{3}$. However, trigonometric concepts are introduced with a brief note and examples in grade eight lessons, as illustrated by the following example from the grade eight text book as shown in figure 2.



Grade 8 Mathematics [GEOMETRY AND MEASUREMENT]

Example 18: A ladder 20 meters long, leans against a wall and makes an angle of 45^0 with the ground. How high up the wall does the ladder reach? And how far from the wall is the foot of the ladder?

Solution: Let in Figure 7.55 represent the given problem

$$\text{Cos } 45° = \frac{\text{adj.}}{\text{hyp.}}$$

$$\frac{1}{\sqrt{2}} = \frac{AB}{20\text{ m}}$$

$$20 = \sqrt{2}AB$$

$$AB = \frac{20\text{ m}}{\sqrt{2}} = 10\sqrt{2} \text{ meters}$$

Figure 7.55

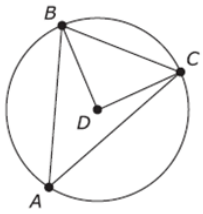
(Gebreyes & Basavaraju, 2016)

Figure 2: Sample problems in Grade 8 geometry lesson

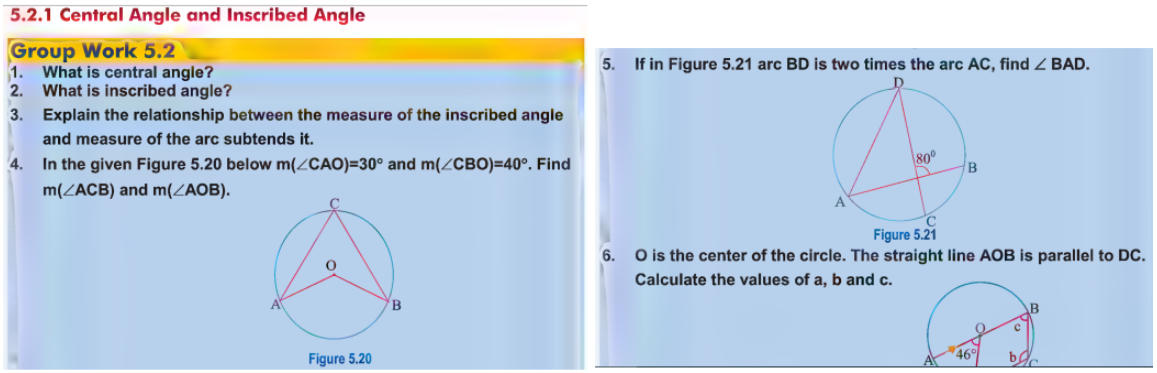
This shows that BSc in mathematics teachers have an inadequate understanding of applying simple trigonometric functions.

- **For question number three**: To what extent do BSc-graduated teachers understand and solve the following basic elementary geometry concept question?

Table 3: BSc teachers' understanding of property of inscribed triangles in a circle

Item	Male				Female				Total			
Q3	Incorr		Corr		Incorr		Corr		Incorr		Corr	
	f	%	f	%	f	%	f	%	f	%	f	%
The figure shows $\triangle ABC$ inscribed in circle D. If $m < CBD = 34$, then find $m < BAC$ 	41	95.3	2	4.6	9	90.9	1	9.09	50	94.4	3	5.6

As it can be seen from Table 3, it provides information on the degree of male and female BSc-graduated teachers of mathematics who can solve a basic elementary geometry inscribed angle in a circle question. When asked to find the inscribed angle, $m < BAC$(95.3%) of male mathematics teachers and (99.9%) of female mathematics teachers, i.e., 94.4% of the total mathematics teachers, did not correctly answer the inscribed angle $m < BAC$, where the answer is 56^0. For instance, the above concepts are found in grade 8 lessons as shown in the figure 3 below.



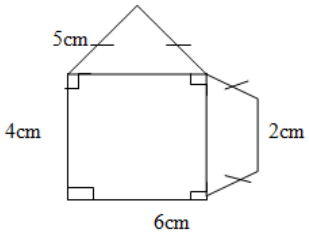
(Gebreyes & Basavaraju, 2016)

Figure 3: Additional sample problems in Grade 8 geometry lesson

This demonstrates how poorly BSc math teachers comprehend the characteristics of an inscribed angle in a circle, at its center, and on a circle.

How well instructors who have earned a BSc degree do comprehend and respond to the following elementary geometry topic question?

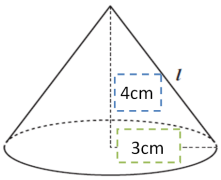
Table 4: BSc teachers' understanding of surface area of regular triangles and quadrilateral

Item Q4	Male				Female				Total			
	Incorr		Corr		Incorr		Corr		Incorr		Corr	
	f	%	f	%	f	%	f	%	f	%	f	%
Find a total area of the following figure 	43	100	0	0	10	100	0	0	53	100	0	0

As shown in Table 4, it provides information on the degree of male and female BSc-graduated mathematics teachers. When asked to find the total surface area of the figure, 100% of male mathematics teachers and 100% of female mathematics teachers, i.e., 100% of the total mathematics teachers, did not correctly answer the total surface area of the figure, where its answer is $36 + 6\sqrt{6}cm^2$. This shows that BSc in mathematics teachers have a lack of skill and understanding in finding the total surface area of a rectangle, a triangle, and a trapezoid.

- **For question number five**: What extent BSc-graduated teachers understand and solve the following basic elementary geometry concept question?

Table 5: BSc teachers' understanding of right circular cone

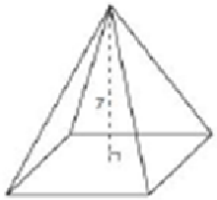
Item Q5	Male				Female				Total			
	Incorr		Corr		Incorr		Corr		Incorr		Corr	
	f	%	f	%	f	%	f	%	f	%	f	%
The altitude of a right circular cone is $4cm$.  If the radius of the base is $3cm$, then find												
Slant height	43	100	0	0	9	90.9	1	9.1	53	98.15	1	0.02
Lateral surface area	43	100	0	0	11	100	0	0	54	100	0	0
Total surface area	43	100	0	0	11	100	0	0	54	100	0	0
Volume of cone	43	100	0	0	11	100	0	0	54	100	0	0

As it can be seen from Table 5, it provides information on the degree of male and female BSc-graduated teachers of mathematics in solving the basic solid geometry of conic sections, including slant height, lateral surface area, total surface area, and volume of the cone. When asked to find the slant height of the cone, 100% of male mathematics teachers and 99% of female mathematics teachers, i.e., 98.15% of the total mathematics teachers, did not correctly answer the question where the answer is $10cm$. Lateral surface area of the given cone (100%) of male mathematics teachers and (100%)

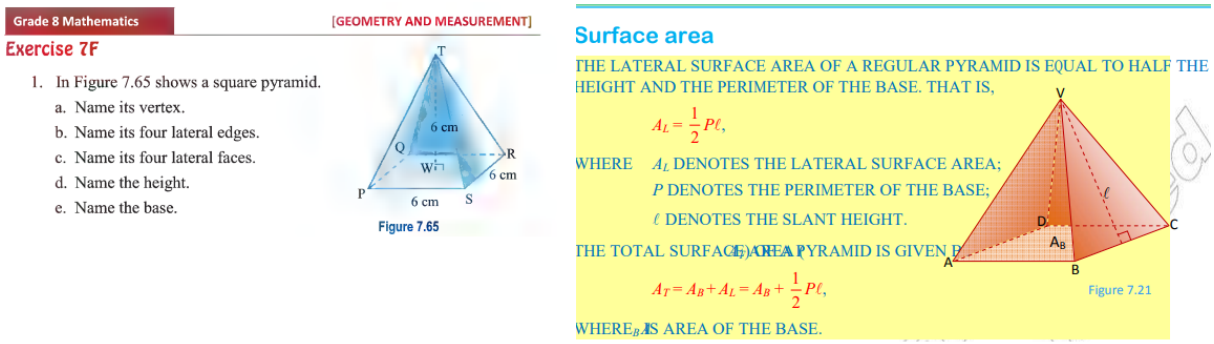
of female mathematics teachers, i.e., 100% of the total mathematics teachers, did not correctly answer the lateral surface area of the given cone where its answer is $60cm^2$, and the total surface area of the given cone (100%) of male mathematics teachers and (100%) of female mathematics teachers, i.e., 100% of the total mathematics teachers, did not correctly answer the total surface area of the given cone where its answer is $96cm^2$, This shows that BSc in mathematics teachers have a huge gap in skill and understanding of finding the basic solid geometry of a conic section's slant height, lateral surface area, total surface area, and volume cone.

- **For question number six**: To what extent do BSc-graduated teachers understand and solve the following basic elementary geometry concept question?

Table 6: BSc teachers' understanding of pyramid

Item	Male				Female				Total			
Q6	Incorr		Corr		Incorr		Corr		Incorr		Corr	
	f	%	f	%	f	%	f	%	f	%	f	%
The pyramid shown below has a square base, a length of $8\sqrt{2cm}$ with altitude of $7cm$,  then find												
Slant height	43	100	0	0	10	90.9	1	9.1	53	98.2	1	1.8
Lateral surface area	43	100	0		10	100	0	0	53	100	0	0
Total surface area	43	100	0		10	100	0	0	53	100	0	0
Volume of cone	43	100	0		10	100	0	0	53	100	0	0

As it can be seen from Table 6, it provides information on the degree of male and female BSc-graduated teachers of mathematics who can solve the basic solid geometry of a pyramid section's slant height, lateral surface area, total surface area, and volume cone. When asked to find the slant height of the pyramid, 100% of male mathematics teachers and 99% of female mathematics teachers, i.e., 98.15% of the total mathematics teachers, did not correctly answer the slant height of the pyramid where its answer is $144\sqrt{2}cm^2$. The lateral surface area of the given pyramid was correctly answered by 100% of male mathematics teachers and 100% of female mathematics teachers, i.e., 100% of the total mathematics teachers. The total surface area of the given pyramid was correctly answered by 100% of male mathematics teachers and 100% of female mathematics teachers, i.e., 100% of the total mathematics teachers did not correctly answer the total surface area of the given pyramid where its answer is 62 + $144\sqrt{2}cm^2$. But all the above concepts are found in grade eight and ten lessons, for instance.



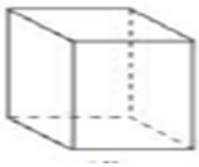
(Gebreyes & Basavaraju, 2016; Bansal, Rachel Mary, Mesay, Gizachew, & Tesfa, 2010)

Figure 4: Sample problems in Grade 8 &10 geometry lesson

This shows that BSc in mathematics teachers have a huge gap in skill and understanding of finding the basic solid geometry of a section pyramid of slant height, lateral surface area, total surface area, and volume cone.

- **For question number seven**: To what extent do BSc-graduated teachers understand and solve the following basic elementary geometry concept question?

Table 7: BSc teachers' understanding of rectangular prism

Item Q7	Male				Female				Total			
	Incorr		Corr		Incorr		Corr		Incorr		Corr	
	f	%	f	%	f	%	f	%	f	%	f	%
The rectangular prism shown below has a base, a length of $6cm$, width $8cm$ and height $10cm$, then find 												
Diagonal of rectangular prism	40	93.0	3	7.0	10	100	0	0	50	94.4	3	5.6
Total surface area of prism	41	95.3	2	4.7	10	100	0	0	51	96.3	2	3.7
Volume of prism	38	88.4	5	11.6	10	90.1	1	9.9	47	88.9	6	11.1

As it can be seen from Table 7, it provides information on the degree of male and female BSc-graduated teachers of mathematics who can solve the basic solid geometry of a diagonal of a rectangular prism, the total surface area of the prism, and the volume of the prism. When asked to find: a diagonal of a rectangular prism, 93% of male mathematics teachers and 100% of female mathematics teachers, i.e., 94.0% of the total mathematics teachers, did not correctly answer the diagonal of rectangular prism where its answer is $10sqrt2cm$; the total surface area of a given rectangular prism, 95.3% of male mathematics teachers and 100% of female mathematics teachers, i.e., 96.3% of the total mathematics teachers, did not correctly answer answered the total surface area of given rectangular prism where its answer is $416cm^2$, the volume of prism of the given rectangular prism (88.4%) of male mathematics teachers and (90.1%) of female mathematics teachers i.e. (88.9%) of the total mathematics teachers did not correctly answer the volume of prism where its answer is $480cm^2$.

This shows that BSc in mathematics teachers have a huge gap in skill and understanding of finding the basic solid geometry of a diagonal of a rectangular prism, the total surface area of the prism, and the volume of a prism.

- **For research question number two** (Does the comprehension and ability to solve simple, elementary geometry problems differ significantly between male and female BSc graduates?)

Table 8: Group Statistics

Group	Code	N	Mean	Std. Deviation	Std. Error Mean
Female	.00	11	1.5455	1.63485	.49293
Male	1.00	60	2.0500	1.85422	.23938

As Table 8 shows, the mean result on basic elementary geometry questions for BSc-graduated mathematics female teachers is 1.55 out of 15, and their standard deviation is 1.63. And the mean result on basic elementary geometry questions for BSc-graduated mathematics male teachers is 2.05 out of 15, and their standard deviation is 1.85.

Table 9: Independent Samples $t-test$

		Levene's Test for Equality of Variances		$t-test$ for Equality of Means						
									95% CI of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
FM	Equal variances assumed	.008	.931	-.843	69	.402	-.50455	.59827	-1.70	.689
	Equal variances not assumed			-.921	15.130	.372	-.50455	.54798	-2	.663

3 Discussion

The current study includes an analysis to determine the extent to which BSc-graduated mathematics teachers understand basic elementary geometry concepts. The results of this study indicate that participants had difficulty solving basic elementary geometry questions. Teachers use basic elementary geometry mathematics knowledge; students learn basic geometry concepts such as similar plane figures, similar triangles, further on the circle, angles in the circle, geometry and measurements (theorems on the right-angled triangle, introduction to trigonometry, and solids figures) in 8^{th} grade levels, and basic geometry concepts such as coordinate geometry, trigonometric function, plane geometry in 10^{th} grade levels (Gebreyes & Basavaraju, 2016). However, all BSc-graduated Mathematics teachers would undoubtedly know enough to correctly answer those basic elementary geometry questions; it is communal content knowledge that is useful not only for the work of teaching geometry.

Students' learning is influenced by teacher knowledge and teaching performance because mathematics teachers' meaningful understanding of geometry can help them develop confidence to teach their students (Iheanachor, 2007). The competency and knowledge of teachers in using and teaching mathematics are influential factors that can influence students' conceptual understanding in problem-posing (Rober, Capraro, & Capraro, 2018). It is necessary to support teachers' professional development. The findings in this study show that there is a disconnect between the qualifications of BSc-graduated mathematics teachers and the teachers' knowledge of basic elementary geometry concepts. And From table 9, the significance level is 0.372,

greater than 0.05, which indicates there is no significant difference in gender between BSc-graduated mathematics teachers on understanding and solving basic elementary geometry questions, which agrees with the null hypothesis.

4 Conclusion

In Ethiopia, all BSc mathematics graduates become high school teachers after they take an additional one-year pedagogy course. The focus of this study was on BSc-graduated mathematics teachers. In the present study, the results showed that BSc-graduated mathematics teachers do not have sufficient understanding and skills to solve basic elementary geometry questions, even what they teach in grades 8-10. If a teacher does not explain and solve different elementary basic geometric equations, it's not possible to teach the operations to pupils. The data also revealed that the majority of teachers are unfamiliar with the properties of vertically opposite angles, alternate interior and exterior angles, straight angles, the sum of triangle angles, the area of a triangle, the area of a rectangle, the perimeter of a triangle and a rectangle, the volume of a cylinder, the volume of a prism, and the height of a pyramid, as well as the slant high, diagonal, and altitude of solid geometry.

5 Recommendation

The study revealed that BSc-trained math teachers lack the knowledge and abilities needed to answer simple questions in elementary geometry.

Through professional development programs, teachers should increase their knowledge. Therefore, it is crucial that the MOE and the stakeholders intensify their efforts to encourage conscription.

Universities must act, like a workshop, to fill the vacuum in mathematical education. Further research is required to determine how well-versed in fundamental mathematical ideas BSc-educated mathematics teachers are.

Conflict of Interest

The authors is affiliated with Dilla University as teaching and research staff. He declared that has thoroughly read and approved the manuscript to be published in this journal.

Ethical Approval

Consent was sought form the research participants. Confidentiality was maintained in reporting information.

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Assessing Factors Hindering Females' Participation and the Practice of Teacher's Strategies in EFL Classrooms: The Case of Grade 11 Students in Gedieo Zone

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Abstract

The purpose of this study was to assess factors hindering Grade 11 female students' participation and teachers' strategies in EFL classrooms. To achieve the objective, the researchers used a descriptive survey design and employed both qualitative and quantitative methods. There are around 46 grade 11 sections in the selected weredas, so the researchers selected 18 sections using a lottery system. Each section has an average of 42 students. Among these, 40% are females, and the researchers selected 176 female students using purposive sampling for this study. The researchers employed three data-gathering tools. These are semi-structured interviews, classroom observations, and questionnaires. The major findings indicated that female students did not freely participate like male students do in the EFL classroom unless they were called by their teacher; most female students were passive listeners. They didn't even ask questions for the briefing when the lesson wasn't clear to them. EFL teachers' teaching strategy did not invite female students to participate in the classroom discussion. According to the findings, EFL teachers should give male and female students equal opportunity in classroom discussions. They also need to create a conducive environment and gender-sensitive group formation since it builds female students' self-confidence.

1 Introduction

Classroom participation is an essential part of language learning, and students must engage in classroom activities in order to learn the foreign language effectively. According to communicative language teaching and task-based language teaching assumptions, students should be included in and engaged in teaching and learning activities to improve their language competence (Larsen-Freeman, 2000; Richards & Rodgers, 2001). Classroom participation in English as a Foreign Language (EFL) classes develops students' communication skills in particular and is a crucial factor in fostering positive learning outcomes in general. Crone (1997) noted that if you engage students to participate in an active learning environment, they have the opportunity to become critical thinkers and, in turn, will be less passive. Classroom participation in EFL classes allows students to build on their knowledge, demonstrate what they have understood in the lesson, and develop confidence. It also lets students think critically and engage in dialogue with their colleagues (Garside, 1996). Classroom participation is critical for students' academic advancement as well as preparing them for future careers by building their confidence and ability to speak in front of others.

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Mack, L. (2012) stated that "classroom participation evokes feelings of power and powerlessness." Students who don't participate tend to feel excluded and are ignored by their peers. EFL teachers' teaching strategy and students' motivation are key factors for ensuring equitable classroom participation. According to Fawzia A. (2002), pedagogical factors like EFL teachers' teaching strategies, the topic of the lesson, and teaching style could influence female students' classroom participation. Students who are motivated to participate in the classroom become more critical thinkers, and their classroom participation enhances their engagement in greater thinking abilities.

Active classroom participation contributes a lot to the success of education and students' personal development in the future. Tatar S. (2005) Classroom participation is a fundamental interactional and pedagogical task through which students display their involvement in EFL lessons. In line with this idea, Liu (2005) stated that students who actively participate tend to have better academic performance compared to students who do not participate. Furthermore, it is a common belief that participation in verbal interaction offers EFL learners the opportunity to follow up on new words and structures to which they have been exposed during language lessons and to practice them in context.

In this case, providing opportunities for female students to participate in classroom interaction or discussion is really needed to foster their English language competence and improve their communication comprehension. It is believed that students who are actively engaged in EFL classroom participation can develop their critical thinking and achieve high academic performance. Despite such importance, the majority of female students in secondary schools are less active participants in classroom discussion than their male counterparts (Yenenesh T., 2013).

Thus, the current research seeks to search out the factors that exert a crucial influence on female students' participation in EFL classrooms in four selected secondary schools in the Gedieo zone.

2 Statement of the Problem

The relationship between participation and language learning, which seems to be associated with each other in several aspects, has been investigated in various studies (Mondada & Pekarek-Doehler, 2004). However, using the target language in EFL class is a struggle for many students in general and female students in particular. From the researcher's teaching experience, most female students are not willing to volunteer to participate in EFL classroom discussion, are not asking for help using the target language, and are not willing to speak up in small-group activities. This problem impedes their English language performance.

According to Gan (2012), female students who learn English as a foreign or second language are usually passive and hesitant to participate in a classroom discussion, and Le Thi Mai (2011) claims that most female students are shy to speak in English because they are afraid of losing face in front of their classmates. In line with this, Aemiro Tenaw (2018) revealed in his study that most female students lack competence in the medium of instruction, which is English. In fact, this problem is true for all students, but most female students lack the confidence to use the language in classroom discussions due to different reasons. Their shyness influences their participation in language learning, and this situation can be considered a major problem faced by many female students in secondary schools. The present researchers observed this problem in detail when they were HDP candidates and assigned to secondary schools for teaching in the Geo Zone. To help such shy students, EFL teachers need to provide a supportive and encouraging climate that helps female students feel more comfortable, more confident, and less fearful of participating in the class discussion. Therefore, engaging female students in classroom participation is one of the strategies that can potentially change their participation, help them become more participative in the EFL classroom, and provide quality education.

According to Yenenesh T. (2013), more than half of the Ethiopian population is female. Therefore, giving equal opportunity for female and male students to participate in classroom discussion is very important. EFL teachers need to create a conducive

environment and gender-sensitive group formation since it builds female students' confidence and makes them responsible for their learning.

There have been various studies conducted on the academic achievement of female students at the university level, and some of them were at the secondary school level. For example, Yenenesh T. (2013) conducted research in Harar Senior Secondary School and discovered that psychological factors (including student motivation and level of aspiration, as well as personal factors) affect female students' academic achievement. Gashahun Wami (2019) conducted research in Woliso Secondary School on problems affecting female students' academic performance and discovered low-income parents, a lack of adequate female role models, and a lack of adequate female role models. However, the study conducted by these researchers focused on the academic performance and achievement of female students. Unlike the above studies, the present study focuses on female students' participation and teachers' strategies in EFL classrooms. As far as the knowledge of the researchers is concerned, no study was conducted on female students' participation and teachers' strategies in EFL classrooms in Gedeo Zone secondary schools. Hence, this study will contribute to filling the existing research gap.

3 Objectives of the Study

This research is designed to assess factors hindering females' participation and teachers' strategies in EFL classrooms, in the case of grade 11 students in the Gedieo zone. Specifically:

- to identify the causes that hinder female students' participation in EFL classes
- to assess whether EFL teachers' strategies affect female students' classroom participation
- to suggest possible solutions to alleviate the problems identified

4 Materials and Methods

4.1 Research Design

The objective of this study was to assess factors that affect female students' participation and strategies used by teachers in EFL classrooms in secondary schools. The researchers used a descriptive survey design and employed both qualitative and quantitative methods. The qualitative research method primarily addressed data gathered through interviews and observations. Whereas the quantitative research method treated the data obtained through the questionnaires administered to female students.

4.2 The Research Setting

The study was conducted in four government secondary schools in urban areas of Ethiopia's Gedeo Zone, SNNPRS. The subjects of this research were grade 11 English teachers and grade 11 female students from the four secondary schools. Two English classes in each school were selected randomly in each high school for classroom lesson-observation purposes.

4.3 The Population and Sample of the Study

The target population for this study was secondary school English teachers and grade 11 students. The researchers attempted to survey four weredas in Gedeo zone, including Bule, Yirgachefe, Wonago, and Dilla secondary schools. The researchers selected one secondary school from each area using simple random sampling. There were around 46 grade 11 sections in the selected weredas, so the researchers selected 18 sections using a lottery system. Each section had an average of 42 students. Among these, 40% were females, and the researchers selected 176 female students using purposive sampling for this study. Besides the semi-structured interview and the observation, the researchers selected 8 EFL teachers using a simple random sampling technique.

4.4 Data Gathering Tools

The researchers employed three data-gathering tools. These were semi-structured interviews, classroom observations, and questionnaires.

4.5 Data Analysis

Data from the interviews was transcribed, and the observation data was coded and analyzed using the qualitative method. The data gathered from

the questionnaire, on the other hand, was analyzed using frequency and percentage.

5 Considerations for Ethical Issues

The process of conducting the study must be ethically sound, as it is based on the participants' free will and motivation. Every effort was made to keep the status of all participants and institutions and the participants' beliefs, opinions, and values unharmed. During data collection, the autonomy and equity of the participants were well ensured. To that end, the researchers first stated the purpose of the study. The researchers attempted to pay the utmost attention to maintaining the privacy, anonymity, and confidentiality of the responses. Being aware of cultural sensitivity, the research team tried to confirm the intended readership. For classroom observation and conducting interviews, prior permissions were obtained from school directors, head teachers, and the classroom teachers.

6 Results and Discussion

6.1 Questionnaire Result on female students' participation

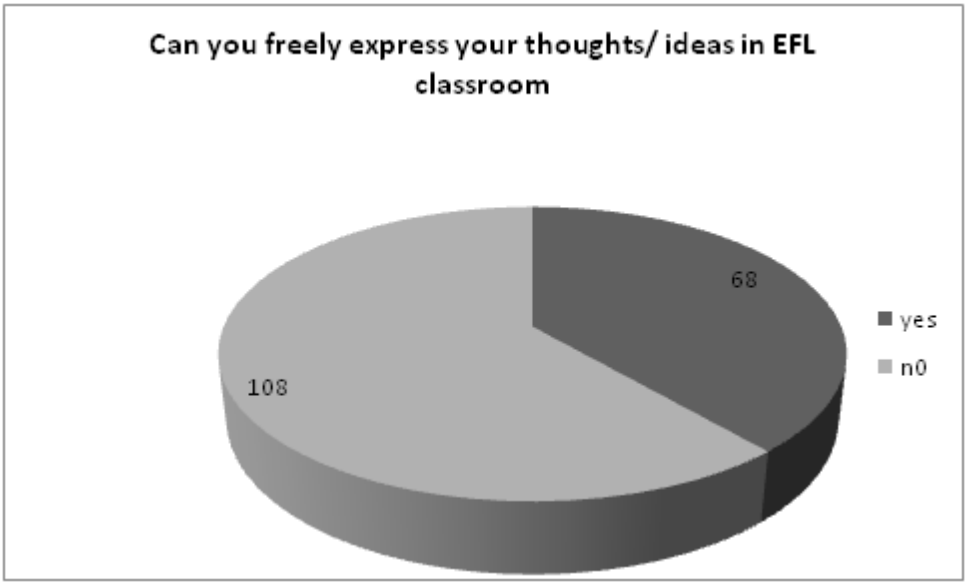

Figure 1: Students' response whether they freely express their thoughts/ ideas in EFL classes

The result of the data indicates that majority of female students did not express their idea freely in the English language classroom.

The data in figure 2 has shown that most female students feel afraid to ask for clarification when the lesson is not clear to them. Fassinger (1995) and Gomez *et al*. (1995) asserted that female students' fear of failing to demonstrate their intelligence in the classroom, low levels of self-confidence and feelings of confusion will cause them to become passive, and thus less engaged in classroom discussions.

The data in figure 3 shows that there is gender-specific bias in different ways in the EFL classroom. Gender bias is often present in classrooms, but sometimes teachers may not even detect it (Lundeberg, 1997). Most teachers call on male students more frequently than female students. This decreases the participation of female students in classroom discussions (Higgins, 2010).

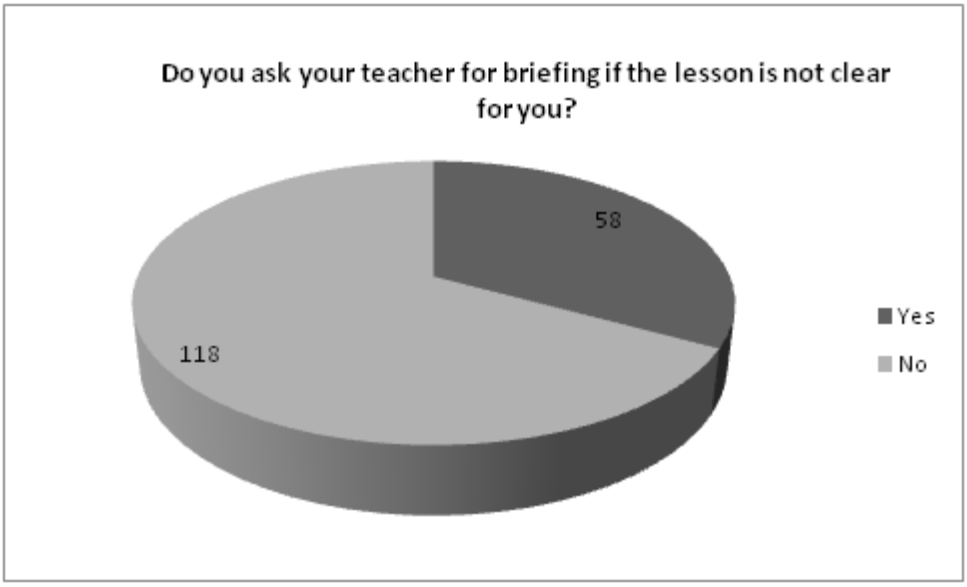

Figure 2: Students' response on whether they ask for briefing when the lesson is not clear for them

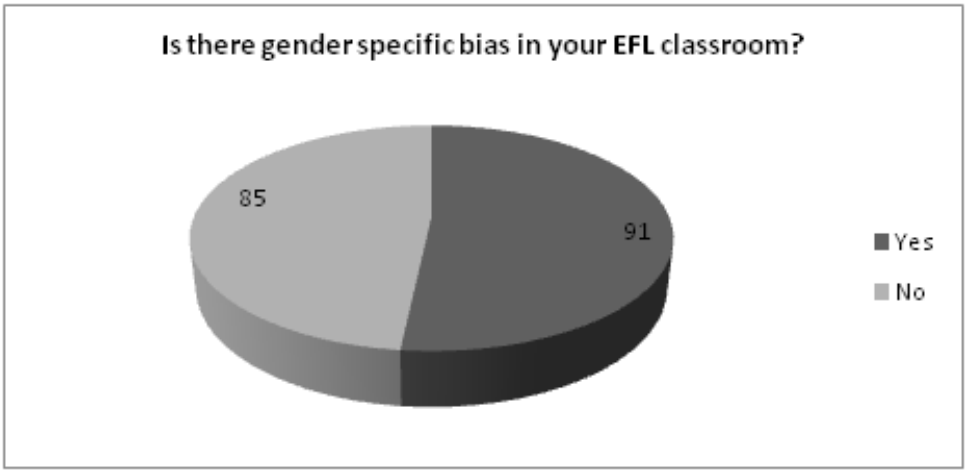

Figure 3: Whether there is gender specific bias in EFL classroom

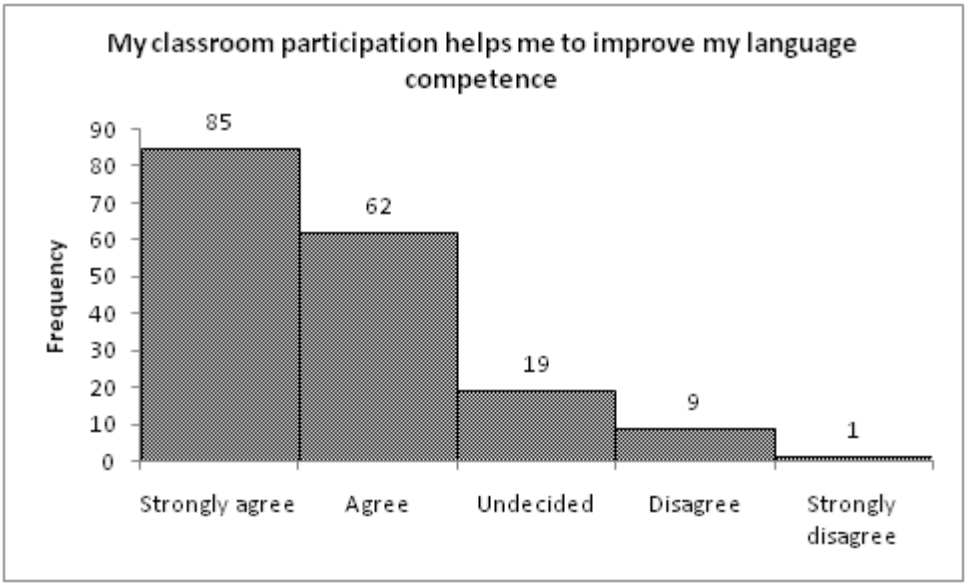

Figure 4: The advantage of Classroom participation in EFL class

Figure 4 indicates that a great number of the respondents believe that their classroom participation will help them to improve their language competence. Concerning this, Ewens (2000) suggested that classroom participation promotes a higher level of reflective thinking and problem solving, including application, analysis, synthesis, and evaluation, and that information learned through discussion is generally retained better than information learned through lecture.

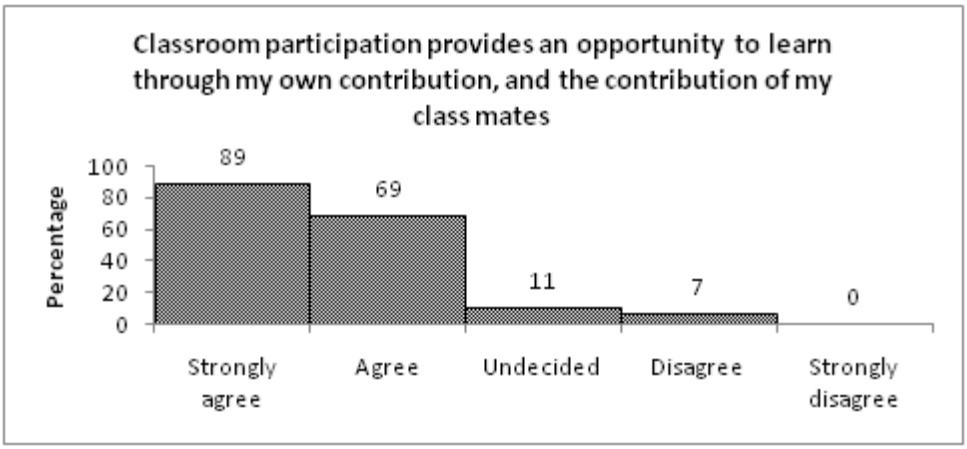

Figure 5: Students response on how they learn from their own classmate participation

Figure 5 indicates that most female students strongly believe that their classroom participation will help them to learn from their own contributions and the contributions of their classmates. Mustafa *et al*. (2010) claim that students who actively participate in the classroom are expected to get better results. Thus, poor participation may affect female students' academic achievement.

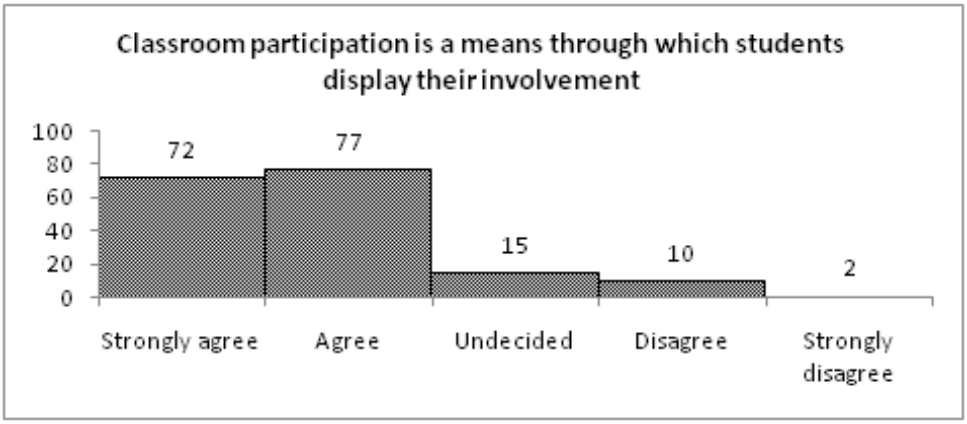

Figure 6: Female students' involvement in Classroom participation

The majority of female students, as shown in figure 6, concurred that participating in class activities demonstrates their interest in EFL lessons.

Figure 7 shows that many female students felt that their experiences with various forms of gender bias at school have an impact on how they participate in class. Today's kids face significant gender discrimination in the classroom, and numerous studies have demonstrated that professors treat male and female pupils differently (Aina & Cameron, 2011; Garrahy, 2001; Higgins, 2010; Tindall & Hamil, 2004).

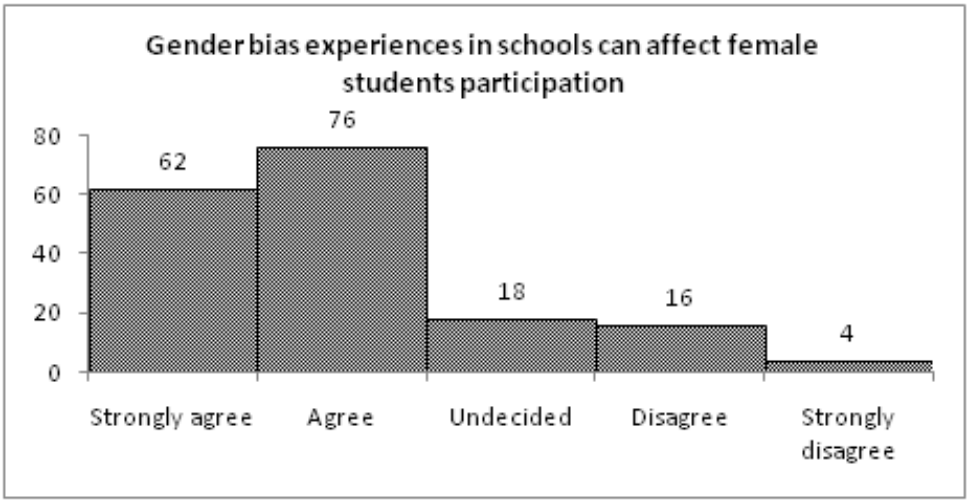

Figure 7: Gender bias experiences in the school

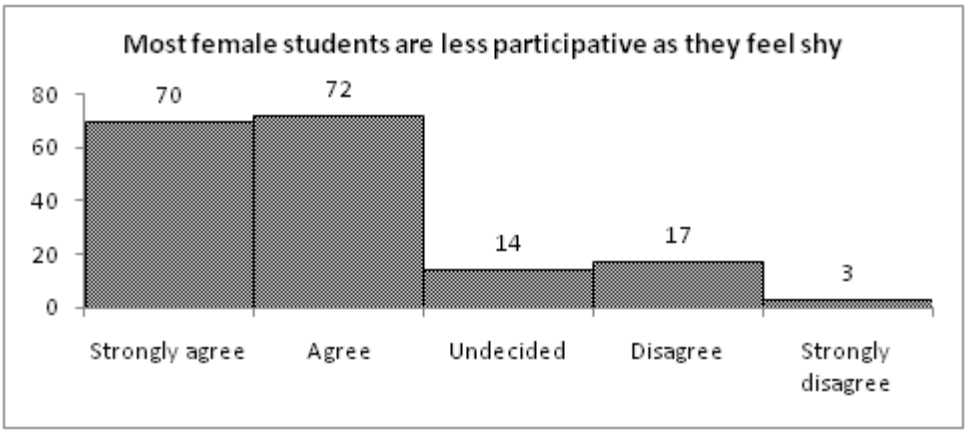

Figure 8: Shyness makes students less participative in EFL classes

Figure 8 indicates that shyness is one of the factors that make female students less participative in the EFL classroom. According to Fassinger (1995) and Howard *et al*. (2002), most female students are less participative simply because they are afraid of other students, their teacher, or they are embarrassed to stand in front of their colleagues.

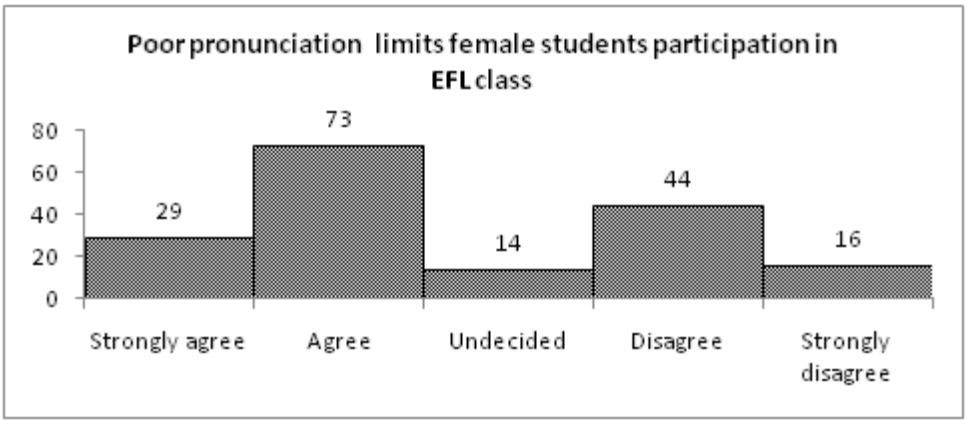

Figure 9: Poor pronunciation of words limits female students' classroom Participation

Figure 9 has shown that inaccurate or poor pronunciation of words is one of the factors that limits female students' classroom participation in EFL class. Performance anxiety and mispronunciation of words make female students feel embarrassed and make them less active participants in EFL classes.

6.2 Result of the Questionnaire on EFL teacher's strategies

Table 1: Teachers teaching strategies in EFL classroom

Key: (SA= Strongly Agree, A= Agree, U= Undecided, D= Disagree, SD= Strongly Disagree, N = number, F= frequency)

No.	Items	Frequency and Percentage						
		F/N	SA	A	U	D	SD	TOTAL
1	Teacher's poor teaching strategies affect female students'	N	49	54	22	39	12	176
	classroom participation.	%	28	31	13	22	7	100%
2	Girls are more likely to sit quietly unless they are called	N	63	86	9	11	7	176
	on by their teacher to respond questions.	%	36	49	5	6	4	100%
3	EFL teachers only choose volunteers to answer questions;	N	70	60	11	23	12	176
	they did not give females the opportunity to participate.	%	40	34	6	13	7	100%
4	Our English teacher creates conducive environment to help	N	26	40	9	80	21	176
	female students to participate freely in the classroom.	%	15	23	5	45	12	100%
5	Our English teacher encourages me to participate in	N	38	45	6	73	14	176
	classroom discussion.	%	22	26	3	41	8	100%
6	Our English teacher makes the lesson fun and interesting	N	11	23	7	97	38	176
	to enhance our classroom participation.	%	6	13	4	55	22	100%
7	Our English teacher gives credit for our participation,	N	13	19	1	91	52	176
	so I motivated to participate.	%	7	11	1	52	30	100%

The data in the above table indicates how EFL teachers' teaching strategies affect female students' classroom participation.

In item one, 54 (31% of the respondents) agreed that EFL teachers' poor teaching strategies affect their classroom participation. Similarly, 49 (28%) of the respondents strongly agreed that EFL teachers' poor teaching strategies affect their classroom participation. From this data, we can see how teachers' strategies affect female students' classroom participation.

Concerning item two, 63 (36% of the respondents) strongly agreed and 86 (49% of the respondents) agreed that girls are more likely to sit quietly unless they are called on by their teacher to respond to questions. On the other hand, 7 (4% of the respondents) strongly disagree, and 11 (6%) of them disagree that girls are more likely to sit quietly unless they are called on by their teacher to respond to questions in an EFL classroom. From this data, we can see that a great number of female students sit quietly unless they are pushed by their EFL teacher to participate in the classroom.

According to item three, 70 (40%) of the respondents strongly agree and 60 (34%) of them agreed that their EFL teacher only choose volunteers to answer questions; they did not give females the opportunity to participate. Whereas 12 (7%) of the respondents strongly disagree and 23 (13%) of them disagreed that their EFL teacher only choose volunteers to answer questions; they did not give females the opportunity to participate. From this data we can say that EFL teachers did not give equal opportunity for female students to express their ideas on the lessons.

In item four, 26 (15%) of the respondents strongly

agree, and 40 (23%) of them agree that their English teacher creates a conducive environment to help female students participate freely in the classroom. Contrastingly, 21 (12%) of the respondents strongly disagreed, and 80 (45%) of the respondents disagreed that their English teacher creates a conducive environment to help female students participate freely in the classroom. However, nine (5%) of those polled selected the option "undecided."From the data, we can see that a great number of respondents said that their EFL teacher did not create conducive environments that helped their female students participate freely in the EFL classroom.

Item five shows that 38 (22% of the respondents) strongly agreed and 45 (26% of them) agreed. 73 (41% of them) disagreed, and 14 (8%) strongly disagreed, that their English teacher encourages them to participate in classroom discussions. On the other hand, 6 (or 3% of them) said they were undecided. From this data, we can see that almost half of the respondents disclosed that their EFL teacher didn't encourage them in the classroom discussion.

When we come to item six, 11 (6%) of the respondents strongly agreed and 23 (13%) agreed. On the contrary, 97 (55%) of the respondents disagreed, and 38 (22%) of them strongly disagreed that their English teacher makes the lesson fun and interesting to enhance their classroom participation. Whereas, seven (4%) of the respondents responded that their English teacher makes the lesson fun and interesting to enhance their classroom participation. From this data, we can say that EFL teachers didn't make the lesson fun and interesting enough to increase the students' classroom participation.

According to item 7, 13 (7%) of the respondents strongly agreed, and 19 (11%) of them agreed. In contrast, 91 (52%) of respondents disagreed, and 52 (30%) strongly disagreed that their English teacher rewards their participation, so they were motivated to participate. From this data, we can say that English teachers at this grade level didn't give credit for their students' participation, so their students were not motivated to participate in the classroom discussion.

6.3 Interview Data Analysis

The researchers selected eight EFL teachers to be participants in the semi-structured interview. After analyzing the data gathered from the interview, the researchers divided according to the following themes:

- **Female students participate as well as male students in the classroom discussion**

  Almost all eight EFL teachers that were selected for the interview confirmed that female students didn't participate as well as male students in the classroom discussion.

- **Female students' interest in participating in classroom discussion**

  The majority of the respondents said that female students are not interested in participating in the classroom discussion in an EFL classroom. Three respondents stated that few female students are interested in classroom discussions and participate in them.

- **Classroom participation and academic achievement of female students in an EFL class**

  Almost all of the respondents confirmed that the majority of their female students have less academic achievement in the English language compared with their male classmates. The respondents added that students who actively participated in EFL classrooms had good academic achievement. They believe that female students' poor academic performance is due to their lack of participation in EFL classes.

- **Teaching strategies affect the extent of female students' participation**

  The majority of the respondents asserted that EFL teachers' teaching strategies directly affect female students' classroom participation.

- **Factors that affect female students' participation in EFL classes**

  All eight respondents assured me in one word that fear is one of the major factors that affect female students' classroom participation. The respondents further explained that, in

addition to fear, there are some other factors that affect female students' classroom participation. These are lack of confidence, lack of self-esteem among female students, shyness, cultural influence, and family background. Fassinger (1995) stated that advanced classroom preparation as well as a student's level of confidence would determine their willingness to participate within the classroom.

- **Possible solutions to alleviate these influences**

  The majority of the respondents responded that encouraging female students to participate in the classroom, giving them advice, and telling them the advantages of classroom participation in language learning can be a solution to increasing female students' participation.

6.4 Analysis of the Observation

The data from the observed classes showed that EFL teachers obviously do not provide equal opportunities for male and female students to participate in the classroom discussion. They didn't give just a little chance for female students to participate in classroom discussion. The classrooms observed are totally teacher-dominated, and in most classrooms there were gender-biased situations. As stated by Aina and Cameron (2011), gender bias experiences that students encounter in schools can affect their participation in classroom activities.

Besides, the teachers didn't use various teaching methods or strategies to motivate and encourage female students to practice the target language. They gave oral and written activities to the students and then asked only two or three volunteer students who raised their hands to respond. The rest of the class, especially the female students, sat idly and became passive listeners.

The classroom led by a female EFL teacher, on the other hand, indicated that the teacher's role in engaging female students in classroom discussion is relatively better. In this classroom, female students' classroom participation is relatively better than that of classes led by male EFL teachers. However, it was observed that some female students did not volunteer to participate even if they were called by their EFL teacher. They are concerned about communication. According to Fassinger (1995; Howard *et al*., 2002), communication apprehension makes most female students less participative.

7 Conclusion

- The following conclusions were reached based on the main revelations from the questionnaire, interview, and classroom observation.
- Unless their teacher called them, female students did not participate as freely as male students do in the EFL classroom. There weren't many female students who voluntarily attended EFL classes.
- Most female students lack the motivation and reluctance to participate in class discussions in EFL.
- Most female students feel intimidated to participate in class discussions. They simply sit still and pay attention to their teacher. When the lesson is not clear to them, they don't even ask questions for the briefing. There is gender specific bias in most EFL classes through calling only male students for classroom participation and by giving less attention for female students participation.
- The EFL teacher's teaching method excluded female pupils from the conversation in class. The majority of the classes were taught by the teacher. Since most female students have lower levels of academic success and English language proficiency than male students, they didn't give them the opportunity to participate in the teaching and learning process.

8 Recommendations

EFL teachers are expected to help or motivate female students to become active participants and high achievers in their education because the female population in our country (Ethiopia) is greater than or equal to half of the total population. They can increase female student participation by employing various strategies, such as making the lesson fun

and interesting. Therefore, EFL teachers should design the lesson according to the interests of their female students. EFL teachers should also use positive nonverbal behaviors such as smiling and nodding to acknowledge female students' answers. This can encourage shy and fearful students to participate and share what they feel in the classroom discussion.

Instead of calling only students who raised their hands, EFL teachers should give equal time to male and female students in class discussions. They also need to create a conducive environment and gender-sensitive group formation since it builds female students' confidence and makes them responsible for their learning.

To increase female students' classroom participation, EFL teachers should avoid teacher-dominated classroom situations and instead use a communicative teaching and learning approach. Teachers need to give their students more time to use the language in different ways. Students can easily develop their language competence when they get the chance to use it. Besides, giving credit for students' classroom participation can also increase the number of female participants in the classroom discussion.

Conflict of Interest

The authors of this article confirmed that they have thoroughly read and approved the manuscript to be published in this journal.

Ethical Approval

Consent was sought form the research participants. Confidentiality was maintained in reporting information.

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Cooperative Training as a Means of Implementing Dual Training Model for Sustainable Employment Opportunity in SNNPR, Gedeo Zone

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Abstract

Cooperative training in vocational education is a dual training system developed in collaboration between businesses and TVET institutions. It aimed to provide trainees with employable skills by spending the majority of their courses in practical sessions. The main objective of the study is to explore the role of cooperative training in tracking unemployment in TVET colleges. To achieve this goal, three major research questions were formulated. These are the current cooperative training statuses. How does cooperative training help to reduce unemployment? What factors are influencing cooperative training? To answer these research questions, 385 research participants were involved for both quantitative and qualitative data. Multistage sampling was employed. An embedded mixed research design was used. Both descriptive (frequency, percentage, and mean) and inferential (ANOVA and regression) statistics were implemented to analyze the data. A survey questionnaire, an interview guide, and document analysis were employed as data collection tools. The study identified that, despite its weaknesses, the current status of cooperative training is promising. It is significantly contributing to tracking youth unemployment. However, it is distressed due to a lack of adequate demand assessment, weak collaboration in partnerships, and an inadequate amount of industry and enterprise. It is recommended that TVET colleges plan workshops and trainer training to equip them with the skills needed to conduct demand assessments in collaboration with nearby universities. Likewise, a strong partnership should be maintained with the government and non-government sectors of the zone and regional states to eliminate challenges.

1 Introduction

Background of the Study

The study conducted on the role of cooperative training in tracking youth unemployment at technical and vocational education and training colleges in southern Ethiopia found the current cooperative training program is promising in reducing youth unemployment, though there was a lack of adequate demand assessment, weak collaboration in partnership, and an inadequate amount of industry and enterprise. The mixed-method study was done in SNNPR and Geo Zone on a total of 385 participants, including TVET leaders, trainers, trainees, and enterprise office experts, by distributing questionnaires and conducting interviews. A pilot study was done before the main research to check for its reliability.

As a background, the article magnified the importance of vocational education to eradicate poverty by creating employment opportunities. In support of this, Shavit Shavit and Müller (1998), Müller and Gangl (2003), and Breen (2005) wrote that vocational education and training are advantageous for the labor market, and individuals with a vocational

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background get jobs faster (Wolbers, 2007; Wolter & Ryan 2011) and hence have a lower chance of being unemployed upon their graduation (Ryan, 2001). The study related the theme to theoretical backgrounds on the concept of dual training systems by describing the UK liberal market model, the French state-regulated bureaucratic model, and the German dual system model. It insisted on the importance of dual training in creating permanent employability opportunities for VE graduates. The study further developed a conceptual framework that was effected by the interaction between the training institutions, both public and private, and the industry at large.

The research touched on the main problems associated with cooperative training, such as the insufficient availability of industries and enterprises, a lack of coordination among the stakeholders, and institutional and workplace problems. Keramati, M.R. and Gillies, R.M. (2021) also identified lack of familiarity with cooperative learning and its implementation, issues associated with assessment, and time constraints as challenges in implementing cooperative learning programs. Furthermore, it has discussed the importance of cooperative training as a means of implementing a dual training model to curb youth unemployment.

Technical and vocational education and training (TVET) is concerned with the acquisition of knowledge and skills for the world of work. In the past, various terms have been used to describe elements of the field that are now conceived as comprising TVET. It is a system that aims at providing recipients with the necessary knowledge and skills to exercise a profession and be integrated with the labor market (Irina, 2010). By combining the two as Technical and Vocational Education, UNESCO and the ILO (2001) ensured all forms and aspects of technical and vocational education.

Vocational education and training are in all likelihood as old as humanity (Maclean & Wilson, 2009). Currently, UNESCO estimates that 80% of occupations are based on the application of technical and vocational skills to the world of work (UNESCO, 2006). In the 1960s and 1970s, international development agencies, particularly the World Bank, played a significant role in popularizing the TVET system in various African countries (Girma, 2009).

As well, the role of TVET is instrumental in creating wealth and emerging out of poverty by producing a skilled and entrepreneurial, or employable, workforce. Technical and vocational education and training in Ethiopia followed the school-based model of training beginning with the establishment of the system. The beginning of TVET in the formal educational scheme dates back to 1920, when mission schools in Addis Ababa, Harar, and Dredawa were teaching technical and vocational courses like embroidery, different handicrafts, and home science training to females while the males received agricultural training. Then, in 1942, TVET as a formal education was established in AA under the name Ecole Nationale des Arts Techniques, later renamed Addis Ababa Technical School (Girma, 2006).

But an autonomous strategy was developed in 2008. Paramount, the major objectives of TVET are to create and further develop a comprehensive, integrated, outcome-based, and decentralized TVET system, making them centers for technology capability, accumulation, and transfer (MOE, 2008). Its expansion is accelerating at the moment. In 2017, there were 582 TVET institutions in the country under both government and non-government ownership. These institutions have a total of 24,179 trainers, of whom 22 percent are female. It enrolls 304,139 trainees or students in a year (MOE, 2017). In SNNPR alone in 2017, there were 91 TVET colleges run by the government and non-government organizations with a total of 3093 trainers and 74,486 trainees (SNNPR TVETB, 2018). In Gedeo Zone alone, there are 4 TVET colleges and institutions that have been providing cooperative training.

1.1 Statement of the Problem

Today, many African countries consider that the infrastructure and equipment of TVET institutions are, for the most part, obsolete, inadequate, and unable to adapt to private sector expectations and technological change (Atchoarena, 2002).

The major challenges facing the TVET system nowadays have been acknowledged in ESDP-IV (MoE, 2011). The major challenges are that the im-

plementing bodies themselves have low awareness about the benefits of TVET, stakeholders' participation in the management and delivery of TVET is inadequate, and both the experts and trainers of the TVET system lack capacity and competence to implement the TVET strategy (MOE, 2011). Current standards for cooperative training stipulate that 70% of formal TVET courses are delivered in industries. This target is not, however, widely met, although precise information is unavailable (MOE, 2015).

Currently, unemployment is a serious problem in Ethiopia. The measurement of unemployment is based on the three criteria that must be satisfied simultaneously: "without "currently available for work," and "seeking work" (ILO, 1983, as cited in FDRE CSA, 2016).

Urban unemployment data are available for continuous survey periods. Accordingly, in 2016, about 8,938,749, which is 16.9 percent of urban people, were unemployed in Ethiopia. The survey result reveals that the unemployment rate at the national urban level was 16.9 percent. The corresponding rates for males and females were 9.4% and 24.7%, respectively. The unemployment rate in the regions shows that the highest rate was recorded in Dire Dawa Administration (23.9%), followed by Addis Ababa at 21.0 percent, and the lowest rate was found in Gambella (8.2%) and Harari Region (10.4%). Also, unemployment in SNNPR indicates 11.5% for males and 18.2% for females, which shows a similar scenario. This indicates there is a serious problem of unemployment that needs further study to come up with constructive recommendations.

There are certain studies conducted by Matwos (2013), Desalegn (2014), and Birhane(2014) which stress on challenges and opportunities of cooperative training in the case of Oromia and SNNPR. But, there is meager attention given to publishing the paper on the role of cooperative training in reducing unemployment. The role of cooperative training as a means to mitigate unemployment is less researched and publication is meager. But, also these studies have time gaps and in no way offer up to the dated image of TVET cooperative training in the SNNPR; predominantly in the Zone under consideration-that is, Gedeo Zone. Thus, the current study will attempt to address time and setting gaps.

Therefore, there is a need to conduct a study on cooperative training as a means of implementing a dual training model for a sustainable employment opportunity in SNNPR, Geo Zone. The research has revealed that technical and vocational education and training have been playing a significant role in providing human resources and enhancing the structure of economic development in developing countries (Ramadan & Xiaohui, 2019). It concentrates on a restricted range of training programs and forces the TVET system to be inefficient and irresponsive to labor market needs. Likewise, the absence of an autonomously structured institution that manages the collection of data on assessing the training need and the sustainability of quality cooperative training makes it unreliable (Birhane, 2014). According to the study of Geda (2021), among others, scarcity of training equipment, mismatch of training material with occupational standards, and loose consideration given for TVET are topical constraints in Ethiopia. Furthermore, unemployment, job creation, and skills development incapability are becoming major challenges in Africa due to the lack of attention paid to TVET training (Inyiagu, 2014). Accordingly, this study was conducted to identify the current status of cooperative training in TVET, the role of cooperative training in reducing unemployment, and to detect factors affecting its effectiveness.

Theory

Among three distinct European TVET models, namely the UK liberal market model, the French state-regulated bureaucratic model, and the German dual system model, cooperative training as well as the German dual system model have been highly encouraged as a type of TVET in enabling the economic development of countries (Fawcett, Sawi, & Allison, 2014).

According to Fawcett *et al.* (2014), cooperative training or the dual-system model of German establishes effective practical learning through apprenticeships, on-the-job training, and internships. Hence, the model is effective in making sufficient numbers of apprenticeship and internship place-

ments for the trainee.

Germany's dual training system, as well as the TVET cooperative training approach, are well defined and have evolved over time in Germany and other countries such as Austria and Switzerland (Pilz & Wieman, 2021).This model was designed primarily to address both the skills shortage and the unemployment problem that many countries face.

The literature suggests important points for the effective implementation of the dual model. The European Commission (2019) states that the dual vocational training system is grounded on training occupations. It refers to training courses that are nationwide and planned in training regulations; they mainly aid in the objective of providing the trainee with vocational requirements. The fundamental objective is to offer them chances for long-lasting employment. Also, the training is to deliver entrepreneurial business skills with qualified skilled labor for an extended period of time. The training is usually undertaken within two conjoining learning sites: the company or enterprise and the TVET institution.

Industry-based training—"the training at the workplace"—has to be a major part of the trainee's training time at the vocational college or institution. That is why in Ethiopia's dual training modality, 70% of training activities are expected to be performed at the workplace or on the company site. Therefore, effective implementation of the dual system implies strong involvement between the enterprise, the government, and the collective partners, including the private and public sectors.

Some findings substantiate that dual-model vocational training has a significant contribution to tracking unemployment. Among these, Saleh (2017) reveals that vocationally trained graduates were more likely to be employed than those with amateur or no vocational training. Even adult workers with vocational training have a higher chance of being employed full-time than other adult workers who do not have the same training. Similarly, research conducted in China's poorest province, Gansu, identified the pleasing contribution of Germany's dual training model (Postiglionea *et al*.Tang, 2019).

They illustrate Dual models. The German TVET model highly contributes to addressing six determinant difficulties: graduate employment, the success-related problem of enterprises, internship place constraints, teacher upgrading, quality standards, and poverty mitigation. Provision of an incentive mechanism for enterprises, long-sustaining employment stability, professional career development of trainers, and a well-equipped information system for institutions, selecting systematically, and placing interns are prominent best practices gained from the area in implementing this model.

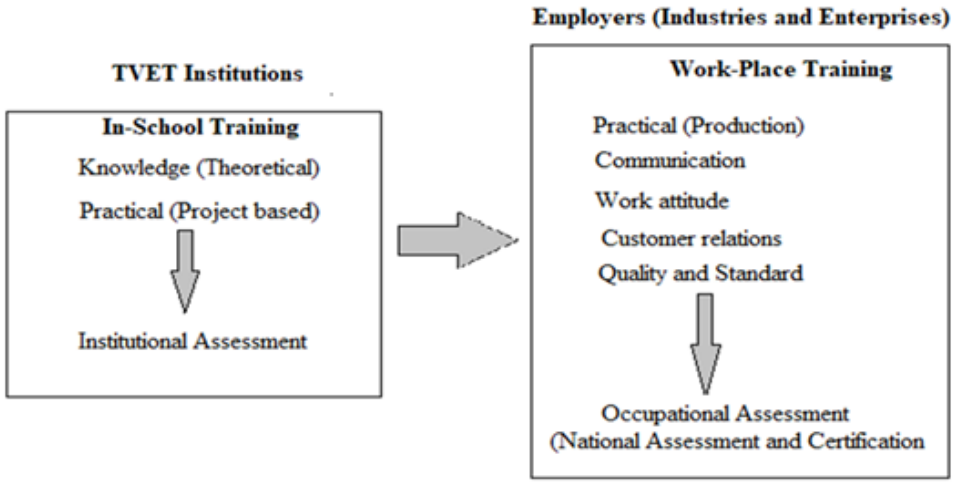

Figure 1: Conceptual framework of Ethiopian Dual Training System

Moreover, Paryono (2017) identified that the German dual-system model meets the labor market demand by contributing to sustainable development, especially in green job formation, which positively aids in sustainable environmental development. According to BMZ (2012), the dual TVET training model had better play a vital role in tracking employment problems by transferring needs-oriented social and personal skills, thereby improving graduate employability.

2 Methods

TVET leaders, trainers, trainees, and enterprise office experts were chosen for this embedded mixed research using simple random, stratified, and purposeful methods. Purposive for TVET leaders, a simple random sampling technique for trainers, and strata for trainees were used. Questionnaires and interviews were used in collecting data from the respondents. The questionnaire and interview were self-prepared based on a review of related literature.

The questionnaire includes 42 questions and four scopes, including the status of cooperative training in TVET (Questions 1–10), the effects of cooperative training in reducing unemployment (Questions 1-9), stakeholder contributions to the effectiveness of TVET (Questions 1–5), and factors affecting the effectiveness of cooperative training (Questions 1–18). This questionnaire was answered on a five-point Likert scale (from strongly disagree to strongly agree, and from very low and very high scales).

The quantitative tools were tested in Gedeb Wereda TVET College, which was not chosen for the main study, and their reliability was scientifically assessed using Chronbach's alpha statistics. Likewise, the reliability tool was reported as having a 0.81 coefficient using Cronbach's alpha coefficient. According to the literature, a figure of 0.75 or higher is usually used as a rule of thumb to denote an acceptable level of reliability (Singh, 2007). A demographic questionnaire was used to collect data on the demographic characteristics of the participants, including age, sex, educational qualification, and service year. The Dilla University Institute of Education and Behavioural Science's Center for Education Studies and Research approved this study. Finally, the data were analyzed using appropriate statistical analysis such as frequency, percentages, mean, standard deviation, ANOVA, and regression in SPSS version 22.

3 Results and Discussion

3.1 Results

In terms of demographics, more than half of the respondents 193 (52%), are male, and 138 (48%), are female. It affirms the status of female participation in the sector as being in progress and a little bit promising. Likely, the majority, 43 (52%) of leader and trainer respondents, have 1–5 years of service, and only 12 (11% of respondents) have 16 years of service or more. This implies that the majority of TVET workers are less experienced; specifically, trainers have fewer experiences than the leader's group. This suggests that the status of TVET colleges in terms of retaining workers or trainers is low. Trainers' educational backgrounds confirm that 31 (60%) of respondents are degree holders, and the rest 15 (30%) of respondents are MA or MSc holders. This data ensured that trainers' educational backgrounds met standards, as the required minimum standard set to be an instructor was at least 30% M.A./MSc degrees and 70% B.A./BSc degree holders (MOE 2006, cited in Wondfraw, 2015).

Table 1: Results for Status of Cooperative Training

SN	Variables	No	Descriptive		ANOVA	
			Mean	SD	F	Sig.
1	Provisions of the entrepreneurship course for trainee	325	3.85	.777	3.99	.019
2	Enable trainees to achieve the necessary competences	325	3.87	.741	3.822	.022
3	There is practices of adapting the curriculum to the world of Work	325	2.95	.781	.472	.624
4	TVET industry partnership has been strongly established	325	2.94	.759	.779	.460
5	All training programs are demand driven in the colleges	325	2.10	.711	.034	.967
6	Intensive training is provided for both rural and urban labour market	325	2.10	.695	.226	.798
7	Adequate resource granted to facilitate training	325	2.19	.750	2.782	.063
8	Labour market demands assessments are conducted	325	2.06	.666	.387	.679
9	Skill gaps are properly identified before provision of training	325	1.51	.898	1.43	.241
10	There is enough industry and enterprise space for CT	325	1.46	.869	.328	.720
11	Practice of encouraging through advertising, &financial incentives	325	1.46	1.285	.123	.885
12	Full collaboration during planning of CT with industries ensured	325	1.44	8.09	.239	.787

*Significant at $p < 0.05$. Source: Researchers' Field Survey Result
Note: 1-1.8 strong disagreement, 1.9-2.6 disagreement, 2.7-3.4 Undecided, 3.5-4.02 Agree & 4:21-5.00 strong agreement.

Out of the 379 questionnaires distributed, 325 were filled out by the participants, representing a response rate of 85%. Most participants, 250 (76%) were trainees, and the rest, 75 (24%), were trainers and leaders.

Hence, Table 1 shows that respondents are "agreed" (mean values range from 3.5 to 4.20), with the statements "Provisions of the entrepreneurship course for trainees" having x= 3.85, SD =.777, and "Enable trainees to achieve the necessary competencies" having x= 3.87, SD =.741. However, the other respondents are "undecided" (ranging from 2.70 to 3.40) with two statements that indicate the status of TVET cooperative training. These are "practices of adapting the curriculum to the world of work," with a grand mean score of x=2.95, SD=.781, and "TVET industry partnership has been strongly established," x=2.94 and SD=.759. Besides, respondents "disagreed and strongly disagreed" (1.00–1.80) with the eight statements: "All training programs are demand-driven; intensive training is provided for both rural and urban labor markets; adequate resources are granted to facilitate training; labor market demands assessments are conducted; skill gaps are properly identified before the provision of training; there is enough industry and enterprise space for CT; the practice of encouraging trainees; and full collaboration during the planning of CT with industries is ensured." The grand mean is x= 2.10, 2.10, 2.10, 2.19, 2.06, 1.51, 1.51, 1.46, 1.46, 1.46, 1.46, 1.46, 1.46, 1.46, 1.46, 1.46, 1.46

The result reveals that cooperative training is promising in terms of providing entrepreneurship courses and enabling trainees to achieve the necessary competencies. However, it is constrained by other potential aspects of cooperative training, including granting adequate resources, identifying skill gaps before the provision of training, the unavailability of enough industry, and collaborative planning with industry. Except for items one and two (p = 0.019 and 0.022 0.05), the ANOVA test result revealed no statistically significant differences in mean value in all ten cases (p = 0.624, 0.460, 0.967, .798, .063, .679, .241, .720, .885, .785 > 0.05). It consolidates the findings as perceived by the majority of respondents.

Supporting this finding, interviewee respondent "B" said that the available industries, as well as enterprise, are not sufficient for cooperative training in the Geo Zone. The problem is countrywide. Therefore, TVET institutions are forced to provide more training at the college by accessing materials and machines. Also, respondent "A" asserted that identifying skill gaps before the provision of training has practical constraints on the side of technical and vocational education and training.

Table 2: Effects of Cooperative Training in Tracking Unemployment

SN	Variables	No	Descriptive		ANOVA	
			Mean	SD	F	Sig.
1	Graduates' Communication and collaborative ability	325	3.83	.813	.966	.382
2	Graduates' ability of developing adaptable skills to their environment	325	3.81	.903	.247	.782
3	Graduates' access to get start up finance credit	325	3.70	.986	.210	.811
4	Graduates' ability of creating their own businesses	325	3.02	.835	.421	.657
5	Ability of using relevant training machines to local situation	325	2.96	.796	.708	.493
6	Graduates' trend of getting job opportunity	325	2.96	.736	.176	.839
7	Graduates' ability of assessing the realistic labour market	325	2.94	.868	.063	.938
8	Graduates' business management skills and openness to risk	325	2.92	.855	2.66	.071
9	Success of self-employed graduate in small and micro enterprise	325	2.90	.818	1.190	.306
10	Graduates' access to land or structures to operate	325	1.91	.874	.319	.727

*Significant at p < 0.05. Source: Researchers' Field Survey Result
Note: 1-1.8 very low, 1.9-2.6 low, 2.7-3.4 moderate, 3.5-4.20 high & 4.21-5.00 very high.

Table 2 presents the effects of cooperative training on tracking unemployment. Hence, respondents rated "high" (mean values range from 3.5 to 4.20) on variables "graduates' communication and collaborative ability" having x= 3.83, SD =.813, "graduates' ability to develop adaptable skills to their environment" having x= 3.81, SD =.903, and "graduates' access to get start-up finance credit" having x= 3.70, SD =.986. However, the respondents rated "moderate" (mean values ranging from 2.70 to 3.40) on six variables. It includes "graduates' ability to start their own businesses," "ability to use relevant training machines in the local situation," "graduates' trend of getting job opportunities," "graduates' ability to assess the realistic labor market," "graduates' business management skills and openness to risk," and "success of self-employed graduates in a small and micro-enterprise" with grand mean scores x=3.02, 2.96, 2.96, 2.94, 2.92, and 2.90 SD =.83 Aside from that, respondents were rated "low" (1.0-1.8) on the variable "graduates access to land or structures to operate," with a grand mean value of x=1.91 and a standard deviation of.874 respectively. F (0.966, .247, .210, .421, .708, .176, .063, 2.66, 1.190, and .319; P= 0.382, .782, .811, .657, .493, .839, .938, .071, .306, and .727, respectively) show that there are no statistically significant differences between the respondents. Thus, the presented result justifies the effects of cooperative training in tracking unemployment as significant, in which the majority of respondents rated "high" and "moderate" for the given variables that illustrate the graduate's ability to develop adaptable skills and to start their business. Whereas access to land or structures to operate their businesses has been a major challenge for graduates.

Table 3 shows the effect of cooperative training on unemployment tracking using a linear regression model. The linear regression model statistical test result shows r= .890 coefficient and p= .017, 0.05, as well as [R= .890; p= 0.017, 0.05] for the dependent and independent variables. The independent variables are graduates through cooperative training, and the dependent variable is the employment rate in each year. The year encompasses data from 2014 to 2018 for five consecutive years for both variables. The study reveals cooperative training has an estimated 79% impact on increasing the employment rate, and the model is the best fit since p= 0.17, 0.05 acknowledges statistical significance. This is happening due to the number of graduates, and the number of employed graduates each year has been increasing across the years.

Table 3: Liner regression on effect of cooperative training in tracking unemployment

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.890[a]	.793	.741	77.962

a. Predictors: (Constant), Graduate Through Cooperative training

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	93035.259	1	93035.259	15.307	.017[b]
	Residual	24312.074	4	6078.019		
	Total	117347.333	5			

a. Dependent Variable: Employment Rate

b. Predictors: (Constant), Graduate through cooperative training

Thus, based on this data, one can conclude that though unemployment is a serious problem in the area, there is a reality that assures TVET colleges in southern Ethiopia, particularly Gedeo Zone that they have been contributing most to tracking youth unemployment through cooperative training.

Cooperative training or TVET training, according to interview respondent "A," significantly contributes to employment opportunities. Annually, a greater number of graduates have been participating in different job opportunities like construction (paving stone, metal work, etc.), greenery, poultry, food preparation, surveying, metal work, and hotel management.

This finding is in line with empirical literature that says youth unemployment is low in countries with well-working dual VET systems (European Commission, 2020).

Table 4: Institutions Related Factors Affecting Cooperative Training in TVET

SN	Variables	No	Descriptive		ANOVA	
			Mean	SD	F	Sig.
1	Discrepancy between number of trainees and capacities of enterprises to provide training	325	4.32	1.180	.625	.536
2	Inadequacy of physical facilities, for provision of training	325	3.84	.913	.294	.746
3	Low commitment of TVET leaders	325	3.73	.927	1.852	.159
4	Financial problems of trainee to afford training fee	325	3.14	.824	.114	.892
5	Lack of collaboration among TVET stake holders	325	3.20	2.89	.441	.644
6	Low trainers motivation and Commitment	325	2.37	.933	.776	.461
7	Trainers less qualifications, and pedagogical knowledge	325	2.31	.923	1.652	.193
8	High cost of TVET training	325	2.29	.914	4.78	.009

*Significant at p < 0.05. Source: Researchers' Field Survey Result.
Note: 1-1.8 very low, 1.9-2.6 low, 2.7-3.4 moderate, 3.5-4.20 high & 4.21-5.00 very high.

Several institution-related factors have been affecting cooperative training in TVET. Table 4 presents institution-related factors affecting cooperative training. Thus, respondents rated "very high" (mean values range from 4.21 to 5.00) on the variable "discrepancy between the number of trainees and capacities of enterprises to provide training," with x= 4.32 and SD= 1.180. Also, respondents rated "high" for "inadequacy of physical facilities, provision of training," and "low commitment of TVET leaders," with x= 3.84, SD= .913, and 3.73, SD= .927, respectively. Furthermore, respondents

rated "moderate" (mean values ranging from 2.7 to 3.4) on "financial difficulties of the trainee in affording training fees" and "lack of collaboration among TVET stakeholders," with x= 3.14 SD= .824 and x= 3.20 SD= .644, respectively. Respondents rated "low" for "lack of collaboration among TVET stakeholders," "low trainer motivation and commitment," "lack of trainer qualifications and pedagogical knowledge," and "high cost of TVET training," respectively, with x= 3.20, 2.37, 2.31, and 2.29, and SD= 2.89, .933, .823, and .914.

The ANOVA test result, F (0.625, .294, 1.852, .114, 441, .776, 1.652, & 4.78), P= 0.536, .746, .159, .892, .644, .461, & 193, > 0.05, authorizes this because there are no statistically significant differences between the respondents' perspectives. However, there is a statistically significant difference for item eight that states "high cost of training" is among the factors influencing cooperative training, considering it has less impact on training.

Likewise, qualitative data confirming this finding says:
Interviewee C said that institutional-related factors like less infrastructure and low commitments of academic and administrative staff members are among the main problems negatively influencing cooperative training.

Table 5: Work Environment Related Dynamics Affecting TVET Training

SN	Variables	No	Descriptive		ANOVA	
			Mean	SD	F	Sig.
1	Insufficient working capital	325	4.29	1.251	.026	.975
2	Collateral loan requirement by credit and saving organizations	325	4.23	1.317	.131	.878
3	Lack of market place for display or sale	325	3.63	.946	1.785	.169
4	High market competition	325	3.56	1.039	.477	.621
5	Lack of infrastructure like electric city, and water	325	3.51	1.035	.789	.455
6	Lack of linkage between market and enterprise	325	3.63	.955	.061	.941
7	Lack of similarity of activities during training with the activities in the world of work	325	3.58	.925	.795	.453
8	Non availability of raw materials in close proximity	325	2.00	.669	.445	.641
9	High level of taxes	325	2.06	.736	.004	.996
10	Insufficient size of production to get profit	325	2.79	.826	.858	.425

*Significant at p < 0.05. Source: Researchers' Field Survey Result.
Note: 1-1.8 not problem, 1.9-2.6 minor problem 2.7-3.4 moderate problem, 3.5-4.20 major problem& 4.21-5.00 very serious problem.

Table 5 illustrates work environment-related dynamics that hinder cooperative training. Concerning this, respondents rated a "very serious problem" (mean values range from 4.21 to 5.00) on the variables "insufficient working capital" and "collateral loan requirement by credit and saving organizations" with x= 4.29 and 4.23, SD= 1.251 and 1.317, respectively. Similarly, respondents rated "major problem" (mean values ranging from 3.50 to 4.20) for five variables, including "lack of market place for display or sale, high market competition, lack of infrastructure such as electric cities and water, lack of linkage between market and enterprise, and dissimilarity of activities during training with activities in the world of work," with x= 3.63, 3.56, 3.51, 3.63, and 3.58 SD = 0.946, 1.039, 1.035. Furthermore, respondents ranked "minor problem" (mean values ranging from 1.9 to 2.6) for two variables: "nearby raw material availability, insufficient size of production to gain profit, and high level of taxes," with x= 2.00, 2.06, and 2.79 SD= .669, .736 and .826 correspondingly.

The ANOVA test result, F (.026, .131, 1.785, .477, .789, .061, .795, .445, .004 & .858; P= 0.975, .878, .169, .621, .455, .941, .453, .641, .425 & .996, > 0.05), supports this because there is no statistically significant difference between the re-

spondents' perspectives. Thus, it validates that the majority of respondents have an almost similar understanding of environmental-related factors as being among the major dynamics hindering the success of cooperative training in the study area.

Likely, interviewee C said that:
Institutional factors such as fewer infrastructures and low commitments of academic and administrative staff members are serious issues that have a negative impact on cooperative training.

At the same time, interviewee A said that "textitabsences of motivation as well as an incentive package for enterprise or industry ownership and trainers are among the greatest challenges ever affecting cooperative training."

Discussion

The analysis of the empirical results along with the theoretical frameworks included in this research has provided insights into the various issues of cooperative training. As a result of this quantitative and qualitative analysis, important discussions are made that has implications for the improvement of cooperative training.

The philosophical basis of Ethiopian TVET is grounded in the vision of raising the level of education and creating a self-reliant and innovative society. Moreover, it is primarily focusing on preparing the youth today and in the future as well. To implement this, TVET institutions are expected to address praiseworthy cooperative training, which would maintain a dual training system that demands 30% of theoretical training in the colleges and the rest of the percentage of training in industry workshops. Findings indicate that the current state of cooperative training in TVET colleges is precarious due to a lack of adequate demand assessment, a lack of partnership collaboration, an insufficient amount of industry and enterprise, and a reduced practice of encouraging potential stakeholders.

This finding substantiates the research results of the previous study. According to Aman (2021), the most common challenges trainees face when learning practical skills are a lack of training resources, a mismatch between training equipment and established training standards, and fewer concerns dedicated by the institution to industrial or enterprise collaboration. Equally, there are trainers who are incapable of demonstrating their expertise and knowledge during the practical training of skills. Moreover, there is empirical evidence revealing that in developing countries, states importunately call for TVET growth, but there are still several limitations deterring this field from accomplishing the demanded standards and accomplishments, such as management systems and financial support (Xiaohui & Ramadan, 2019). This study varies from previous research findings regarding the weakness of demand assessment before the provision of training and the mismatch of the industry with trainee numbers, which are the points of departure from those referred research findings.

Despite its several limitations, cooperative training is significantly contributing to tracking unemployment. Therefore, TVET could be the greatest means to escape poverty. Furthermore, graduates' ability to develop adaptive skills, communication, and collaborative abilities, the trend of getting job opportunities, and getting access to start-up finance credit are encouraging practices. The regression model estimate specifies that 79.3 percent of employment opportunities obtained by TVET graduates are due to employability skills obtained from the training. However, for self-employed graduate entrepreneurs, access to land or structures to operate is not promising.

This may adversely affect TVET's journey to reduce unemployment. Researchers addressed themselves to ten enterprises organized by TVET graduates years ago; almost all of them are suffering due to the absence of places to display their products. It magnifies through cooperative training, which is significantly contributing to employment, but it is bottlenecked by several constraints.

This finding is supported by the literature, which shows that expanding technical and vocational education has a displacement effect on less educated or secondary school-leaving workers. Amazingly, the study reveals a 10% increase in vocational education graduates in the labor market, which minimizes the opportunity of having a formal job by 4.9% for male secondary school graduates (Machikita &

Fukunishi, 2017). This elaborate training from technical and vocational education has enabled TVET graduates to get employment opportunities to the advantage of those who have no such training, while at the same time reducing unemployment.

The discussion paper conducted by the University of California and the World Bank discloses that the effect of TVET cooperative training on employment is positive but adjacent to zero and statistically not significant. Even the positive effects are heavy when training is offered by the institutions of the private owner (Hirshleifer, McKenzie, Almeida, & Ridao-Cano, 2014). Similarly, this research reveals the existence of the positive impact of cooperative training on reducing unemployment, which in turn substantiates its positive effect on raising employment opportunities. On the other hand, the study brought the impact statistically significant in reverse to previous findings in advance of the previous study.Further, it is stated that dual vocational education and training are well recognized in Europe and are reputable, for example, in Austria and Germany. Youth unemployment in countries with well-working dual VET systems is low (European Commission, 2020). The informal and traditional rural sectors, in particular, play an important role in providing massive employment opportunities; this necessitates employability skills from technical and vocational education (UNESCO, 2016).

Because of the astonishing nature of technical and vocational cooperative training, several studies recommend the government give it due focus by broadening access, improving funding, and holistically restoring the sector needed to tackle the load of unemployment and create wealth to a great extent (Inyiagu, 2014; Jwasshaka & Fadila, 2020; Saleh, 2017; Obidile, Obi, & Ikpat, 2020; Ogbunaya & Udoudo, 2015).

Also, the study identified that institutional and work environment-related factors are among the major dynamics affecting the success of cooperative training. Institutional-related factors like fewer infrastructures, the inadequacy of physical facilities, the lack of a marketplace for enterprise, and low commitments of academic and administrative staff members are serious problems negatively affecting cooperative training. In addition to this, the absence of motivational support as well as an incentive package for enterprise or industry ownership and trainers is among the most serious challenges ever affecting cooperative training. Moreover, the discrepancy between the number of trainees and the capacities of industry and the lack of sufficient working capital are among the greatest shortfalls. These findings are in line with previous studies. It has been identified that cooperative training has been continuously influenced by insufficient essential resource supply. Subsequently, the cooperative training quality process has been too weak to equip pupils with the needed capabilities (Melaku, 2019). Also, a deficiency of vital facilities, less funding for the programs, weak training quality, ineffective training methods, and poor managerial activities are among the factors negatively hampering cooperative training (Dereje, 2018).

Critique

The study determined that cooperative training was the only means of achieving employment opportunities. In its background section, it has cited some evidence to depict the seriousness of unemployment and the importance of skills development programs in reducing the problems.

The researcher claimed the development of a conceptual framework for a dual training system would serve as a bridge between training institutions and employers. The conceptual framework, however, lacked clear linkage with the principles of hands-on-job training and school-based training, which are the major components of dual training programs. A typical framework of the Ethiopian TVET dual system is presented in Figur 1.

The theoretical section referred to three major European training models: the UK liberal market model, the French state-regulated bureaucratic model, and the German dual system model. The study deepened its view of the unfolding German dual training system while discounting the two. For a better understanding of the dual training system, it would have been better had the study discussed the two models in a bit more detail. Furthermore, the pieces of evidence presented for the sole importance of cooperative training in curbing youth unemployment were not enough.

Further education in the UK, Australia, New Zealand, and Canada is conducted to prepare graduates for skilled workers at the middle level of the occupational range (Wheelhan, 2016). Community colleges, in addition to preparing graduates for upper-division degrees at universities, also provide vocationally oriented qualifications to prepare graduates for specific occupations in the labor market (Dennison 1995; Meier 2013).In British English, the training program is regarded as no more than a market process in which the participants are employees, employers, and partners (Mückenberger 1998, $p.$ 37 $etseq.$). In French, the production process, by itself, is considered a political entity where the key players are the state and its executors, called inspecteurs de travail, on the recognition of the social order; it is more centrally controlled by the state than the market process.

By its nature, cooperative training requires the coordinated efforts of the stakeholders based on a predetermined memorandum. In this regard, the TVET strategy also stated:

To this end, maximum flexibility is given to TVET providers to negotiate and develop relationships with individual employers, groups of employers, or business or sector associations about the organization of cooperative delivery schemes. TVET providers will also be encouraged to venture into more agreements with small companies and the micro-enterprise sector, as these companies represent the target labor market for a large group of trainees (MOE, 2008, $p.$ 31).

Although the study mentioned a lack of cooperation among the stakeholders, it didn't give much attention to how the main actors should work together for mutual benefit. Cooperative training provides an opportunity for both the training institution and the employer (MOE, 2008).

Recent studies conducted in similar areas revealed the primary determinant of the quality of TVET training programs was the unavailability of sufficient industries and enterprises for the implementation of dual training programs. The study gave equal importance to this problem and other factors such as lack of demand assessment and weak collaboration between actors in the sub-sector. Others also concluded several factors determine young graduates' employability. Economic model investigations such as household income, job preference, access to credit, access to training, and cooperative membership were found to have significant impacts on youth unemployment (Menta, L., & Leza, T. 2020). Furthermore, Demissie, M. M., Herut, A. H., Yimer, B. M., Bareke, M. L., Agezew, B. H., Dedho, N. H., and Lebeta, M. F. (2021) found demographic characteristics, curriculum, institutional characteristics, graduate characteristics, and market and labor market conditions determine graduate unemployment. Other challenges of the sub-sector include perceptions of the TVET program in general and the cooperative training program in particular.

Self-employment is one of the components that is important to include in the TVET strategy. It requires not only possessing certain skills but also market analysis, product development, work attitude change, and business leadership. The strategy stated, "The TVET executive bodies will also undertake initiatives to strengthen and raise quality in traditional apprenticeship training, as this mode of TVET delivery is particularly effective in preparing youth for self-employment" (MOE, 2008, p. 32). The study did not trace self-employment or the creation of jobs for others.

The 48% participation of female respondents in the study was weak evidence from which to conclude that there is promising progress in the inclusion of females in the TVET sub-sector as a whole. The same analogy applies to only 12% of participants having an experience of more than 16 years to claim the sub-sector as being challenged by inexperienced workers. It should include and be verified by the country's TVET leaders, trainers, and administrative staff members' statistical data. A report obtained from the Ministry of Science and Higher Education's Federal TVET Agency indicated the sub-sector is still challenged by the low participation of TVET leaders and trainers (MOSHE, 2019–20).

The study, in general, found there are several challenges in implementing a cooperative training program in SNNPR and Gedeo TVET institutes, criticizing the system as obsolete, inadequate, and unable to adapt to the private sector. However, it

revealed cooperative training can be used as an important method of reducing graduates' unemployment. For the program to be effective, the TVET institutions must facilitate trainer training to assess demand and closely work with major actors to overcome challenges. By proclaiming the importance of the study in the improvement of TVET programs and as a means of challenging the policy, the study called for further investigations in the area.

4 Conclusions and Recommendations

Finally, the study can be viewed as a step toward closing the sub-sector's research gap.It raised an important course of inquiry, for unemployment is challenging the country's development while investing huge capital in the training institutions, which could be lost otherwise. It gives better information for policymakers to improve the implementation of cooperative training to ensure the dual training model, which is the major component of the TVET strategy (MOE, 2008). It can finally serve as a base for further studies in the area.

To that end, colleges should collaborate with nearby universities to plan workshops and train trainers to equip them for conducting demand assessments. Likewise, a strong partnership should be maintained with the government and non-government sectors of the zone and regional states to disregard the challenges. Further research on the role of cooperative training in reducing unemployment at regional and national levels should be conducted to generalize the magnitude of its effect.

Conflicts of interest The authors affirm that there are no conflicts of interest regarding the publication of this paper.

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Conflict of Interest

All the authors are affiliated with Dilla University as teaching and research staff. For publication purposes, we all, as group members, confirm that we have thoroughly read and approved the manuscript to be published in this journal.

Ethical Approval

Consent was sought form the research participants. Confidentiality was maintained in reporting information.

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Teachers' and Supervisors' Views of Principal Power in Secondary Schools of Ethiopia

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Abstract

In order to better understand how teachers and supervisors view the uses and sources of power that principals favor, this study took a qualitative approach. Through interviews, qualitative data on three teachers' and three supervisors' views on the uses and sources of power is acquired. Principals employ legitimate power, reward power, coercive power, expert power, and referent power, according to the teachers' and supervisors' analyses of the uses and sources of power. The principal frequently exercised legitimate power, although the others hardly ever did. This study demonstrates that teachers' performance suffers when they only rely on legitimate sources of power, despite the fact that principals use a variety of power sources inequitably. Therefore, it is essential for effective leadership to inform school principals about how to employ various power sources depending on the situation.

1 Introduction

Schools use different techniques to be efficient and accomplish their intended objectives. The actions of the principals are crucial in defining the organizational politics and energizing the teachers. To inspire teachers, principals must be effective and efficient. The objectives of a high-quality education could be internalized to increase school effectiveness. It has to do with the power sources that school leaders in organizations ought to have (Fullan, 2007). Power has frequently been mentioned in literature in relation to concepts like hierarchy, authority, influence, and control. To avoid causing confusion in context, it is appropriate to define related concepts together with the word itself.

According to Barraclough and Stewart (2012), power develops relationally and in context. It is preferable to characterize individuals in relation to others and their connections than to give a clear-cut explanation. Power is defined in relation to its senses and other people. Similar words for it include "control," "ability," "influence," and "authority." Power is simply defined as a source of authority or a tool for accomplishing tasks (Adam, Alsadi, & Suleiman, 2019). Additionally, Lukes (2021) defined "power" as the actual method by which one agent affects others. A person can only exert power in a society by swaying others and bringing about their desires. All three terms—power, authority, and influence—could overlap. Though sometimes confused with influence, power is sometimes described as a source of capability. Activating sources is a process of influence, which is frequently compared to power. On the other hand, legitimacy or power that has been formalized is known as authority. Generally speaking, authority is defined as lawful power, whereas power is only defined as informal authority (Buchanan & Badham, 2020).

Social psychology typically uses influence tactics as a transformative kind of power to persuade subordinates to take a certain action within an organization. Influential acts and changes on the subject are typ-

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ically derived from concepts like control, power, and authority. The term "influence" is used interchangeably depending on the objective (Alrowwad, Obeidat, Tarhini, & Aqqad, 2017). Power, according to Scott & Davis, is the capacity needed for influence. In this view, influence is the process of using power. For instance, if a student complied with a teacher's suggestion, he or she might have been motivated by the expectation of reward for their efforts or by the perception of their social position (Scott & Davis, 2015). As a fundamental idea in leadership, influence may be characterized as the manner of behaviour a leader employs to motivate followers. Thus, it is evident that influence—which is the act of leaders to change the behaviours of others and a type of influential capacity in organizations—is the end outcome of the power process.

Another concept associated with power is authority, which is widely accepted in social contexts as legitimate power. It is a quality of a generally and freely accepted deed because of its legitimacy in organizations (Beetham, 2013).The idea of authority and the process of establishing authority within management and structural subsystems are intrinsically linked to both compliance and disobedience. By definition, authority is simply defined as "rightful power that is vested in a particular person or position, acknowledged as such, and deemed suitable not only by the person who wields the power but also by those over whom it is exercised, as well as by the other participants in the system" (Wrong, 2017). In this sense, the terms "power" and "authority" have been used to refer to notions that are centered on authority, such as manager, supervisor, and subordinate.

Additionally, it is lateral as well as downward, which relies on an informal position as well. When people interact laterally, they are all on the same level of power, and their power-based behaviour is invisible. Depending on their level, downward power interactions could be seen if the individual gets promoted to a higher position (Allen, Porter, & Angle, 2016). There are many levels of legitimacy for authority, which is the use of power to legitimately affect others. This kind of "naked authority" has reportedly nothing to do with legitimacy (Ricoeur, 2007). The exercise of authority by the group's formal leaders is symbolized by the word "authority." The degree of legitimacy is influenced by how closely it is connected to power. Its closeness to power determines how legitimate it is. In contrast to economic power, which is deemed to be of medium strength, coercion is the least lawful form of power.

Every form of power usage, according to Weber, includes coercion, whereas legitimacy is what confers authority. The way that subordinates view the orders of superiors as legitimate is proof that authority, as opposed to sovereignty, is the capacity to control people freely (Gorun & Gorun, 2018). Purely authoritative relationships could no longer be sufficiently extensive and productive. According to Haber-Curran & Tillapaugh (2015), authority is defined as the process of creating learning organizations that involves dispensing with the conventional authority- and control-based organizational structure. Pfeffer (1992) also emphasized that although formal authority is not significant or effective, leaders could increase their power by employing it. As a result, authority is viewed as more legitimate in organizations and has a more limited definition than power. The statute and the majority of applicable sources of power support its legitimacy, and its members are compelled to submit due to its positional nature. The difference between democratic and authoritarian systems can be distinguished by the separation of the legislative and executive powers.

In democratic organizations, executive power is typically dispersed in accordance with the pyramidal system of authority (Gronn, 2002). According to Brass and Burkhardt (1993), organizations' hierarchical structures are what cause power relations. In an organization, every decision is simultaneously a means of exhibiting power. In this view, power is typically understood to be hierarchical and is described as the control that superiors have over inferiors (Jervis, 2002). Because hierarchy is based on subordinates' strict obedience to superiors, it can breed hostility, opposition, and unhappiness. However, the fundamental dynamics of organizations are hierarchical levels like leadership, control, accountability, and cooperation (Schein & Schein, 2018).

In line with paradigm shifts over time, power has transformed. The paradigms that have become more prevalent over time have changed the ways in which leaders utilize the power bases they need. Due to teamwork, post-positivist methods, and 21st century leadership, leaders favor knowledge over sources of authority-based power (Kilicoglu & Kilicoglu, 2020). Heath (2020) said that actors endeavour to control, decide, and manage organizational behaviour as a form of power play on behalf of the organization.

In order to understand organizational behaviour, it should be obvious who has influence, what it takes to have influence, and what can be done to best utilize power inside an organization. Modern times are more complicated and perplexing since the service sector is so broadly dispersed. Leadership styles shouldn't be rigid in a democratic, multicultural society, and leaders should have a wide range of appeals in their toolkits (Deszca, Ingols, & Cawsey, 2019). Instead of adopting authoritarian philosophies that consolidate all power and make all choices in one way, leaders may find that diverse, numerous, and situational approaches are more suitable.

2 Literature Review

The power source of a principal is a crucial element in influencing the shareholders of the school. Principals of schools frequently exercise their power to carry out instructional activities. However, relying simply on their authority is no longer adequate to meet the demands of our day and guarantee educational excellence. Personal power sources, or the advice and sway they exert over teachers through their expertise and charisma, are critical for improving teaching effectiveness in addition to their legitimate authority as school leaders (Mesfin, 2022).

Studies (Mesfin, 2022; Birhanu, 2020) indicate that school leaders in Ethiopia exclusively exercise the legal authority that comes with their position and do not seek to sway the teachers. This finding shows that school leaders do not use power sources and that the traditional view of management still rules in schools. To ensure the quality of education, it is necessary to inform the principals about the power sources and how to use them effectively.

Power can be obtained from a number of sources. People can exercise power through their positions of authority, their skills, education, or physical attributes (Kotter, 2010). Focusing on interpersonal power relationships, French and Raven (1959) identified five different categories of power. Legitimate power, reward power, coercive power, expert power, and referral power are some of these power sources.

The ability of a leader in an organization to influence the behaviour of others as a result of their status within the organizational hierarchy is known as "legitimate power." The formal authorization for the use and control of organizational resources that is granted as a result of one's structural position within the organization is referred to as "legitimate power," also known as "official power."

Reward power, which is based on the notion that teachers in schools are rewarded by their principals when they exhibit the desired conduct. It is the principal's authority to reward teachers who do well and follow the rules (Sergiovanni, 2015). Principals usually employ wage, promotion, incentive, or admiration when using their reward power (Marshall & Hooley, 2006), and their power is centered on their control over the reward mechanisms (Friedman, 2002).

The ability to reprimand others is known as coercive power (Lewis, 2013), and principals frequently use coercive power to manage punishment. As a result, other teachers in the school follow the principal's orders out of fear of the consequences. The principal downgrades teachers, appoints them to unpleasant positions, fires them, and leaves without saying goodbye or showing them any gratitude (Jones, 2019).

Competence, expertise, or knowledge are the foundations of expert power (Härtel & Fujimoto, 2014). Expertise is the capacity to exert control over behaviour by using any information, experience, or judgment that other teachers lack and that they see as necessary (Hargreaves & Fullan, 2015).

Referral power is the ability of a principal to affect the behaviour of teachers on the condition that he

or she is liked or loved by them (Botha & Fuller, 2021). The teachers in an organization tend to trust and admire a principal with referral power (Berson, Da'as, & Waldman, 2015) and try to resemble him/her or identify with him/her as a result of this respect and admiration (Starratt, 2003).

Power is an important tool in schools that helps teachers work together toward a common objective while also guiding them and maintaining leadership continuity. The manner in which the school leader uses the power source that he or she owns determines the effectiveness of the leadership in the schools (Shields, 2010). Several studies conducted in Ethiopia on the use of power by school leaders have found an increase, which is not surprising given that the usage of power sources in schools has a considerable impact on teachers' effectiveness (Mesfin, 2022; Sintayehu, 2020). According to research on the power sources used by school principals, using power sources not only ensures the school's successful leadership but also increases teacher effectiveness, which benefits educational quality. As a result, a serious issue is raised by the principals' and teachers' opinions on the use of power. The following questions are raised within the context of this research:

1. How far may the principals use their power—legal, coercive, reward, referral, and expert power—and to what effect?
2. What are the teachers' and supervisors' opinions on the power source that the principals use?

3 Research Design and Method

A research design is the research's blueprint.It constitutes how the research is to be conducted, giving answers to the basic questions such as what, when, how, and who, as well as related questions in the research process (Gog, 2015). This research employs a qualitative-instrumental case study research design, which allows the researchers to understand the feelings and interpret the lived experiences of study participants. According to Stake (1995), a qualitative-instrumental case study research design is important to investigate a particular case in order to gain an in-depth investigation into the researched issue.

By using a qualitative methodology, the researchers can refine their preconceived ideas and extrapolate their thought processes, assessing and evaluating the problems from a comprehensive angle. Because it enabled researchers to learn in-depth details about participants' actions, emotions, wants, routines, feelings, experiences, and a range of other information, a qualitative study design was employed to explain the entire phenomenon (Madrigal & Mcclain, 2012). In a relaxed situation, the researchers conducted a semi-structured interview to get the data. The interpretive paradigm was employed because it made it easier to comprehend the social environment through individual experiences and subjective meanings.

In this qualitative research, methodology appropriate for investigating and identifying the research problems was included, including population and sampling. The data collection instrument and data analysis technique were presented in the following sub-sections.

3.1 Population and Sampling

The study area is SNNPR, Ethiopia. The study was conducted in three government secondary schools that are found in three zonal towns of the SNNPR: Durme (Kembata-Tembaro zone), Wolkite (Gurage), and Jinka (South Omo). Government secondary school supervisors and teachers were the target population of the study. Thus, the participants of this research were teachers and supervisors of the government secondary schools that are found in the three zones, namely the Kembata-Tembaro, Gurage, and South Omo zones of the SNNPR. The sample for the study was selected by purposive sampling, which allows the researcher to perform a qualitative investigation under study (Creswell, 2013). In this research, six participants were selected, i.e., three teachers and three supervisors, from the three schools.

3.2 Instrument

The interview was conducted in Durme, Wolkite, and Jinka secondary schools with teachers and principals working in the three zone towns. Before the commencement of data collection, piloting of the interview was conducted with three participants to

revise and refine the interview tool and to minimize the unclear items in the interview questions. The research participants were interviewed using the semi-structured interview instrument prepared for this study, conducted in *Amharic*. We were introduced to the head teachers of these schools by a contact at the EDDA/district education office.

We conducted two semi-structured, in-depth interviews with most of the participants. Interviews with study participants, teachers, and supervisors were transcribed from the audio recordings in the Amharic language, and then the verbatim texts were translated into English. The researchers frequently checked the translations with the actual recorded audio to ensure that the translations were correct and relayed the same concept as the actual audio-recorded document. The interviews, lasting about an hour each, were conducted at the school sites during school hours. Thematic analysis was used to use the sub-dimensions of the power sources of their applicability. Included in the interview guide were questions on the power use and sources of principals that were generally geared towards quality education.

3.3 Data Analysis

Our analytical approach included data immersion, coding, and meaning making through abduction. I reflected on the social dynamics among the agents, how they each contributed to the usage of power, and their perceptions. We noticed repetitions, tensions, and inconsistencies. We re-read the transcripts and wrote short observations and reflections on each participant and school, identifying two objectives and ideas that diverged from the theory and literature. Further analysis drew on theoretical frameworks that had not been considered prior to data generation.

4 Results and Discussions

During the data analysis, two key objectives were taken into consideration. First, the opinions of teachers and supervisors regarding the amount of power used by principals; second, the opinions of the two participants on the sources of power. The discussion that follows is founded on verbatim quotes. Each quotation is preceded by the codes "teacher 1, 2, and 3" and "supervisor 1, 2, and 3."

Power Applications

Teacher 1 claimed that when it comes to the power that principals exert, it is common for them to do so excessively. This is as a result of the principal power coming from above (a political appointee). His assignment was not made by colleagues. The principal who abuses this position tends to take on an authoritarian personality. Ethiopia's principal appointment and selection process has been decentralized for the past 30 years. Principals are chosen by the district or *wereda* education office depending on their affiliation with the ruling Ethiopian People's Revolutionary Democratic Front (EPRDF).

Supervisor 1 clarified that principals in positions of authority are given a dual duty after they are appointed to the post in relation to this point. The first task is to carry out their regular government duties, such as their administrative or teaching and learning duties. The second objective is to implement the policies and strategies of the ruling party in the school environment. I and my colleagues believed that the members of the ruling party holding various positions in the schools were spies. We think that the principal's main responsibility is to collect information from the school community and provide it to the party official. The influence of ruling party politics on school leadership tends to prevent them from exercising discretionary authority. Political body intervention in school leadership is considered a challenge in the teaching-learning process since every managerial activity and teaching-learning process are carried out under the close supervision of the political bodies.

Teacher 2 added the following clarification:

Principals are unable to completely discharge their duties due to politics. Teachers and principals have less authority to make judgments and implement changes in schools because all decisions pertaining to the business of the school are made by higher-ranking government authorities. Additionally, there are political bodies at the school that will rule on a few minor issues.

From the above data, it can be said that the ed-

ucation system is not autonomous. As a result, both the principals and teachers may hesitate to relinquish their power to empower students through the affordance of spaces for students to exercise creativity, independent thought, and critical reflection on the structures and norms that shape their lives out of a possible fear that their status or power may be undermined. This could cripple the teaching and learning process. Moreover, such practices go against the education and training policy (MOE, 1994). The policy clearly articulated that education is secular. Despite not being politically secular, the school is ironically secular in terms of religion.

Supervisor 2 describes the extent to which principals bully, harass, or verbally abuse teachers. His influence is unwavering. Teacher 3 overestimated the degree of personal power used by principals while underestimating the reliance on positional power. He asserts that the overwhelming majority of teachers are very unhappy with their principals.

The principle was similarly described by supervisor 3 as follows:

When you are not responsive to his influence, he is verbally abusive, embarrasses you in front of others, and is less supportive. You have no idea what is expected of you, and if you do something wrong, you are in big danger. He acts impulsively, and no one is consulted before making decisions. He favors a few people.

The information above indicates that the principals exercise an excessive level of power. Negative power is used when teachers and students only express their fear for the person in control and refuse to communicate in any other way. Such a misuse of power could make principals feel uneasy and make their colleagues disrespect him. The power that principals should strive for, however, is that of those who recognize that they have the ability to positively influence students and teachers on a daily basis (Smith & Squires, 2016).

Sources of power

Teacher 1 described how the school principal understood the sources of power:

The principal's legitimacy served as the main source of power. Compared to other power sources, this sort of expression appeared more frequently at top levels, and this power reflected administrative chores and activities while also providing a legal foundation granted by their positions.

According to the data presented above, legitimate power was the most frequently used organizational power source in schools, as determined by principals. These results demonstrate that Ethiopian secondary schools are supported by legal power. Principals use this power to carry out tasks and direct others to carry out activities that are necessary for their roles as leaders of the school. Teachers are aware that the principle has the power to provide directives and directions within the range of this power. Teachers are therefore required to follow these instructions. Even if lawful power makes it easier to apply management procedures in the school, its overuse can lead to conflict, opposition, and dissatisfaction.

In a similar vein, Supervisor 1 provided the following justification for the legitimate sources of principal power:

A school principal cannot afford to overlook every issue. Due to this, the practice of tolerance, which aims to sustain teachers' cooperative behaviour by evoking feelings of reciprocity, has the drawback of potentially damaging the principal's reputation as an impartial leader.

Accordingly, the school's culture of cooperation may be harmed by the abuse of power there. The results may be detrimental to morale and collaboration. Excessive use of legitimate power can take many different forms, such as asking teachers to perform personal favors or errands for you, forcing teachers to falsify information, interfering with a colleague's capacity to execute their job well, and bullying.

In general, both of the above participants (under objective 2) come to an agreement on the most applied power sources being legitimate power. Schools are organizations where informal relationships are more intensive and where superior-subordinate relationships are more flexible compared to other organizations. Leading the legitimate processes

required by the directives and guidelines required at schools is critical for the schools' survival (Rapaport & Ashkenazi, 2019). However, when the legitimate power required to operate the process rises to levels that can damage the informal relationships at school, it will harm the school structure and make it harder for teachers and administrators to find middle ground. Therefore, school leaders should be careful when using legitimate power and abstain from its excessive use.

Generally, within the boundaries of their legitimate power, principals have the power to reward teachers in a variety of ways. This power also extends to non-monetary awards, so it is not just restricted to monetary ones. Utilizing this kind of power is crucial if we want to keep teachers' passion alive, improve their performance, and identify the teachers who stand out. However, it's critical to remain consistent and remember your own requirements. Excessive usage of reward power may have a negative effect on teachers' interactions and job satisfaction. In fact, teaching has become a challenging profession in recent years.

Teacher 2 provided the information below on the school principal's use of coercive power:

Principals are more likely to talk their way out of issues at the school. When he noticed an undesirable behaviour, the principal invited the teacher to speak with him one-on-one in an effort to determine the cause of the issue. Additionally, he chooses to discipline by using his body language when he sees a teacher who does not put much effort into the school, is late for class, or does not complete a task. He gives the teacher a hard look.

Similarly, Supervisor 2 explained the principal basis of coercive power in the following way:

Most of the time, principals prefer to discuss an issue with the teacher rather than solve it right away, waiting for the problem to be forgotten with the passage of time. He relates this to the fact that when you intervene shortly after a problem emerges, the teacher has a propensity to overreact, which makes the arguments worse. The school's principal keeps walking through the halls, stopping by the teacher's room to provide an oral warning. Another teacher claimed that rather than go through the issue with the principal, who becomes insulted, the principal chooses to avoid interaction with the teacher.

The two participants above strongly emphasize that excessive use of coercive power can occasionally lead to the predicted behaviour. Even though it is one of the less frequently used power sources, using rewards excessively can encourage people and maintain desired behaviours. Indeed, it should come as no surprise that principals' rewards play a critical role in motivating the teaching-learning process to increase student performance and make greater contributions to school improvement.

On the contrary to the above two participants, teacher 3 described the principal's sources of power:

At each event where teachers are present, the principal acknowledges them. Teachers frequently receive certificates from the principal, while administrators frequently recognize the best students. Treatment is given fairly. Everyone who works hard is rewarded.

Similar to teacher 3, supervisor 3 said that principals use coercive power. Since it is often used, coercive force leaves people with a bad impression. There have been reports of discontent and aggressiveness following coercion-based behaviour in schools. In educational institutions, coercion is also not viewed favorably. Since the majority of power rests with the principals in overly bureaucratic organizations, teachers may feel less empowered (Mathibe, 2007).

In general, teachers must be respected as professionals and given recognition for the academic success of their students if we are to preserve our profession and our children's futures. Many things need to be fixed and enhanced. As a school leader, you can influence some of these variables. It is within your power to reward your personnel. Moshel and Berkovich (2021) argue that top leaders use more legitimacy, coercion, and rewards than middle-level leaders. Hence, as school leaders assume positions of power and dominance relative to teachers and students, it is essential that they conceptualize their roles and responsibilities in relation to the position of power they occupy relative to other members of the school community. They must also develop the

skills necessary to act effectively in these roles.

5 Conclusion

Power plays a fundamental role in school organization. Some principals behave in such a way that teachers' lived experiences indicate that they are abusing their position or the privileges they have in the schools. The misuse of power has an impact on teachers' interpersonal relationships, emotional health, and leadership abilities and disempowers them. As a result, the teaching profession is essentially un professionalized. A social capital structure that enables collaboration between principals and teachers is what is required. As a result, they will be better able to use power in a way that is advantageous to all students and behave meaningfully in their own, distinctive school circumstances.

The way forward

The development of a national educational leadership program is essential. We advise that the MOE continue the discontinued school leadership program for principals, which is of more immediate importance. The program ought to provide a nuanced understanding of power rather than taking a "one size fits all" stance. The significance of picking exercise strategies that best fit the unique "historical, cultural, and institutional backdrop" of their school must become clear to principals. In addition, principals must foster a culture free from fear and treat teachers fairly. This ought to inspire the latter to seek guidance or administrative assistance on issues like taking risks and considering potential growth while keeping certain goals or objectives in mind. Principals' lack of emotional intelligence can be addressed by in-service training programs that deal with the complex concerns of many forms of power, both on a personal and a social level.

The development of principals' self-awareness, self-management, internal locus of control, emotional and leadership competences, leadership styles, building and maintaining successful relationships, and human rights are a few examples of possible topics. This should cover how the abuse of power endangers efforts to establish secure workplaces, lowers productivity, and erodes trust. It should also emphasize how strong relationships between leaders, teachers, and students are facilitated by effective leadership that values diversity and upholds social justice. Teachers should have at least annual opportunities to express their views on issues relating to leadership in the school. They could then raise problems related to the principals' use of power through mechanisms such as annual job satisfaction external committees to create and maintain a school climate that supports teachers and ensures that their morale remains high.

A wellness program for teachers is also necessary to aid them in overcoming the challenges brought on by incidents of disrespect, conflict, and exploitation. A framework for social capital should be used to create effective social networks that can involve both internal and external stakeholders. These could encourage teamwork and motivate staff to build the social capital required to develop into leaders who can be held accountable for high-quality education. This may help us comprehend and interpret why some principals are able to "get it right" while others lack the skills necessary to form a habit that denotes an embodied style of carrying out leadership.

Teachers will be more capable of overseeing and enhancing teaching and learning if principals distribute power and provide them with chances to grow and realize their leadership potential. Principals will gain a better grasp of how a lack of positive power relationships can impede progress.

Declaration of Competing Interest

This research was exclusively funded by Dilla University. The university will not take any responsibility for the results beyond reporting purposes. The researchers are affiliated to Dilla University as teaching and research staff. We also confirm that intellectual property rights (IPR) and other ethical principles were adhered.

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Availability of the Data

We would like to inform the journal managers that a set of field data is available and will be shared whenever requested.

Ethical Approval

Consent was sought form the research participants. Confidentiality was maintained in reporting information.

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Educators' Academic Integrity: The Case of Three Selected Universities in the Southern Region of Ethiopia

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Abstract

The main objective of this study is to investigate the status and features of academic integrity among educators of universities in southern Ethiopia. The study designed to achieve the objectives used quantitative approach where cross-sectional survey design was implemented.Three hundred fifty five respondents were selected for the study using multistage sampling method. The data were gathered using an academic integrity scale measuring honesty, trust, respect, fairness, and responsibility. The data gathered were organized and analyzed using SPSS – version – 24. Descriptive and inferential statistical techniques were used to analyze the data. The finding of the study revealed that significant number of the respondents (35.5%) was moderate in their academic integrity; the academic integrity of 24.8 percent of the respondents was low; 22.1 percent of them were poor in their academic integrity; 16.1 percent of them demonstrated high academic integrity while the percent of the respondents who demonstrated very high academic integrity was 1.5 percent of the total participants. Moreover, multiple linear regression analysis revealed that all honesty, trust, respect, fairness and responsibility determine academic integrity equally. As educators' academic integrity contributes for educational quality in higher institutions,universities should design and implement a program to change educators' academic integrity mindset, and find out and address factors that can it.

1 Introduction

Educating people about the vitality of education in human life seems redundant. Many people are tired of listening to the issue, as it is common to hear education scholars and laypersons talking about education, most commonly criticizing quality of education negatively everyday. Daily activities of blames and counter blames of key stakeholders in education system have resulted in burnout state of mind due to unresolved stress for long period of time (Sarafino & Smith, 2011). Parents blame schools, schools blame parents, scholars criticize education system, politicians aggrandize their educational policies, teachers blame students and so many other dynamics and interplays are common in education discourse. But quality can be affected by a number of factors such as faculty administrators, staff and students (Tefera & Kinde, 2019)

These days, breaches in academic integrity have been reported on media, during public gatherings, and personal conversations and many scholars have been researching academic dishonest to forward ways to contain the practices (Almutairi, 2022; Solomon W. Feday, 2017 & Gillespie, 2003). Other things being constant, the honor and integrity of higher institutions in producing qualified, disciplined and productive citizen is being challenged by prevalence of academic misconducts both from teachers and students. However, many teachers are heard blaming students' misbehavior in schools,

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exam rooms and in their relationship with their instructors for deterioration of academic honesty in schools and universities. For instance, teachers reported that cheating and plagiarism are common in students' work (Jones, 2001 & Etter, Cramer & Finn, 2006). Many researchers have been focusing on studying problems of integrity as students' dishonest (Tefera & Kinde, 2019; Solomon, 2017; Mabratu, 2014; Devis, Grover, Becker & Mcgregor, 1992 & Greene & Saxe 1992) and fewer of them addressed the breach of integrity by teachers.

The problem of academic integrity cannot be only a problem of students as there are many stakeholders in higher education and teachers are one of them. Teachers of academic institutions can also have contributions for the challenges. Efforts, courage, perseverance, motivation and commitment they made to equip their students with the required skills and knowledge should be examined to identify whether they are up to the standards or not. The preparation they make, the effort they exert to teach and assess achievements, materials they produce for students, time they invest for teaching, and the like look problematic because significant numbers of teachers seem relied more on gaining more income to survive in their personal life than the life of their students. But "a good teaching comes from the identity and integrity of the teacher. . . " (Palmer, 2007; *P*. 13).

Academic staffs can play significant role in deterioration of education quality because of problems with commitment, trust, honest, fairness, respect and responsibility because their positive impacts on students comes only if they have developed sense of ownership which encourage them to maintain the essential ethics of academic integrity that are vital for achieving education qualities at different levels (CIA, 1999). Some findings indicated that the status of rules and norms of the academia in higher institutions is failing to align with the expected social contracts (Jones, 2001) of ensuring academic integrity, which reflects the core values in a society such as mutual respect, trust, honesty, transparency, fairness and accomplishing own responsibilities. It is assumed that establishing and maintaining academic integrity is a fundamental element in the process of assuring quality of education in Ethiopian higher institutions than other materialistic components.

Hence, the concept of quality education and its components, status, threats and challenges should be points of analysis on continuous bases even though its meaning is blurry and argumentative one (Sayed & Ahmed, 2011) from various perspectives. Scholars should continue researching issues in education to come up with better understanding and practices in the area as quality of education is determined by attributes of educators, students, education policy, curriculum, teaching-learning settings, educational leadership and parents of the learners. However, researching how all these components impact education quality and at all parts of the world at a time is difficult if not impossible. The point of focus in this paper is specific to explaining academic integrity of educators assuming that it can be one of the factors that can determine quality education (CIA, 1999).

Academic integrity is vital to theoretical studies and institutions where students, teachers and administrative staffs develop sense of trust, fairness, respect, honesty and responsibilities in their learning, teaching and administrative services in order to produce ethically sound, morally upright, trustworthy and well-mannered graduates that can serve as good professional and behavioral models in the larger society. However, scientific writings, scholarly speeches, public conversations and the general public complain serious problems in academic integrity very vividly. Challenges and problems of Ethiopian education quality mainly emerge from increasing prevalence academic dishonesty. The status of academic integrity in higher institution is best explained by CIA as follows, which may be true in Ethiopian context too.

Higher education and society benefit when colleges and universities have standards of integrity that provide the foundation for a vibrant academic life, promote scientific progress, and prepare students for responsible citizenship. Many institutions, however, have neither defined academic integrity nor expressly committed to it. Others explain academic integrity merely by listing behaviors that are prohibited rather than by identifying values and behaviors to be promoted (CIA, 1999, P. 4).

Critical look into trends of public behaviors indicates that there have been deteriorations of personal, institutional and national integrities and that was why Montefiore and Vines (1999; PP. iii) asserted that ". . . a widespread collapse of confidence in the integrity of public life presents peculiar dangers for societies. . . " Societal morals and ethical behaviors have been transforming, changing, being substituted and discarded to the level of challenging human co-existence and what we have been witnessing in the public spheres in our country, Ethiopia, are a clear indication that personal, institutional and public integrities are under clear threat. Schools, work places and interpersonal communications are ridiculed by breaches of honesty and trustworthiness, lack of fairness, absence of respect and deterioration of responsibilities. Academic dishonesty in education institutions, rampant corruption in governmental and private organizations, rambling frauds in public services and disgusting interpersonal communication are all intriguing quest to know about and solve them. Researching integrity in its academic, political and social contexts sounds more than ever before because of the challenges we are encountering as a nation. Above all, it is convincing to research academic integrity because educational institutions are establishments where generations are scaffolded to be a good citizen. Academic integrity is essential in instructional process because it helps to focus on highest standard of excellence in learning and to develop ethical decision making perspective (Guerrero-Dib, Portales-Derbez & Heredia-Escorza (2020).

Based on the gaps of studies described above, the researcher paused the following research questions: (1) What is the level of academic integrity among university academic staff, and (2) How much educators are honest,trust, respectful, faire and responsible in their academic behavior; and (3) How much honest, trust, respectful, faire and/or responsible determine academic integrity. Assuming that studying educators' academic integrity and describing its prevalence and features will have immense contributions for enhancing quality education as theoreticians, policy makers and practitioners learn more out it. Hence, the major objective of this study is to describe prevalence and features of academic integrity among university educators.

Conceptualizing Academic Integrity

As described by Bretag (2016), Macfarlane, Zhang and Pun (2014) and others, the concept of academic integrity is very multifaceted and defined by scholars from various disciplines and it is not easy to explain in concise and agreed up on way. In order to minimize the complex interpretations of the concept, these scholars have tried to define it operationally in line with the issue they have intended to research or write on.

In many of the literature reviewed for the purpose of this study, it is defined operationally and descriptions of the concept given below are indications of how varied the interpretations are. For instance, the following interpretations of academic integrity are extracted from various literature.

In ICAI define academic integrity as "a commitment to six fundamental values: honesty, trust, fairness, respect, responsibility, and courage" (ICAI, 2021: P. 4).

"Academic integrity is an important part of the education process, which is a commitment and moral code in the academic world based on the fundamental values of honesty, trustworthiness, fairness, respect and responsibility" (Sunawan, Nugroho, Sutoyo & Susilawati, 2019: P. 219)."

"Academic integrity entails commitment to the fundamental values of honesty, trust, fairness, respect, responsibility, and courage" (Fishman, 2014; cited in Holden, Norris & Kuhlmeier, 2021: P. 1).

Essentially, the definitions emphasized values, commitment, honesty, trust, fairness, respect and responsibility demonstrated by stakeholders of education mainly teachers, students and administrative staffs of educational institutions. Based on these definitions, academic integrity can be conceptualized as educators' commitment to these values in their scholarly engagements in higher institutions in the context of the current study.

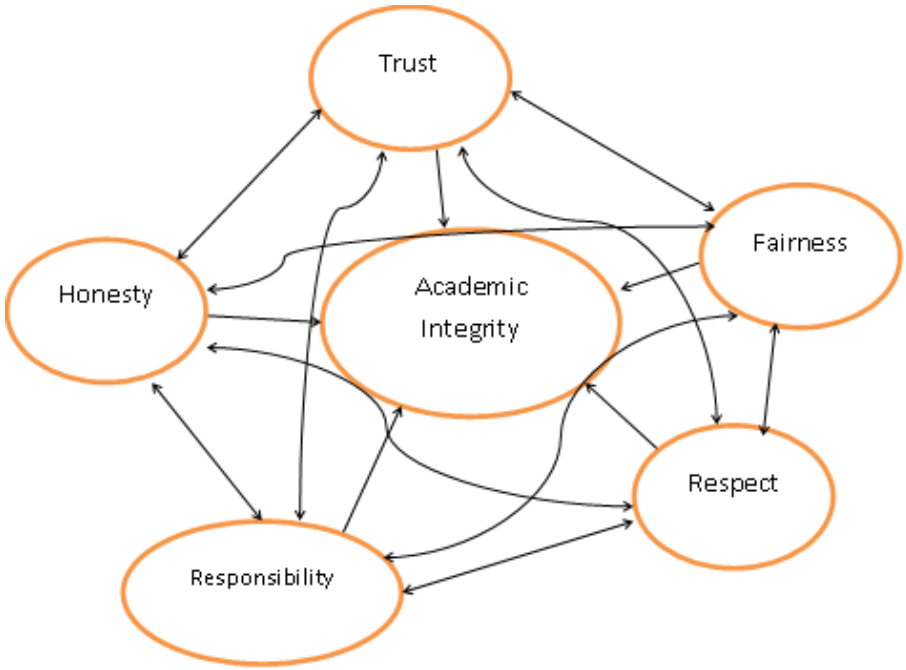

Figure 1: Conceptual framework

Perspectives on Integrity

Various literature described integrity from different points of view (Cox, Caze & Levine, 2021; Huberts, 2018; Schöttl, 2015 & Macfarlane, Zhang & Pun, 2014) but Stanford Encyclopedia of Philosophy is inclusive in presenting the perspectives. In Stanford Encyclopedia of Philosophy revised by Cox, Caze and Levine (2021) discussed integrity as the integration of self, maintenance of identity, standing for something, moral purpose and a virtue. However, Brenkert (2004) and Montefiore (1999) concluded that interpretation of the concept of integrity is still argumentative and needs further clarification and range of various viewpoints, from those describing integrity as wholeness to those scholars who defined integrity as model moral behavior, or integrity as individuals value of behaving in line with certain national and international codes and laws (Six & Huberts, 2008).

Integration as Maintenance of Identity: The underlying assumption of these perspectives is focused on commitments, "identity conferring commitment" as coined by Cox, Caze and Levine (2021), in interpreting integrity and they describe integrity in terms of how persons recognize themselves with most deeply held life convictions. In this sense, the term commitment is nearly defined as set of promises, convictions, intentions and relationships of one's trust and expectancy that can be displayed intentionally, unintentionally, in private or with the knowledge of others and with commitment to institutions, people, traditions, principles, causes, projects, ideals, and others (Cox, Caze & Levine, 2021). Integrity as integration of identity perspective is mainly implied in the works of (Williams, 1973).

According to Williams (1973) identity conferring commitment is equivalent to life identity, very existence, of a person or his/her character and people lacks meaning of living unless they are driven forward by the conatus of needs, life scheme and curiosity. In this approach, integrity is not explained in terms of conformity or compliance to the intentions of others but it is primarily viewed as an individual's persistently held truth. Not all commitment to persons, object, values and concepts are permanent and they are subjected to unavoidable conflicts and dynamics of changes. Realizing this nature of commitment of integrity, philosophers have explained various aspects of integrity to differentiate pillars commitment in an individual's integrity (Cox, Caze & Levine, 2021) as a person's commitment to honesty, trust, respect, being fair and taking responsibility (Waters, 2022).

Self-Constitution View of Integrity: In the self-constitution view of integrity, the central point in interpreting integrity are views of one's present self and future self. Integrity constitutes both the intention to behave on principle in accordance with rationales confirmed by oneself as one behaves and his/her future self, and having a comprehensible lifelong intention and the courage to realize it. One must perform on set of one's rational and approved future self that reflect the issue satisfactorily. There is hypothetical appropriate correlation between one's current plan and future actions that defines one's integrity (Cox, Caze & Levine, 2021).

A prominent advocator of this view of integrity is Christine Korsgaard. In her work entitled *Self-Constitution: Agency, Identity, and Integrity*, Korsgaard (2009) explained integrity in constructivist Kantian perspective. According to the author, integrity is not described in terms of aspired and imagined excellence of one's very existence in life in which failure to reach the ideals in life result equated with absence of integrity, loss of life or lost self. In her explanation of the moral law is the law of self-constitution, it is implied that integrity, which makes a person a good person, is the result of mechanism by which one make intra-active, interactive, consistent, unified and wholistic self and someone's continuance of himself/herself into well and good at being a person.

Integrity as Standing for Something: This perspective of integrity can be called Calhoun's perspectives because she was Cheshire Calhoun who explained integrity as a social virtue where an individual value behaving in accordance with the role s/he has in his community. Contrary to explaining integrity in terms of one's self-integration and identity which is mainly a private personal issue and quality of one's care of the self, integrity is largely a social virtue and interpreted in line with an individual's relationship with others in a given society (Calhoun, 1995). According to Calhoun (1995), integrity is both consistent confirmation of one's personal values and striving to find out best and acceptable decisions acceptable by members of the community. Integrity is an issue of owning appropriate respect, a process of confirmation of what a community regards as worth doing and valuable and respect for the judgment of others.

Integrity as Moral Purpose: This can be called moral integrity as one can conclude from the works of Ashford (2000) or Halfon (1989), Utilitarianism, Integrity and Partiality and Integrity: A Philosophical Inquiry respectively, analyzed by Cox, Cazeand Levine (2021). Even though there are variations among scholars in this category in ways of defining integrity in terms of moral integrity, their explanation of integrity centers morality.

For instance, as described by Halfon (1989) in a process through which a person is dedicated to search a moral life using his/her intellectual obligation that urges them to understand the needs of such a life in living. According to him, a man of integrity is the one who has conceptual clarity, logical consistency, impart relevant empirical evidence, enforce limitations on their behaviors, seeks a commitment to do what is best in a community, and keen to recognize and evaluate pertinent moral deliberations (Halfon, 1989). Ashford (2000) also described integrity as objective perception of the real moral obligation and a person integrity is the one who cannot be morally mistaken.

Integrity as a virtue: Virtue is the center of description and explanation of integrity. The concept of virtue is defined by various philosophers and writers contextually. For instance, MacIntyre (1981) defined virtue as learned value that a person possesses and realize in practice that helps the person to attain goods of life. According to this perspective, integrity is a dynamic process of change where a person's convictions, values, beliefs, commitments, knowledge, desire and other personal virtues undergo changes in life through a strongly successful self-examination (Cox, Caze, & Levine, 2021). In this perspective, integrity is also explained as a virtue of self-monitoring, moral emotions or emotions of self-assessment such as regret, remorse, guilt and shame (Pugmire, 2005; cited in Cox, Caze, & Levine, 2021).

Taking the explanations of these the perspectivesare vital in understanding the essence of integrity in the context of educators in higher institutions. One's commitment, being principled, moral upright and social values, directly or indirectly, constitutes the

values (honesty, trust, respect, fairness, responsibility and courage) identified by CIA (1999) as pillars of academic integrity. For instance, the intention this study was to measure educators' commitment to being honest, trustworthy, respectful, fairness and taking responsibility.

2 Methodology

Conceptually, integrity and its components: trust, fairness, respect, sense of responsibility, and honesty are constructs common to human personality despite their variations in magnitude. It is believed to be a cross-cutting issue that demands objective investigation and utilization of the knowledge being generated. Hence, the study was framed and executed as per the principles, assumption and methodologies of positivism. Quantitative was the appropriate approach because it enabled us the researcher to conceptualize the study procedures and have standard instrument to measure the level of educators' academic integrity.

It was assumed that the best research design preferred for this study was cross-sectional descriptive where major values of academic integrity was investigated by collecting data from educators teaching in Dilla, Wolayita and Bonga universities in southern Ethiopia as it helps to take samples from different sects of a population at a time and generalize knowledge generated based on the sample descriptions taken from the population.

2.1 Procedure

All educators working in eight universities (Hawassa, Dilla, WolayitaSodo, Arba-Minch, Bonga, Jinka, MizanTeppi and Wolkitie Universities) in SNNPR of Ethiopia were population of the study but Dilla, Wolayita and Bonga were randomly selected as study site and academicians teaching in these universities were the target population. Then, the three universities were randomly selected after all the eight universities were purposively categorized into four categories as first, second, third and fourth generation universities. At the time of data collection, academic staff of Dilla, Wolaita and Bonga universities were 1154 (Sources, Dilla University Academic Programs), 1143 (University Official website, 2022) and 295 (Biniam Genet & Amanuel Shibiru, 2020). The total population size was 2592. Then, sample size was determined using the formula (Kothari, 2004) mentioned below where all the figures were added. Finally, educators are selected using systematic sampling technique.

$$n = \frac{N*Z^2*P*Q}{e^2(N-1)+Z^2P.Q}$$

Where, n = the sample size; N = Number of educators in the selected universities; Z=the standard normal value at the required confidence level (1.96) at confidence level 95%; P=an estimate of the population proportion, which is 0.5; Q=1-P and e = the maximum acceptable error margin or the confidence interval which is expressed in decimal (0.05).

$$n = \frac{2592*1.96^2*0.5(1-0.5)}{0.05^2(2592-1)+1.96^20.5(1-0.5)}$$

Hence, the sample size is calculated is 335 (334.685).

Then, the number of participants from each university was calculated proportionally as follows:

$$n_{(Dilla\,University)} = \frac{1154}{2592} * 335 = 149;$$
$$n_{(Wolaita\,University)} = \frac{1143}{2592} * 335 = 148$$
$$n_{(Bonga\,University)} = \frac{295}{2592} * 335 = 38$$

Then, systematic sampling technique formula (K = N/n, where K, N and n represent systematic sampling interval, population size and sample size respectively) was used to identify specific participants from each university and every 8th instructors, assistant professors, associate professors and technical assistants in the lists where selected and made to participate in the study.

Finally, letter of permission for data collection was granted from Dilla University Research and Technology Transfer Vice President Office and Research and Dissemination Office of the three Universities for communicated for the purpose. Then, the selected participants were communicated through their departments in person and made to fill the data collection instrument after the necessary explanations of the purpose the study and consent were made. Then, they took a week to compete the questionnaire. First, from 15-22 June 2022 GC., data were collected from the selected educators from Dilla University. Then, from 10-16 July 2022

GC. data collection was made at Wolaita University. Finally, from 14-23 August 2022 GC., data collection was conducted at Bonga University.

2.2 Instruments

A questionnaire having three sections was used in the study. The first section contains introduction and consent while section two includes demographic data. The third section was a scale items adapted to measure educators' academic integrity. Academic integrity scale (AIS) having 17 items and seven rating levels: very appropriate (5), appropriate (4), neutral (3), inappropriate (2), and very inappropriate (1), which was constructed by Ramdani (2018) was adapted and used to measure educators' levels of academic integrity in this study. The scale has five subscales: honest (5 items), fairness (4 items), respect (3 items), trust (3 items) and responsibility (2 items). Ramdani (2018) claimed that the scale has a total reliability coefficient of the scale 0.866 with interrelated and single dimensional of the five aspects. Using pilot test of the instrument on 32 instructors from Hawassa University, it was found that the scale items have Cronbach alpha reliability of 0.923. Moreover, summary of item and scale statistics of the final study are given in table 2 below.

Table 1: Summary Academic Integrity Item Statistics

	Mean	Min	Max	Range	Max/Min	Variance	Scale	N of Items
Item Means	2.938	2.149	3.937	1.788	1.832	.239	Mean=49.95;	17
Item Variances	.961	.553	1.717	1.163	3.104	.112	SD=12.699	17
Inter-Item Covariances	.533	.304	1.300	.996	4.278	.027		17
Inter-Item Correlations	.571	.355	.917	.562	2.581	.012		17

The data generated using survey questionnaires were organized, coded and analyzed, using SPSS version 20. Descriptive statistical techniques like frequencies, measures of central tendencies and measures of dispersion were used. To interpret the sampled educators' scores of academic integrity, the raw data was transformed to standard scores and ranges of determining levels of academic integrity were developed in line with the area under normal curve. Theoretically, academic integrity scores of the respondents were dichotomized as very high (>2 St. Deviation), high (1 through 2 Std. Deviation), moderate (0 through 1 St. Deviation), low (-1 through 0), poor (-1 through -2 St. Deviation) and poor (< -2 St. Deviation).

In the analysis, interpretation and presentation of the results, questions: (1) What is the level of academic integrity among university academic staff; (2) How much educators are honest, trust, respectful, faire and responsible in their academic behavior; and (3) how much honest, trust, respectful, faire and/or responsible determine academic integrity were presented in their order in here one after the other.

3 Results

All the respondents were contacted in person and 100% response rate was secured, i.e. all the 335 respondents returned the questionnaire they were given to fill. Accordingly, 293 (87.5%) males and 12 (12.5%) females with age rages of 18 – 24 years (8, 2.7%), 25 – 45 years (299, 89.3 %) and more than 45 years (27, 8.1%) have participated in the study. The instructors were selected from 8 colleges/institutes/schools/faculties and 40 departments have participated in the study.

Among the respondents, 278 (83%), 34(10.1%), 13 (3.9%), 9(2.7%) and 1 (0.3%) were MA/MSc graduates, assistant professors, PhD holders and associate professors respectively. Most of them, 114 (34%), have served for 11 to 15 years while 98 (29.3%) had work experience of 6 to 10 years; 66 (19.7%) have been working for more than five years; 33 (7.3%) of the respondents have been engaged in work for more than 16 to 20 years; and 24 (7.2%) of the respondents had work experience of more than 20 years. Out of the total respondents, 283 (84.5%) respondents have attended HDP (higher

Table 2: Frequency distribution of respondents' college/institute/school/faculty

No.	Faculty/School/College/Institute	Frequency	Percent (%)
1	Education and behavioral sciences	28	8.4
2	Engineering and Technology	128	38.2
3	Social Science and Humanities	36	10.7
4	Law	6	1.8
5	Medicine and health sciences	56	16.7
6	Agriculture and natural resources	35	10.4
7	Natural and computational sciences	26	7.8
8	Business and economics	20	6.0
	Total	335	100.0

Diploma Program), on-job one year pedagogical training program intended to equip instructors with some teaching skills and behaviors but 52 (15.5%) of them did not attend the program at the time of data collection. Moreover, 50 (14.9%) of the respondents were position (any) holders and most of them, 285 (85.1%) respondents were fully engaged in teaching and other related roles.

The study revealed that significant percent of the respondents, 35.5 percent, was neutral in their responses to the statements provides to measure their levels of academic integrity. For instance, in the case of the first item of integrity scale, about 43 percent of the respondents do not agree that honesty starts with a person; 33.1 percent reacted as neutral while 23.8 percent of them responded being trustful to oneself is appropriate and very appropriate. Significant number of the respondents, about 33.8 percent of them took a statement "honesty trains us to believe in our abilities" as very inappropriate or inappropriate; 22.7 percent were neutral in their response while 43 percent of the respondents reacted as appropriate and very appropriate.

In general, cumulatively, the number of those respondents who reacted to the ideas presented in the scale as very inappropriate and inappropriate was more than those who reacted as appropriate and very appropriate. For more details, refer to table 3 below.

Table 3: Frequency distribution of respondents' responses for each item in the academic integrity scale

No	Items	Frequency/Percent				
		1	2	3	4	5
H1	For me to be honest it starts from myself.	83/24.8	61/18.2	**111/33.1**	36/10.7	44/13.1
H2	Honesty trains us to believe in our abilities.	30/9	83/24.8	76/22.7	**93/27.8**	53/15.8
H3	I really appreciate friends who do the tasks with their own ability.	11/3.3	59/17.6	78/23.3	**102/30.4**	85/25.4
H4	I am sure that any work done honestly results will be satisfactory.	91/27.2	85/25.4	**108/32.2**	46/13.7	5/1.5
H5	Originality of ideas is an important thing to have when writing.	10/3	112/33.4	**123/36.7**	81/24.2	9/2.7
F1	I am happy to pass the course material to my friend.	4/1.2	76/22.7	**115/34.3**	106/31.6	34/10.1
F2	I am glad when a friend asks my idea in doing the lecture work.	2/.6	54/16.1	**124/37**	113/33.7	42/12.5
F3	I am active to participate in academic activities inside and outside of the campus.	8/2.4	93/27.8	**158/47.2**	63/18.8	13/3.9
F4	I love studying other people's research results.	30/9	96/28.7	**157/46**	47/14	5/1.5
R1	All students have equal opportunities to get involved in campus activities.	2/.6	45/13.4	**142/42.4**	109/32.5	37/11
R2	Regular academic evaluation is very important in the learning process.	—	34/10.1	68/20.3	**118/35.2**	115/34.3
R3	Trusting each other's friends is a solid foundation for collaboration on campus.	2/.6	50/14.9	140/41.8	**140/41.8**	3/.9
T1	I like to discuss how to cite the reference sources that lecturers present in the classroom.	30/9	124/37	**158/47.2**	19/5.9	4/1.2
T2	For me preparing the material before the lecture is a natural thing.	29/8.7	119/35.5	**163/48.7**	16/4.8	8/2.4
T3	I enjoy discussing college assignments with friends.	61/18.2	113/33.7	**114/34**	40/11.9	7/2.1
R1	Getting a scholarship is like having a responsibility to serve the nation.	29/8.7	119/35.5	**154/46**	24/7.2	9/2.7
R2	I feel a good image of campus is a shared responsibility.	127/37.9	102/30.4	47/14	47/14	12/3.6

Note: very appropriate (5), appropriate (4), neutral (3), inappropriate (2), and very inappropriate (1).

The mean value of the respondents' responses to the items in the scale is between 2 (inappropriate) and 4 (appropriate). As reported in table 4 below, the mean scores of academic integrity scale and its sub-scales: honest, fairness, respect, trust and responsibility are 49.95, 14.70, 12.33, 10.61, 7.56 and 4.75 respectively.

Table 4: Summary of descriptive statistics of academic integrity and its subscales (N = 335)

Measures	Academic integrity	Honesty	Fairness	Respect	Trust	Responsibility
Mean	49.95	14.70	12.33	10.6	7.56	4.75
Median	52	15	12	10	8	5
Mode	59	18	13	10	9	3
SD	12.70	4.84	3.01	2.43	2.30	1.92
Range	53.00	18.00	13.00	10.00	12.00	8.00
Minimum	26.00	6.00	6.00	4.00	3.00	2.00
Maximum	79.00	24.00	19.00	14.00	15.00	10.00

The ideal lowest and highest scores for the scale are 17 and 85. Out of the respondents, 10 (2.99%) of them has scored 50 (about the mean value), 157 (46.9%) scored below the mean value and 174 (51.94%) scored above the mean value. The descriptive statistics for honest subscale revealed that 140 (41.8%) of the respondents have scored 14 and below while 37 (11%) of them scored approximate to the mean value, 14.70, while 158 (47.16%) of the respondents scored above the approximate mean value. In terms of fairness, 134 (40%) have scored less than the approximate mean value; 34 (10.1%) scored the mean value; and 167 (49.85%) of them scored above the mean value. In terms of respect, the descriptive statistics revealed that 190 (56.7%) have scored score of ten and below; 6 (1.8%) scored 10 and 11 that is close to the mean value 10.61; and 139 (41.49%) scored above 11. In the case of trust, 155 (46.3%) scored below 7. 56, 54 (16.1%) scored 8 which is approximate to the mean value, 7.56; and 126 (37.61%) scored above the mean value. Moreover, statistics of the responsibility measure shows that 142 (42.4%) of the respondents scored 4and below; 93 (27.8%) scored 5, which is approximate to the mean value 4.75; and 100 (29.85%) of them scored above 5.

However, interpreting a raw score without norms of reference may not sound in terms of statistical assumptions there was a need to find out a standard domain to compare the academic scores of the respondents. Hence, other things being constant, to formulate standardized intervals to equate the academic integrity scores of the respondents, the raw data were converted to standardize scores and the following classes of the standard score were developed based on the assumptions of the area under the normal distribution because the researcher unable to find reference norm to interpret the scores obtained the academic integrity scale used in this study. As depicted in table 5 below, the majority of the respondents (35.5%) had moderate academic integrity; the academic integrity of 24.8 percent of the respondents was low; 22.1 percent of them were poor in their academic integrity; 16.1 of them demonstrated high academic integrity while the percent of the respondents who demonstrated very high academic integrity was 1.5 percent of the total participants.

Table 5: Frequency distribution of standard scores of the respondents' academic integrity

Z-scores interval	Corresponding score interval	Frequency	Percentage	Level of Academic integrity
> 2	> 74.95	5	1.5	Very high
1 through 2	62.65 – 74.95	54	16.1	High
0 through 1	49.95 – 62.65	119	35.5	Moderate
-1 through 0	037.25 – 49.95	83	24.8	Low
-1 through -2	< 37.25	74	22.1	Poor
< -2	None	None	None	Very poor

Similarity, scores of the sub-scales of the academic integrity: honesty, fairness, respect, trust and responsibility were converted to standard scores as given in tables 6, 7, 8, 9 and 10 below. About 32 percent of the respondent had moderate level of honesty in their academic behavior and 19.1 percent of them measured as having high level of honest. However, 26.3 and 22.4 percent demonstrated low and poor levels of honesty respectively.

Table 6: Distribution of standardized honesty scores of the respondents and their levels

Z-scores interval	Corresponding score interval	Frequency	Percentage	Level of honesty
> 2	> 24.38	—	—	Very high
1 through 2	19.54 – 24.38	64	19.1	High
0 through 1	14.84 – 19.54	108	32.2	Moderate
-1 through 0	9.86 – 14.84	88	26.3	Low
-1 through -2	5.02 – 9.86	75	22.4	Poor
< -2	None	None	None	Very poor

As indicated in table 7 below, 34.9 percent of the respondents were moderate in their level of fairness while 29 percent demonstrated low level of fairness. Moreover, 20.3 percent of the respondents demonstrated poor level of fairness and 13.6 scored high fairness.

Table 7: Distribution of standardized fairness scores of the respondents and their levels

Z-scores interval	Corresponding score interval	Frequency	Percentage	Level of fairness
> 2	> 18.35	6	1.8	Very high
1 through 2	15.34 – 18.35	44	13.1	High
0 through 1	12.33 – 15.34	117	34.9	Moderate
-1 through 0	12.33 – 9.32	97	29.0	Low
-1 through -2	9.32 – 6.31	68	20.3	Poor
< -2	< 6.31	3	0.9	Very poor

As reported in table 8 below, 36.7 percent of the respondents demonstrated low level of respect but 32.5 percent scored moderate level of respect. About 19 percent were poor in their level of respect while 10.7 percent score high level of respect.

Table 8: Distribution of standardized respect scores of the respondents and their levels

Z-scores interval	Corresponding score interval	Frequency	Percentage	Level of respect
> 2	> 18.35	—	—	Very high
1 through 2	15.34 – 18.35	36	10.7	High
0 through 1	12.33 – 15.34	109	32.5	Moderate
-1 through 0	12.33 – 9.32	123	36.7	Low
-1 through -2	9.32 – 6.31	65	19.4	Poor
< -2	< 6.31	2	0.6	Very poor

As depicted in table 9 below, the majority of the respondents (38.2%) of the demonstrated moderate level of trust in their academic behavior, 13.1 scored high and 1.5 very high but 24.5 and 21.8 percent of them displayed low and poor level of trust.

Table 9: Distribution of standardized trust scores of the respondents and their levels

Z-scores interval	Corresponding score interval	Frequency	Percentage	Level of trust
> 2	> 12.16	5	1.5	Very high
1 through 2	9.86 – 12.16	44	13.1	High
0 through 1	7.56 – 9.16	128	38.2	Moderate
-1 through 0	5.26 – 7.56	82	24.5	Low
-1 through -2	2.96 – 5.26	73	21.8	Poor
< -2	< 2.96	3	0.9	Very poor

In the table 10 below, the majority of the respondents (39.1%) demonstrated moderate responsibility, 15.5 percent had high level of responsibility and only 3 percent of them revealed very high level of responsibility but significant percent of the respondents, 33.7 percent, depicted low level of responsibility and only 8.7 percent scored poor level of responsibility.

Table 10: Distribution of standardized responsibility scores of the respondents and their levels

Z-scores interval	Corresponding score interval	Frequency	Percentage	Level of responsibility
> 2	> 8.59	10	3	Very high
1 through 2	6.67 – 8.59	52	15.5	High
0 through 1	4.75 – 6.67	131	39.1	Moderate
-1 through 0	2.83 – 4.75	113	33.7	Low
-1 through -2	0.91 – 2.83	29	8.7	Poor
< -2	< 0.91	—	—	Very poor

As indicated in table 11 below, Honesty, fairness, respect, trust and responsibility have significant positive correlation with each other and academic integrity. The leaner multiple regression analysis result revealed that honesty, fairness, respect, trust and responsibility determine academic integrity ($R^2 = 1$) when they are combined together.

Table 11: Correlation and Linear multiple regression result coefficients academic integrity and it's sub-scales

	AITOTAL	**Honesty**	**Fairness**	**Respect**	**Trust**	**Responsibility**
AITOTAL	1.000	.919	.889	.830	.838	.848
Honesty	.919	1.000	.804	.679	.633	.678
Fairness	.889	.804	1.000	.686	.633	.660
Respect	.830	.679	.686	1.000	.678	.626
Trust	.838	.633	.633	.678	1.000	.896
Responsibility	.848	.678	.660	.626	.896	1.000

Coefficients[a]

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	$3.233E^{-014}$	.000		.000	1.000
	Honesty	1.000	.000	.381	147982637.747	.000
	Fairness	1.000	.000	.237	93257291.048	.000
	Respect	1.000	.000	.191	86321630.906	.000
	Trust	1.000	.000	.181	53468654.877	.000
	Responsibility	1.000	.000	.151	44498490.776	.000

a. Dependent Variable: AITOTAL

4 Discussion

In this study, it is found that university educators' level of academic integrity and its subscales described as very high, high, moderate, low, poor and very poor The majority of the respondents (35.5%) had moderate academic integrity; the academic integrity of 24.8 percent of the respondents was low; 22.1 percent of them were poor in their academic integrity; 16.1 of them demonstrated high academic integrity while the percent of the respondents who demonstrated very high academic integrity was 1.5 percent of the total participants. Even though not academic integrity is not conceptualized as it did in this study, Behera (2022), in his work on "academic integrity and university teaching: A triangulation study on University teachers," argued that like their students, teachers are engaged in academic dishonest in the form of not neglecting their responsibilities, unfair judgment, motivate cheating, disclosure of exam questions before exam schedule, plagiarizing research works, discriminating students and receiving money from students to award marks but his objective was not to describe the level of academic integrity as it is conceptualized in this study. Moreover, Federal Ethics and Anti-Corruption Commission (2013) and Plummer (2012), cited in Solomon (2017), reported collaboration of lecturers of higher institutions with cheaters which in turn affects public perception towards teaching profession.

In terms of specific components of academic integrity studied, the study revealed that about 51.1 percent of the respondent had moderate and high levels of honesty in their academic behavior but 48.7 percent demonstrated low and poor levels of honesty. The existing literature show that honesty is the most researched aspects of academic integrity and many scholars have explained it from different perspectives in the context of educational system but many of them focuses on students' academic dishonest and the role of teachers in containing the practices and it has been researched with negative interpretation and mindset: perception, prevalence, causes and techniques of academic dishonest, for instance, Solomon W. Feday (2017).They also focus on advising teachers to be honest in their teaching. Hence, it is difficult to discuss the current finding in line with the previous ones.

The current study found that 48.5 percent of the re-

spondents were moderate and high in their level of fairness while and 49.3 percent of the respondents demonstrated low and poor level of fairness. The study depicted that55.7 percent of the respondents demonstrated low and poor levels of respect but 43.2 percent scored moderate and high level of respect. According to the results of the current study, the majority of the respondents (51.3%) of the demonstrated moderate and high levels of trust in their academic behavior but 46.3 24.5 percent of them displayed low and poor levels of trust. Moreover, the majority of the respondents (54.6 percent) demonstrated moderate and high levels of responsibility but significant percent of the respondents, 42.4 percent, depicted low and poor levels of responsibility.

Limitations

The first challenge of this study was inability to find standardized levels of academic integrity along which the raw stores obtained in the study can be rated and the researcher was obliged to transform the raw scores to standard scores and levels were set to judge the raw scores. Secondly, comparing and contrasting the findings of the current study with other previous research result was challenged due to absence prior research results describing the nature of academic integrity among university teachers both at local and national levels. The recent study by Almutairi (2022) on "effect of academic integrity of faculty members on students' ethical behavior" did reveal description of the nature and level of academic integrity among the faculty members.

5 Conclusion

The finding of the current study revealed that academic integrity of university educators can be explained at various levels where 1.5 percent, 16.1 percent, 35.5 percent, 24.8 percent and 22.1 percent scored very high, high, moderate, low and poor acidic integrity. The findings of the current study has immense implications on intervention, promotion and development of academic integrity in higher institutions because academic integrity in general and the educators' in particular is vital in teaching learning process because it determines development of scholarly communities and creation of strong civic engagement (ICAI, 2021). It influences moral and ethical behaviors of students (Almutairi, 2022) and learners' self-identity (Robert & Hai-Jew, 2009; cited in Almutairi, 2022). Moreover, it helps learners and teachers freedom to build new ideas, knowledge and creative works, and to respect and acknowledge the work of others in their academic behavior (www.uow.edu.au).

Hence, Teachers should be honest, fair and trustworthy in their academic exercises and behaviors (Behera, 2022).Stimulating culture of academic institutions - from the higher leaders to supportive administrative staffs and students, and family to the larger society should make integrity their daily discourse. They have to organize seminars, workshops and trainings on regularly bases. It is possible to enhance academic integrity by developing academic environment, enlightening teaching, enhancing institutional support for instructional process, and working to reduce institutional challenges in academic arena (Gallant, 2008, p. 89).

Moreover, universities need to have continuous, specific and applicable academic integrity development policies and strategies. Finally, factors that affect academic integrities should be studied so that universities work on it to reduce their impacts.

Data Availability

The data collected and analyzed to discuss academic integrity in this study are available on request from the author. The data cannot publicly available due to ethical issues.

Conflict of Interest

This research was funded by Dilla University and the author declares no competing of interest.

Ethical Approval

Consent was sought form the research participants. Confidentiality was maintained in reporting information.

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