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Nurturing education quality through impactful research: Insights from Bahir Dar Journal of Education July 2023 issue

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Welcome to the third issue of Bahir Dar Journal of Education for the year 2023. In this issue, we feel that we have made progress in fulfilling some of the promises we made to our readers. As previously communicated (Worku, 2023), the editorial team of Bahir Dar Journal of Education has been working to enhance the overall standard of the journal. One of our priorities in this regard is to improve the quantity and diversity of manuscripts we publish in each issue, and we are pleased to report that we have met this target in the present publication.

By including a total of eight manuscripts, excluding this editorial note, in this particular issue, we have set a new record for the journal. This increase in the number of manuscripts demonstrates our commitment to providing our readers with a wider range of research and perspectives. Furthermore, we have included a book review, a new manuscript section, in this issue. This addition indicates our dedication to expanding the diversity of manuscripts that our journal publishes. By incorporating a book review section into our journal, we aim to provide our readers with valuable insights into relevant literature and promote critical engagement with educational scholarship. The diversity of the manuscripts promises to offer a rich and multi-faceted discourse for readers interested in a wide spectrum of topics related to education.

The manuscripts in the present issue are authored by a total of seventeen scholars from five universities. They cover a variety of topics pertaining to education. More specifically, the manuscripts cover topics in 21st-century pedagogical skills, authentic learning, parents' concerns about the negative effects of television viewing, organizational citizenship behavior, time management practices of student teachers, teacher mediation, civic engagement of school adolescents, and action research. The diverse topics covered in this issue indicate the breadth and depth of research being conducted in the field of education. In the following paragraphs, we highlight the key themes of each manuscript and provide glimpses of the invaluable contributions that the authors have made to the realm of education research.

To begin with, the first article of the present issue, authored by Bethelhem Yasin and Yekoyealem Desie, presents a research report on the extent and areas of parents' concern regarding the harmful effects of television viewing on their children's behavior and school performance. Using a mixed-methods design and data collected from 390 parents and Parent-Teacher-Student Association members, the authors found moderate-to-high levels of concern

among parents about the adverse effects of TV viewing on children's behavior and school performance. Given the rapidly changing digital media environment, the authors suggest that future research is needed to address the topic.

The second article by Berhan Kefyalew Taye and Melaku Mengistu Gebremeskel investigates Organizational Citizenship Behavior (OCB) and its antecedents among the instructors of Begemidir College of Teacher Education, Ethiopia. In this study, a correlational survey design was used, and data were collected from 96 instructors through a questionnaire. The results of the study showed that the instructors had above-average mean scores in all OCB dimensions and that organizational commitment and support had a moderate to strong relationship with OCB dimensions. Based on their findings, the authors suggest that the college should focus on enhancing organizational commitment and supporting to promote sustainable organizational development through OCB.

The third article of the current issue by Amsalu Molla Getahun, Mulugeta Yayeh Worku, and Alemayehu Bishaw Tamiru looks into instructors' understanding and competence to practice 21st-century pedagogical skills at three Ethiopian universities. Using a qualitative case study design, the study provides a comprehensive analysis of how instructors conceive and practice 21st-century skills in higher education. Results revealed that while participants believed 21st-century skills were important, they had a limited understanding of them and faced difficulties practicing these skills in the teaching-learning process. The study highlights the need to enhance instructors' understanding and competence in practicing 21st-century skills and presents implications for future research and policy initiatives.

Then, in the fourth article, the authors, Wendu Mesele Abebe and Abebe Gebretsadik Weldearegawi, analyzed the effects of teacher mediation on students' writing skill self-efficacy beliefs. The study was conducted at Hawassa University using a quasi-experimental design. In the study, the experimental group performed better than the control groups in various aspects. The results of the study showed that teacher mediation positively impacted self-efficacy beliefs sources. This study highlights the role of teacher mediation in enhancing students' self-efficacy belief, which positively impacts their writing performance. At the end, the authors call for further research on the Mediated Learning Experience (MLE) approach in other language skills.

In the fifth article of this issue, Azmeraw Belay Bogale and Belay Tefera Kibret examined how parents, schools, and social media affect the civic engagement of school adolescents, with a focus on the mediation role of perceived civic competence and sense of community connectedness. The study used a correlational design, confirmatory factor analysis, and structural equation modeling to investigate the direct and indirect effects of parental civic socialization, school civic experiences, and social media. Results show that parental civic socialization and school civic experience had significant indirect effects on civic engagement, while social media use had a direct effect on civic engagement. The study also provides implications for educational practice and parenting.

The sixth article of the present issue, authored by Atalay Mesfin Anteneh and Melaku Mengistu Gebremeskel, aimed to analyze the time management practices of students in a teacher education college, along with multitasking, procrastination, task prioritization, and technology use. The study employed a descriptive survey design of the quantitative approach,

and data were collected through a questionnaire, analyzed through mean, one sample t-test, independent samples t-test, and analysis of variance. The study concludes that students' time management practices were unsatisfactory, and their academic performance was obstructed by poor time management practices.

The seventh article in this issue explores the use of authentic instruction in upper primary mathematics lessons in Bahir Dar city, Ethiopia. The authors, Tesfaye Munye Abate, Tilahun Gidey Gebremeskel, and Yalew Endawoke Mulu, used a mixed-methods approach, collecting data through observation, interviews, and questionnaires from mathematics teachers. In the study, they found that authentic instruction was not practiced. They also identified the following four significant challenges: lack of understanding and skills in authentic learning, less suitable curriculum, inflexible and short schedules, and large class sizes. The authors recommend efforts to improve teacher training, curricula, schedules, and class sizes for the successful implementation of authentic instruction in mathematics lessons.

The eighth and last manuscript of the present issue is a book review by Animaw Tadesse Bayih. In his review, the author provides a detailed evaluation of Valsa Koshy's seminal book, "Action research for improving educational practice: A step-by-step guide, 2nd edition", and highlights its usefulness for educators who want to engage in action research to improve their practices. As commented by the reviewer, the book is appropriate for those who seek to understand action research as a research methodology and study social problems, particularly in the field of education. The book can appeal to a range of readers, as noted by the reviewer, but educational practitioners are the ones who stand to benefit the most from it.

To sum up, in the July 2023 issue of Bahir Dar Journal of Education, we present a rich array of research work that offers significant insights into various aspects of education in Ethiopia. From the challenges faced in implementing 21st century skills, authentic learning, and time management to parents' concerns over television viewing's impacts on children's education and well-being, the papers attempt to address various educational challenges. Each manuscript brings unique insights and recommendations that collectively contribute to the ongoing quest for quality education.

We hope that the manuscripts featured in this issue will stimulate reflection, provoke thought, and spark discussions on how to improve the quality of education. Furthermore, we trust that the insights and recommendations presented in these manuscripts will inform and inspire further research, foster the improvement of educational practices, and nurture the delivery of quality education in Ethiopia and elsewhere.

As many eminent scholars state, research is pivotal to nurturing education quality. By generating innovative ideas and solutions to various impediments, presenting evidence-based information on proven methods and the need for change, promoting a culture of continuous improvement in education, suggesting ways on how to improve learning outcomes, and ensuring that education is aligned with changing economic, social, and environmental needs, research plays an indispensable role in enhancing the quality of education (Tseng & Nutley, 2014; Welsh, 2021). Fostering an educational system that equips students with the skills and knowledge required to thrive in the world today and overcome future challenges is only possible through impactful research.

In this regard, we sincerely hope that the readers of the present issue recognize the importance of our manuscripts and their role in promoting and nurturing quality education. Furthermore, they would find the manuscripts insightful in their pursuit of professional and academic growth. The journal remains committed to promoting a culture of learning and facilitating academic discourse to influence policy, practice, and decision-making at local as well as international levels.

Finally, we would like to extend our heartfelt gratitude to the authors, reviewers, and editorial team for their invaluable contributions in ensuring the success of this issue. Together, let us continue striving towards nurturing education quality and working towards equitable, inclusive, and transformative education systems worldwide.

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Parents' concerns about the negative effects of television viewing on children's behavior and school performance in Addis Ababa, Ethiopia

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Abstract

Very little is known regarding parents' concerns about the undesirable effects of unsupervised TV viewing on children's development in Ethiopia. This study investigated the extent and areas of parents' concern about the harmful effects of TV viewing on children's behavior and school performance. A mixed-methods study design was employed. Quantitative data were collected from 390 parents of schoolchildren aged 7–15 in Addis Ababa using a standardized measure of parental concern. Qualitative data were also collected from Parent-Teacher-Student Association (PTSA) members using FGDs. Results showed a moderate-to-high level of parental concern about the adverse effects of viewing on children's behavior and school performance. The findings further indicated that children's learning of offensive language, premature exposure to sexual content, engagement in violent activities, and drug use were reported as parents' areas of concern in relation to children's behavior. In the same way, disengagement in academic activities, mainly not doing homework, not studying, and getting poor exam results have been reported as parents' areas of concern in relation to school performance. Statistically significant differences in level of concern across parents' and children's socio-demographic characteristics were observed. As children's screen and digital media environment is fast-changing in Ethiopia, future studies in the area by child developmentalists, educationalists, and health professionals are highly warranted.

Introduction

Children's behavior and schooling are substantially influenced by the social environment they live in. One of the influential social contexts that profoundly shapes children's development is the media (Bronfenbrenner, 1986; Heim et al., 2007). Media is used by children for various purposes in their daily lives, such as obtaining information, entertainment, and education. Children's access to the media is increasing more quickly today than ever before. According to Rideout, Foehr, and Roberts (2010), children between 8 and 18 years old collectively spent an average of 7 hours and 38 minutes on media (TV, computers, video games, music, print, cell phones, and movies) daily. Rideout and colleagues further

indicated that as a result of the explosion in mobile and online digital media technologies, today's children are becoming multitasking in their media use and experience a significant rise in their total media exposure time.

Despite access to so many new media technologies, television continues to control the media lives of young children (Rideout et al., 2010) including in Ethiopia (Erena & Gutema, 2021; Gebru, 2021). Television viewing has many functions in children's lives. Watching educational and supervised entertainment programs has been associated with positive child development outcomes (Wilson, 2008), increased friendliness, cooperation, self-control, delay of gratification, and reduction of stereotypes (Saleem & Anderson, 2012), better learning and language skills, high intelligence scores, and problem-solving skills (Barkin et al., 2006), and improved cognitive and academic skills (Anderson et al., 2017).

Although careful and supervised uses of TV benefit children most, negligence uses may impede children's healthy behavioral development and school performance. Exposure to excessive and unsupervised viewing has been associated with multiple negative child development outcomes such as increased hostility and aggression (Anderson et al., 2003), unsafe sexual behavior, early initiation and experience of sex (Escobar-Chaves et al., 2005; Ward, 2002), learning of bad language and repeated use of it (Cressman et al, 2009; Kaye & Sapolsky, 2009), poor academic engagement and lower school performance (Ballard, 2003; Pagani et al., 2010), substance use (Armstrong et al., 2010), diminished attention (Christakis et al., 2004; Nikkelen et al., 2014), sleep problems (Arora et al., 2014), and conduct problem, hyperactivity and poor prosocial behavior (Limtrakul et al., 2018; Poulain et al., 2019).

Television viewing negatively affects children's development in different ways. Displacement theory suggests that viewing simply replaces time that might normally be invested in important activities such as reading, doing homework, playing and social interaction (Moses, 2008). Observational learning theory (Bandura, 1973; Bandura & Walters, 1977), on the other hand, emphasizes that children learn a variety of undesirable behaviors from models or TV characters through imitation. Cultivation theory (Gerbner et al., 2002) states that repeated exposure to television misleads children's understanding of objective reality by influencing them to develop behaviors and attitudes that are more consistent with a media-constructed version of reality. Television's influence on children is related to both the amount and type of content they are exposed to (Dietz & Strasburger, 1991).

The prevalence of television viewing among children and the corresponding surge in exposure to inappropriate content have become a subject of discussion for parents, educators, researchers, and policymakers across the globe. The Council of the American Academy of Pediatrics (2013) has expressed its concern that children are heavily exposed to television, much more than the recommended two hours of quality programming per day. Gigli (2004) also reported that in developed countries, there have been a series of concerns over growing levels of aggression, obesity, substance abuse, eating disorders, and unsafe sexual behavior among youth, principally attributed to children's increased exposure to the media. This could be even worse in low-income countries, where resources limit domestic production and the majority of children's programs are imported, and where much of the content contains culturally irrelevant characters and messages, and at times conveys messages that are contrary to cultural values.

According to Nathanson (2015), parents not only provide access to the media, but they also play a critical role in shaping children's media experiences. However, parents are expressing their grave concerns about the harmful effects of television viewing on children, particularly as the entertainment industries, children's TV advertisements, and TV options are growing rapidly (Carlsson, 2006).

According to Cantor et al. (1996), parental concern refers to parents' attitude towards potential negative effects of viewing harmful television content. Parents' concern has been associated with a host of personal and environmental factors. According to Pearson et al. (2011), parents' concern about the harmful effects of television viewing was related to personal beliefs about television viewing, children's actual viewing habits, and the home environment. Similarly, Chan and McNeal (2003) indicated that parents' concerns depend on the demographic characteristics of parents and children. In their study among Chinese parents, Chan and McNeal (2003) reported that mothers, older parents, parents with a higher educational level, parents of younger children, and parents with a medium household income had higher concerns regarding the negative effects of television.

A number of studies in the West (e.g. Nathanson, 2001; Valkenburg et al., 1999; Warren, 2002) have documented the effects of TV viewing on children and the concerns and practices of parents to mitigate the harmful effects of excessive viewing. However, such issues have started to attract the attention of researchers in sub-Saharan African countries only recently (Miller et al., 2018; Ngula et al., 2016; Ngula et al., 2018; Ofosu-Brako, 2022).

In Ethiopia too, although there have been significant changes in children's access to digital and satellite TV channels in recent days, studies that directly pertain to children's screen media usage and associated parental concerns about the effect of viewing on children's development are scarce (Gebru, 2021). Whether TV viewing has adversary effect on children's developmental trajectory is unclear. The studies on TV viewing and its influence in Ethiopia is less consistent. Some studies examined the influence of television viewing habits of primary school children in Addis Ababa, Ethiopia, and their results suggested that children viewed on average 2.32 hours of television per day (Desie et al., 2021). Another study that examined the TV viewing habits of high school students in Ethiopia indicated that most of the students were heavy TV viewers, and TV was rated as the favorite medium by them (Erena & Gutema, 2021). The absence of studies in this area means that parents and other socializing agents do not have the opportunity to acquire evidence-based knowledge about the harmful impacts of excessive TV viewing on children's development. Furthermore, it compromises the quality and appropriateness of the efforts they put in place to mitigate the detrimental effects of viewing. The present study was designed to examine the extent and areas of parents' concerns about the impact of television viewing on children's behavior and school performance in Addis Ababa, Ethiopia.

Methods

Design and Participants

We employed a mixed methods design in which both quantitative and qualitative data were collected independently but at the same time. The quantitative part was aimed to examine

the extent of parents' concerns, and the qualitative part was used to generate data about parents' areas of concern.

Participants of this study were parents of primary school children (grades 1 through 8) randomly sampled from six primary schools in Addis Ababa. Parents of children at this grade level and age group were targeted because previous studies reported a high level of concern among them (Pearson et al., 2011). Three government and three private schools were selected from Addis Ababa using a convenient sampling method. Then one section from each grade level of the six schools, a total of 48 sections, was randomly selected from the available sections, and, considering Krejcie and Morgan's (1970) sample size recommendation formula, eight students from each section, 384 students in total, were randomly selected. To account for non-returns and incomplete questionnaires, a 15% oversample was used, resulting in a total sample size of 443. Based on the child's inclusion into the sample, parents of children were automatically considered as participants, and questionnaires were sent to them through the child with the help of homeroom teachers. Parents were notified to complete the questionnaire thinking about the child who brought the questionnaire home. Of the 443 questionnaires distributed, 390 (a response rate of 88%) were used in the final analysis as 53 of them were either not returned, not properly filled out or parents declined to participate.

In addition, 15 parents who were members of the Parents Teachers and Students Association (PTSA) were purposively selected from both government (7 members) and private (8 members) schools for focus group discussion. PTSA is an arrangement in the Ethiopian school system that bridges schools with parents and is responsible for supporting and monitoring the quality of teaching and learning processes in schools.

Measures

Demographic Characteristics

This section comprised of items assessing parents' age, gender, marital status, educational level, income, and focal children's age, gender, and grade level.

Parents' Concerns

This questionnaire contains items that measure parents' level of concern about the negative effects of television viewing on children's behavior and school performance. To measure parents' concern about the effect of television viewing on children's behavior, an eight-item Likert type scale developed by Cantor et al. (1996) was adapted. The measure was originally developed to assess parents' level of concern about the negative effects of TV viewing on children's behavior. An example of an item that measures concern was "How concerned are you that watching inappropriate programs on TV would encourage your child to engage in illegal or risky behavior?" For each item, parents were asked to rate their concern on four levels: "not concerned at all," "a little concerned," "moderately concerned," or "very concerned." The measure has been widely used in different contexts (e.g.Warren, 2002) including in Ethiopia (Gizachew, 2014). Desie et al. (2021) validated the measure and reported a high internal relatedness of the items (.92) among Ethiopian parents. In the present study, the

psychometric quality of the measure was checked with a pilot test on 58 parents, and a Cronbach alpha of .89 was obtained.

To measure parents' level of concern about children's school performance, a questionnaire with nine items was developed by the authors based on literature review. Parents were asked to indicate their level of concern on a four-point Likert type scale of "Not concerned at all," "A little concerned," "Moderately concerned," and "Very concerned." An example of an item was "How concerned are you about the effect of television viewing on your child's homework?" The pilot test indicated a Cronbach alpha of .94.

Focus Group Discussion

Focus Group Discussions (FGDs) were held among parents who were members of the PTSA. PTSA is responsible for any aspect of school activities, particularly those that could affect students' behavior, school performance, and wellbeing. We believed that PTSA members are excellent in providing relevant information about the issue. Two FGDs were conducted separately with PTSA members in their respective schools. The FGDs were facilitated by the first author. An FGD guide was used to facilitate the discussion. The discussion began by introducing the purpose of the study to the participants. The FGD covered a range of issues such as sources and areas of concern, children's and parents' experience of viewing, and mechanisms of mitigating negative effects of viewing on children. Each FGD lasted for about an hour and was audio recorded.

Procedures and Ethical Considerations

We secured a support letter from Addis Ababa University and presented it to the respective school directors. The purpose of the study was explained to the directors, and permission was secured from them for data collection. With the help of homeroom teachers, questionnaires were sent to parents along with information sheets detailing the purpose of the study, participant's rights, anonymity, and data management process along with consent forms asking parents' agreement to participate in the study. Parents who were willing were requested to fill out the questionnaire and send it back to the homeroom teacher through the child. Parents who were not willing were informed about their right not to participate. In addition, oral consent was secured from FGD participants after they were informed about the purpose of the study.

Data Analysis

We employed both quantitative and qualitative methods of data analysis. Quantitative analysis was carried using the SPSS version 24 for Windows®. In order to summarize the data and describe parents' level of concern, descriptive statistics (means and standard deviations) were used. To examine differences in parents' level of concern across demographic background, we employed independent samples t-tests and one-way ANOVAs. Qualitative data was transcribed and thematically analyzed.

Results

Characteristics of the Participants

About 58% (n = 225) of the parents were mothers of the target children. The ages of the parents ranged from 25 to 70 years (*Mean* = 40.25, *SD* = 8.13). Parents indicated their level of education as: not literate (3.6%), traditional church/mosque education (4.4%), some primary (35%), some secondary (13%), certificate/diploma (22%), and degree and above (22%). About 58% of the target children were from government primary schools. Approximately 56% (n = 219) of them were girls. Children's ages ranged from 7 to 15 (*Mean* = 11.01, *SD* = 2.35). Close to 37% (n = 144) of children were in grades 1 to 4, and the remaining 63% (n = 246) were from grades 5 to 8. All parents reported the availability of TV sets at home and their children's access to it (Table 1).

Table 1

Socio-demographic Characteristics of Participants (n =390)

Variables	n	%
Parents relationship with the child		
Mother	225	57.7
Father	165	42.3
Parents age: *M* = 40.25 years (*SD* = 8.13); range = 25-70 years		
Parents educational level		
Not literate	14	3.6
Church/Mosque education	17	4.4
Some primary (up to grade 8)	136	34.9
Some secondary (up to grade 12)	51	13.1
Certificate/diploma	85	21.8
University degree and above	87	22.3
School type		
Private	162	41.9
Government	225	58.1
Child's gender		
Female	219	56.2
Male	171	43.8
Child's age: *M* = 11.01 years (*SD* = 2.35); range = 7 to 15 years		
Grade level		
1-4	144	36.9
5-8	246	63.1
TV ownership	390	100
Children's access to TV		
Yes	390	100

Concern about the Negative Effects of Television Viewing on Children's Behavior

The score of concern for children's behavior for this sample of parents ranged from a minimum of 8 for not concerned at all to a maximum of 32 for very concerned. Parents scored a mean of 25.01 with a *SD* of 4.66, suggesting a moderate level of concern about the effect of

TV viewing on children's behavior. As can be seen from Table 2, about 79% of the parents reported their level of concern as either very concerned (36%) or moderately concerned (43%). The proportion of parents who reported that they were not concerned at all was very minimal (3%).

Table 2

Parents' Extent of Concern about the Effect of TV Viewing on Children's Behavior (n = 390)

	Min.	Max.	Mean	SD	f	%
Level of concern	8	32	25.01	4.66		
Very concerned					142	36.41
Moderately concerned					166	42.56
A little concerned					69	17.69
Not concerned at all					13	3.33

Parents' Level of Concern about the Effect of Television Viewing on Children's School Performance

The score for this sample of parents varied from a minimum of 3 for not concerned at all to a maximum of 12 for very concerned. Parents scored a mean of 9.83 with a *SD* of 1.55, suggesting a higher level of concern about the effect of TV viewing on children's school performance. As presented in Table 3, about 97% of the parents were either very concerned (32%) or moderately concerned (65%) about the effect of TV viewing on children's school performance. The proportion of parents who were not concerned at all was very negligible.

Table 3

Descriptive Statistics on Parents' Concern about the Effect of Television Viewing on Children's School Performance (n = 390)

Level of concern	Min.	Max.	Mean	SD	f	%
	3	12	9.83	1.55		
Very concerned					125	32
Moderately concerned					252	64.7
A little concerned					10	2.6
Not concerned at all					3	0.7

Parents' Level of Concern across Socio-Demographic Characteristics

Parents' concern about the effect of TV viewing on children's behavior and school performance was examined across demographic backgrounds such as parents' gender, educational level, child's gender, and grade level. Results are presented in Table 4 and Table 5.

Table 4

Level of Concern on Children's Behavior and School Performance by Parents' Gender

Area of concern	Parents' Gender	N	Mean	SD	t (388)	P
Behavior	Father	165	25.77	4.48	2.78	0.006
	Mother	225	24.45	4.73		
School performance	Father	165	10.10	1.56	2.91	0.004
	Mother	225	9.64	1.52		

As can be seen from Table 4, fathers ($M = 25.77$, $SD = 4.48$) were more concerned than mothers ($M = 24.45$, $SD = 4.73$), $t(388) = 2.78$, p =.006) about the effect of viewing on children's behavior and school performance $t(388) = 2.91$, p =.004) though the effect size is small ($d = 0.29$). The results further showed that parents were more concerned about the effect of viewing on the behavior of lower grade (grades 1-4) ($M = 25.96$, $SD = 4.39$) children than children in the upper grades (grades 5-8) ($M = 24.46$, $SD = 4.74$) $t(388) = 3.09$, p =.002). All the other comparisons were not statistically significant.

Table 5

Parents' Concern on Children's Behavior and School Performance by Parents' Education Level

Area of Concern	Source	*df*	*ss*	*ms*	*f*	*p*
Behavior	Between	5	4613.55	922.71	91.78	<.01
	Within	384	3860.35	10.05		
	Total	389	8473.90			
School performance	Between	5	595.85	119.17	133.42	<.01
	Within	384	342.97	.89		
	Total	389	938.82			

A one-way analysis of variance was computed to examine differences in parents' level of concern across educational levels. As shown in Table 5, parents significantly differed in their level of concern about the effect of viewing on children's behavior, $F(5, 384) = 91.78$, *p* .000) across their educational level. Parents who were not literate reported a low level of concern ($M = 19.14$, $SD = 5.82$), compared with parents with traditional church/mosque education ($M = 23.05$, $SD = 2.56$), some primary ($M = 22.40$, $SD = 3.56$), some secondary ($M = 22.39$, $SD = 2.36$), certificate/diploma ($M = 26.54$, $SD = 3.66$), and degree and above ($M = 30.47$, $SD = 1.47$) educational levels. The post hoc comparison showed that parents with better educational levels (certificate, diploma, and degree and above) demonstrated a higher level of concern about the effect of viewing on children's behavior in all the pairwise comparisons.

Similarly, significant differences were observed in parents' level of concern about the effect of viewing on children's school performance across parents educational level ($F(5, 384) = 133.42$, *p* .000). The post hoc comparison showed that parents with university degrees and above showed a statistically significantly higher level of concern (M = 11.88, SD =.55) compared with parents who were not literate (M = 8.71, SD =.82), traditional church/mosque education (M = 8.64, SD =.86), some primary (M = 8.88, SD =.73), some secondary (M = 8.86, SD =.82), and certificate/diploma (M =10.28, SD = 1.50) educational levels.

Areas of Parents' Concern: Findings from the Qualitative Study

Parents were asked to qualitatively describe their areas of concern about the negative effects of television viewing on their children. Two overarching themes describing parents' overall areas of concern about children's exposure to television were identified from the FGD data. The two themes were: concern about the negative effects of viewing on children's behavior and concern about the negative effects of viewing on children's school performance. The themes are described below with illustrative quotes from the participants. All the names mentioned next to the quotes are not real names.

Parents' Concern about the Negative Effects of Viewing on Children's Behavior

Participants repeatedly reflected their concern about the negative effects of television viewing on their children's overall behavior. Most of them reported that their concern particularly heightened following the introduction of Kana Television in April 2016 in Ethiopia. Kana is a satellite entertainment television channel that broadcasts mostly dubbed foreign movies translated into Amharic language. Participants indicated that the 24-hour intensive and repetitive transmission makes the channel very powerful and available to everyone, including children. An FGD participant, for example, reflected her overall concern saying that:

> I remember the time when Kana was introduced in Ethiopia and the concern, feelings, emotions, and responses of many parents. Parents were concerned that the channel would have a greater influence on their kids, including their personality and educational achievement. Still, parents are raising questions and expressing their concerns to the school management for a possible intervention. It is a common agenda item and source of concern in our monthly PTSA meeting (Mrs. Martha, parent and chairman of PTSA).

Another participant has also reported his general concern as follows:

> As a parent, I'm highly concerned about my children's TV watching because it might have an effect on their spiritual, behavioral, and academic lives (Mr. Amhatsion, parent and chairman of PTSA).

These qualitative accounts substantiated findings of the quantitative analysis that showed parents high level of concern about the effect of viewing on children's behavior and school performance. Parents were further asked to cite specific areas of concern in relation to children's behavior and school performance. With regards to behavior, parents frequently indicated that television viewing has powerful effects on their children's use of bad words, exposure to sexual contents, violent actions, and sensitivity to drug use. A participant has explained how the dubbed films have affected the way her son's choice of words was influenced by his TV viewing:

> These days, one of my challenges and concerns is Kana. There are lots of films that contain indecent *words. Unfortunately, my son picks those words and uses them regularly in his daily conversation. Specifically, if some of the famous characters whom he appreciates on Kana use those words, it does not give him*

a time to repeat those bad words. I have observed in him that he quickly gets inspired by famous characters. (Mrs. Fetlework, parent and member of PTSA).

Another FGD participant further indicated the effect of TV programs on her child's use of bad words as follows.

Since the transmission of Kana, we have heard from our children's use of both good words, such as "ውዴ," (my dear), and lots of bad words (insults), such as "የማትረባ" (useless), "ዋጋቢስ," (valueless), which are directly imitated from Kana and have become common in their conversation. I have a fear that if our children continue their imitation, they might be highly influenced by the negative words (Mrs. Martha, parent and chairman of PTSA).

Parents also expressed their concern on children's untimely exposure to sexual content. An FGD participant has shared his concern on how TV programs prematurely exposed his child to sexual content:

Films and music videos exposed my twelve-year-old child to sexual issues such as fondling, kissing, and sexual intercourse. I once heard him explaining some sexual content from Kana to his older sister with passion. After that, my concern becomes so serious that I start to think about what to do about it (Mr. Eyob, parent and member of PTSA).

On top of the above areas of concern, participants indicated that children easily imitated violent actions from television films and even influenced them to think that aggression is a normative way of solving problems in everyday life. A father participant shared his experiences as:

I found my child involved in fighting at school after his watching of films from the dubbed TV channel. They told me that he acts and speaks like Kuzi-a famous character in the Kuzi Guni film [from the dubbed TV channel]. I was also called by his homeroom teacher concerning the fighting character that he was exhibiting in class. His teachers told me that instead of discussing differences, my son blames any reaction on his classmates. I think the characters in these films inspired him to engage in such fighting action during disputes (Mr. Beka, parent and member of PTSA).

Another participant reported his observation as follows:

I remember that there has been an incident reported to the PTSA in which grade eight boy students were involved in group fighting that continues outside of the school compound too. I can say that their fighting is after watching some of the films from Kana Television because we found out that one of the fighting groups even named itself "Kuzi" and was acting as a defender of victims (Mr. Amhatsion, parent and chairman of PTSA).

Furthermore, participants have also indicated that children's exposure to television has significantly influenced their sensitivity about drugs. Many participants believed that as a result of watching unsupervised television programs children are now very much aware about different drugs such as cocaine and marijuana. A parent has indicated her concern saying that:

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*I know some cases of grade seven and eight students who were a great threat to parents and schools too. It was about students who smoked, took drugs, and drank because of imitating the lifestyle of their favorite musicians on TV. We have discovered these facts as a result of the school's principal's discussion with parents (*Mrs. Hawi, Parent and member of PTSA*).*

Concern about the Negative Effects of Viewing on Children's School Performance

Many of the FGD participants expressed their grave concern about the effect of television viewing on children's academic performance. Participants frequently reported that in addition to the overall negative influence of viewing on children's behavior, children's unsupervised television viewing seriously disengage them from academic work and results in poor school performance. Participants reported that repeated exposure to television viewing seriously compromised children's important school activities of doing homework, studying and their exam results. An FGD participant described her concern saying that:

> Television viewing really affects my child's school performance. Because of her favorite films, she does not concentrate on her reading and studying. She gives much attention to films instead of doing her homework, which has affected her results (Mrs. Seble, parent and member of PTSA).

Participants indicated that children watch too much TV particularly on weekends and it affected their academic activities and sleep behavior. Parents' concern is observed in one of the FGD participants as follows:

> My child spends time on Kana films only at weekends; it affects her reading and studying. She exclusively focuses on the completion of her homework instead of further book reading and studying for the exam. Currently, I'm not satisfied with her results, and it's not up to my expectations. It's considerably dropped. I know she has the potential to perform well on exams if she studies and reads more instead of spending much time on films (Mrs. Meaza, parent and member of PTSA).

Another FGD participant explained her concern saying that:

> My child's homeroom teacher frequently called me at school because of his incomplete homework. The reason for this was my child's exposure to the Kana series films. The time the films are transmitted is a prime time for my fourth grader to do his homework. Sometimes, he also suffers from sleep problems. One of his teachers told me that he sleeps during lesson hours (Mrs. Hawi, parent and member of PTSA).

Poor performance has been reported as a major source of parents' concern as a result of children's excessive watching of TV. A participant described his concern saying that:

> There were several complaints from parents about the poor school performance of their children because of TV viewing. Parents were reporting to the school principals and homeroom teachers that their children failed to do homework, stopped reading and studying due to excessive TV viewing (Mr. Amhatsion, parent and chairman of PTSA).

Overall, data generated from the FGDs clearly indicated that parents were seriously concerned about the effect of TV viewing on children's behavior and school performance.

Discussion

We investigated the extent and areas of parents' concern about the effect of television viewing on children's behavior and school performance in Addis Ababa, Ethiopia. We also examined demographic differences in parents' level of concern. The results revealed that while parents had a moderate level of concern about the effect of TV viewing on children's behavior, they were very concerned about the effect of viewing on children's school performance. Our results further showed that fathers and parents with a relatively higher educational level were more concerned than mothers and parents with low educational levels. Furthermore, parents showed a higher level of concern about the effect of viewing on younger children in lower grades than on older children in upper grade levels. Concerning parents' areas of concern, qualitative results indicated that children's learning and use of bad words, premature exposure to sexual content, involvement in violence and aggression activities, and awareness and sensitization about drugs were the major areas of parents' concern in relation to children's behavior. Similarly, not doing homework, not studying, and low academic results were the concerns reported by parents in relation to the effect TV viewing has on children's school performance.

The finding that indicated parents' moderate to high level of concern about the impact of TV viewing on children's behavior and school performance was congruent with previous international (Chan & McNeal, 2003; Haines et al., 2013; Wartella et al. 2014) and local (Desie et al., 2021; Gizachew, 2014) studies. For example, one local study on the parenting practices of children's television viewing in Addis Ababa revealed that parents were moderately concerned about the effect of viewing on children, and they reported restrictions on children's viewing time as a mitigating strategy. Parents' higher level of concern in this study may be related to the unprecedented escalation of television channels and the concomitant rise in children's exposure to it in recent times in Ethiopia. Another local study indicated that the fast-paced growth of both local and paid foreign digital channels in Ethiopia has created great access to children to navigate through many channels; that some may be relevant and enlightening, while others may be damaging to their healthy development (Gebru, 2020). Parents' serious concern about the harmful effects of television viewing on children's behavior and school performance was aggravated by the introduction of the Kana Television program in 2016, which parents and guardians, participated in this study, raised a greater concern about.

This study has revealed that fathers are more concerned about TV viewing and its influence. This might be related to the overall patriarchal structure of society, where males have better access to education and exposure to many things that help them understand the harmful effects of excessive viewing. In addition, the difference in the level of concern may be related to the mother's positive attitude toward television watching as a mechanism of engaging children at home instead of letting them go out. As anticipated, parents' levels of concern were also different as a function of their educational level. Parents with better educational levels

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demonstrated a higher level of concern than those with low levels of education. This might be because of the fact that better educated parents are more aware and critical of the content broadcast on television and better understand the negative effects of viewing on children's behavior and school performance. Parents were also highly concerned about the effect of viewing on younger children in lower grades than older children in upper grades, which was consistent with other local studies (Desie et al., 2021). This result might be due to the fact that parents are aware of younger children's inability to filter out important content from deceptive content on television.

The finding on parents' concern about children's use of bad words was similar to previous studies that indicated the commonness of profane language on television (Kaye & Sapolsky, 2009). In consistent with other international studies (e.g., Cantor et al., 1996), parents in this study indicated that children's learning and use of offensive language, exposure to sexual content, violence and aggression, and risky behavior were the main concerns in relation to their overall behavioral development. Furthermore, parents reported that disengagement in academic activities such as not studying, not doing homework, and attaining poor exam results were major concerns in relation to children's school performance. Similarly, parents' concern about the effect of viewing on children's sexual behavior was congruent with previous studies (Kunkel et al., 2007; Lou et al., 2012). These studies indicated that as sexual talk and behavior are highly frequent in the entertainment television environment, excessive and unsupervised exposure of children to these programs prematurely exposes them to sexual content. Parents' concern about the effect of viewing on children's violence and risky behaviors was also consistent with results of prior studies (Anderson et al., 2017). Similarly, parents' high level of concern about the effect of viewing on children's schooling was in agreement with previous studies that showed a strong correlation between excessive viewing and poor academic engagement and school performance (Ballard, 2003; Pagani et al., 2010). Overall, the results of this study on parents extent and areas of concern about the effect of viewing on children's behavior and school performance were congruent with several studies that asserted the harmful effects of excessive and unsupervised viewing on children's development (e.g.,Anderson et al., 2017; Kaye & Sapolsky, 2009).

Conclusion and Implications

We examined the extent and areas of parents' concern about the effect of TV viewing on two important child development outcomes: behavior and school performance. Parents demonstrated a moderate to high level of concern about the harmful effects of television viewing on children. In addition, parents have also identified important areas of concern with regard to their children's behavior and school performance.

Though the study highlighted some important points in relation to parents' level and areas of concern, we would like to recommend comprehensive research in the area that considers the changing media landscape of children in Ethiopia. As children are becoming more multitasking in their media use, future researchers need to consider children's exposure to multi-forms of media and study parental concerns and mediating strategies associated with it. We further suggest future researchers focus on qualitative studies in order to understand the

issue from a grounded point of view. The findings of this study also suggest the need to design interventions that are aimed at providing awareness and skills training to concerned parents about supervising children's viewing and how to help children to become critical consumers of media.

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Disclosure Statement

The authors report there are no competing interests to declare.

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Antecedents of organizational citizenship behavior among the academic staff in Begemidir college of teacher education

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Abstract

The purpose of this study was to examine the organizational citizenship behavior of the staff and its precursors at Begemidir College of teacher education. A correlational survey design that involved 96 instructors recruited through a comprehensive sampling technique was employed. Questionnaire was used to collect data that were analyzed using descriptive and inferential statistics. The result indicated that instructors demonstrated above-average mean scores in all the dimensions of organizational citizenship behavior. It also revealed that organizational support and job satisfaction had a moderate relationship with altruism, civic virtue and sportsmanship while they had a modest relationship with courtesy and conscientiousness. On the other hand, there was a strong relationship between organizational commitment and altruism, civic virtue, courtesy, and sportsmanship. Overall, while OCB had a strong relationship with organizational commitment, it had a moderate relationship with organizational support and job satisfaction. Whereas organizational commitment has a positive and significant contribution to all organizational citizenship dimensions; job satisfaction did not influence all of them. Organizational support has a significant contribution to altruism, civic virtue, sportsmanship, and organizational citizenship behavior. Hence, it was suggested that the college should constantly work on the functions of organizational commitment and support to promote organizational citizenship behavior and ensure sustainable organizational development.

Introduction

Organizational citizenship behavior (OCB) is one of the emerging management concepts that are increasingly gaining the attention of organizational behaviorists and managers (Bashir et al., 2012). These days it has already become the focal area of researchers and practitioners across the globe (Majeed et al., 2017; Sajid & Akhtar, 2020). Robbins and Judge (2019) expounded that employees with a good OCB are highly essential in today's dynamic work environment where tasks are increasingly requiring communication, teamwork and flexibility. Moreover, according to Chahal and Mehta (2010) and Chelagat et al. (2015), OCB is steadily getting recognition as a central factor in the effectiveness of employees and their

organizations. The phenomenon of acknowledging OCB as a determining factor of organizational productivity and effectiveness is supplemented by a substantial body of literature (e.g., Koster & Sanders, 2006; Robbins & Judge, 2009; Turnipseed & Rassuli, 2005).

OCB refers to voluntary or positive behaviors, choices, and individual initiatives that are not directly related to the formal reward system of the organization that improves organizational effectiveness (Ariani, 2008; Organ, 1990, 1997; Organ & Ryan, 1995). It is a behavior that goes beyond the employee's official job description or responsibility without expecting financial reward or recognition in return which includes acts such as helping others, taking on additional responsibilities, and promoting initiatives (Bolino et al., 2013; Humphrey, 2012; Nguni et al., 2006; Organ et al., 2006). According to a wide range of literature (e.g., Alkahtani, 2015; Cohen & Hazratian et al., 2015; Mackenzie et al.,1993; Podsakoff et al., 1997; Vigoda; 2000), OCB is an important factor for employee performance that goes beyond the formal duties. Yen and Niehoff (2004) underline the existence of significant relationships between OCB and organizational effectiveness. Organ (1988, 1990) and Podsakoff et al. (1997, 2000) in particular specified that OCB has an impact on the overall effectiveness of organizations by creating a positive relationship among individuals and groups, adding to the social framework of the work environment, improving the efficiency of colleagues and managers, enhancing effective utilization of resources, assisting team coordination, making organizations more responsive to change, attracting and retaining talented employees, and fostering organization stability.

Podsakoff et al. (2000) argue that employees with good OCB may eventually be rewarded and therefore the expectation of future rewards may motivate some employees to engage in OCB, although OCB is primarily a matter of personnel choice. Alizadeh et al. (2012) supplement that OCBs have often been conceptualized as inherent and socially desirable behaviors the omission of which is not considered punishable in organizations. In a formal job description, accordingly, OCB extends beyond the performance indicators required by an organization. Consistently, Jahangir et al. (2004) view OCB as a set of discretionary workplace behaviors that exceed one's basic job requirements and instead go beyond the call of duty. For Agustiningsih et al. (2016) OCB involves some elements of behavior such as helping others, volunteering for extra duties, and adhering to the rules and procedures in the workplace. As to these authors, those behaviors are constructive, meaningful, and positive social behaviors that contribute much to the success of organizations.

Studies made so far on OCB (e.g., Dyne et al., 1994; Lievens & Anseel, 2004; Morrison, 1994; Organ, 1988; Podsakoff et al., 1997; Podsakoff et al., 2000; Smith et al., 1983) have operationalized different OCB taxonomies. Among them, the five-factor model of Organ (1988) consisting of altruism, courtesy, conscientiousness, civic virtue, and sportsmanship is the most commonly utilized model in the literature, particularly in educational institutions where discretionary extra work activities are essential (Foote & Tang, 2008). This five-dimensional OCB model was employed to formulate a conceptual framework and spearhead the entire present study.

Altruism is helping behavior that includes all types of voluntary actions of staff displayed to help colleagues in a workplace to perform their work and overcome problems within the organization (Organ, 1988). Vieten et al. (2006) state that altruism involves helping

specific individuals or co-workers in relation to organizational tasks. Hsiung (2014) also complements that employees with greater altruistic behaviors make more efforts and show better job performance. Organ (1988) and Podsakoff et al. (2000), in addition, contend that the helping behavior of altruism is not confined only to fellow workmen but also to customers and vendors. Similarly, Vieten et al. (2006) argue that altruism is concerned with going beyond job requirements to help others with whom the individual comes into contact. Pare and Tremblay (2000) explained that behaviors such as helping a colleague who has been absent from work, helping others who have heavy workloads, being mindful of how one's own behavior affects others' jobs, and providing help and support to new employees represent clear indications of an employee's interest for his/her work environment. Socially driven values emphasizing the group over personal concerns are likely to encourage altruistic behaviors benefiting the group (Vieten et al., 2006). In general, altruism makes the work system more efficient because one worker can utilize his or her slack time to assist another on a more urgent task (Niehoff & Moorman, 1993).

Conscientiousness refers to the form of certain role behaviors that focus on displaying certain behaviors above what is expected, devotion to work and organization, low absenteeism levels, care and attention to deadlines, and respecting and obeying procedures, rules, and regulations irrespective of check and balances (Bukhari, 2008; Mushtaq & Umar, 2015; Oplatka, 2006; Organ, 1988; Vieten et al., 2006). Consistently, Elanain (2007) found that people who have higher OCB mostly possess conscientiousness. In the same vein, Singh and Singh (2009) reported that the presence of conscientiousness in a person implies that s/he is responsible, organized, dependable, neat, punctual, careful, self-disciplined, and persistent and aims to achieve above expectations whereas the one without it is easily distracted, disorganized, and unreliable. Organ et al. (2006) sensed that employees display conscientiousness when they come early to work, deliver given tasks at the stipulated deadline, and plan ahead for the next day's work without creating a burden on co-workers. According to Alizadeh et al. (2012), such behaviors of general compliance benefit the organization in several ways because, besides the dislike of engaging in behaviors such as taking excessive breaks or using work time for personal matters, compliant behavior promotes low rates of absenteeism and keeps the organization running efficiently. When these types of behaviors are minimized, the workforce is naturally more productive.

Civic Virtue refers to behaviors that demonstrate a responsible concern for the image and well-being of the organization (Vieten et al., 2006). According to Borman et al. (2001), it refers to involving oneself in and being concerned about the life of the organization. Nyarieko et al. (2017) also explain that employees exhibiting civic virtue behaviors are responsible members of an organization who actively engage in constructive involvement in the policies and governance of the organization. Hence, civic virtue is characterized by behaviors that indicate the employee's deep concerns and active interest in the life of the organization (Alizadeh et al., 2012; Organ et al., 2006). According to those sources, daily affairs such as attending meetings and keeping up with what is going on with the organization are forms of civic virtue that defend organizational policies and practices when they are challenged by an outside force.

According to Bukhari (2008), civic virtue is a behavior exposed by taking part in the unofficial activities of the organization that are not mandatory or obligatory but bring about social cohesion within the organization. Engagement in this type of behavior may be based on the assumption that employees have the right to participate in the organization's affairs, and that their opinions are worthwhile and deserve to be heard. Civic virtue behavior requires a low power distance organizational culture where everyone deserves the right to have his/her opinion heard, and an individual assumes an assertive role in the organization (Hofstede, 1984). Higher education institutions (HEIs), including teacher education colleges, are endowed with academic freedom that characterizes low power distance and induces an OCB-encouraging environment. In a high-power distance culture, on the other hand, people expect leaders to govern their organizations while subordinates implement decisions made by their leaders instead of participating in the governance process (Gelfand et al., 2004).

The fourth dimension of OCB, *courtesy,* is a discretionary behavior that aims at preventing work related conflicts with others (Lam et al., 1999). Courteous behaviors involve things such as making extra copies of the meeting agenda for your teammates, and giving a colleague ample notice when you alter something that will affect them. Advance notice, reminders, passing along information, consultation, and briefing all suggest the intrinsic quality of courtesy (Organ, 1988). This type of behavior can be seen as intended to prevent chaos or conflict among employees and serving to maintain social order and group harmony. Unlike altruism which is meant to provide help to someone who is already in trouble, courtesy refers to preventing a problem from happening (Organ, 1988). This dimension is a form of helping behavior executed to prevent problems from arising. It is just being polite and considerate of others (Organ et al., 2006).

Sportsmanship, the last dimension of OCB, refers to the willingness of employees to tolerate inconveniences and impositions without complaining (Ehigie & Otukoya, 2005). It is essential in organizational performance because a staff with sportsmanship behavior will not have discomfort toward others (Farh et al., 2004). According to Organ (1988) and Podsakoff et al. (2000), sportsmanship incorporates behaviors such as not complaining about trivial matters or making petty grievances, enduring uncomfortable working conditions without complaining, maintaining a positive attitude in difficult circumstances, and being willing to sacrifice personal interests for group interests. For Organ et al. (2006), it is an employee's ability to roll with the punches even if they do not like or agree with the changes that are occurring within the organization. It, therefore, signifies employees' tolerance to less-than-ideal organizational circumstance without complaining and blowing problems out of proportion. By reducing the number of complaints from employees that administrators have to deal with, according to these sources, sportsmanship conserves time and energy.

Due to its pivotal contribution for organizational performance, these days, factors that affect employees' OCB are attracting the interests of managers and researchers. Specifically, factors key in HEIs, given that OCB is not an independent entity but influenced by a number of factors, have been long after such precursors that can elevate OCB have become centers of attraction. In relation to this, Dong and Phuong (2018) identified job satisfaction (JS), organizational justice; organizational commitment (OC), personal characteristics, task characteristics, and leadership behavior are the commonly studied antecedents of OCB. Among

them, JS and OC have been the most frequently reported determinants of OCB (Dinc, 2017). In addition, Mustaffa et al. (2007) stated that organizational culture has an influence on citizenship behavior of employees. Moreover, Lian and Tui (2012) revealed a positive significant association between principals' management styles and the OCB of instructors. Furthermore, Posadas et al. (2020) attribute OCB of teachers to their income and empowerment. Therefore, fulfilling employees' JS, understanding their motivation and creating suitable work environments are important factors of OCB (Alizadeh et al., 2012). Although earlier research works (e.g., Bowler, 2006; Niehoff & Moorman, 1993; Organ & Ryan, 1995; Podsakoff et al., 2000; Ryan, 2001; Schnake et al., 1995) regarding the antecedents of OCB took varying attitudinal and dispositional factors into consideration, the present study emphasized on three antecedents, namely organizational support (OS), OC and JS because they are the most widely cited in literature and the most accommodating factors of all the aforementioned OCB factors (Alizadeh et al., 2012; Dinc, 2017; Niehoff & Moorman, 1993; Schnake et al., 1995).

OS refers to the extent to which an organization values employees' contributions and cares about their well-being (Shore & Wayne, 1993). Its basis is an empathy that postulates an employee who perceives favorable OS and fair interpersonal treatment at workplace shows empathic concern for the organization by demonstrating citizenship behaviors (Fultz et al., 1986). According to different sources of literature (Chiaburu et al., 2015; Firmansyah et al., 2022; Shore & Wayne, 1993; Wayne et al., 2002) OS correlates significantly with OCB. Consistently, Chen (1998) found out a positive relationship of OS with extra-role behavior and a positive and significant effect on OCB. Indicators of supportive organization behaviors namely fairness, support and reward effective performance play key roles in improving OCB. This suggests that the higher OS provided by an institution, the more it will create or increase extra-role behavior among employees (Rosafizah et al., 2020). Besides, it was found out that perceptions of OS were not only positively related to performance and OCB but predicted OCB as well (Shore & Wayne, 1993).

Moorman (1991) and Tepper et al. (2001) explain that employees who perceived fairness in organizations have favorable OCB. Odugbesan (2000) also attributed enabling work environment to better OCB. According to Yen and Niehoff (2004) employees with favorable OCB were reciprocated with a fair or good treatment from the leader or the organization. Employees evaluate their work situations by cognitively comparing their inputs to the organization with the outcomes they receive in return. Although all the above sources unanimously inform that employees empathize and reciprocate OS and fair treatment with extra role behaviors such as OCBs, recently conducted research finding in other settings (Jehanzeb, 2020) reported insignificant relationships between OS and OCB.

The second antecedent in focus, OC, encompasses affective commitment, normative commitment and continuance commitment (Wagner & Rush, 2000). According to these sources, OCB is a function of all these commitment dimensions. Similarly, Kim (2006) found that affective commitment has a positive effect on altruism and compliance. In the context of education, Somech and Bogler (2002) postulated that schools are dependent on instructors who are committed to school goals and values, and more willing to exert considerable effort beyond minimal formal role expectations. Oplatka (2006) and Somech and Ron (2007) supplemented

that the success of educational institutions fundamentally depends on instructors' commitment to institutional goals and values as well as willing to go above and beyond the call of the duty. Different research reports (e. g. Feather & Rauter , 2004; Grego-Planer, 2019; Jehanzeb, 2020; Zayas-Ortiz, 2015) claimed that OC is positively related to OCB. Organ and Ryan (1995), in the same vein, reported that attitudinal measures such as perceived fairness, OC, and leader supportiveness are found to correlate with OCB at about the same rate as JS. Earlier research reports William and Anderson (1991), however, suggested no effect of OC on OCB, possibly because employees with clearly defined duties and responsibilities may be reluctant to go beyond the formally stated obligations.

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Figure 1

The conceptual framework of the study
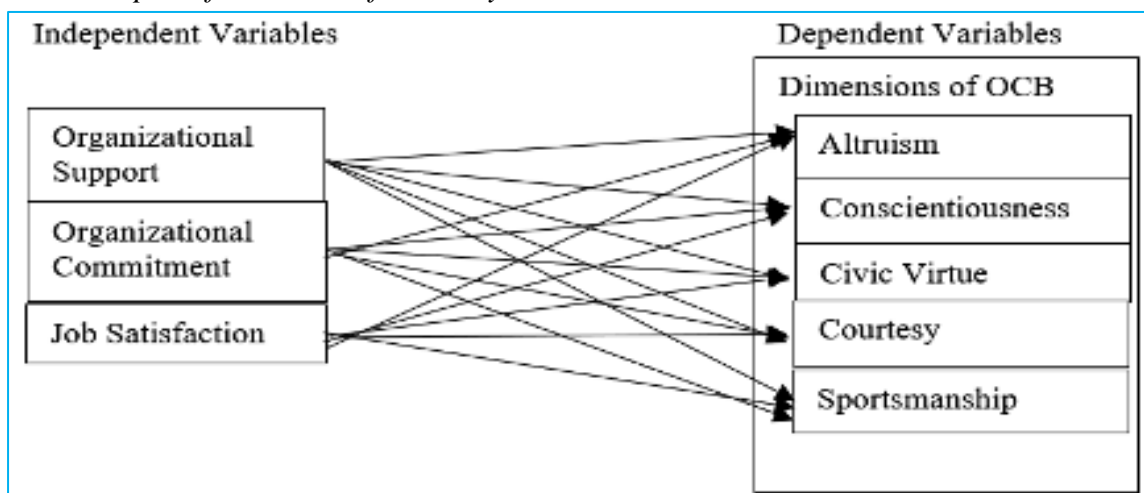
The other antecedent of OCB is JS (Alizadeh et al., 2012). Günay (2018), Organ and Ryan (1995) and Smith et al. (1983) revealed that JS was the best predictor of OCB. A wide range of literature (e.g., Lee & Allen, 2002; Hemakumara et al., 2018; Hemakumara, 2020; Mohammad et al., 2011; Murphy et al., 2002; Organ & Konovsky, 1989; Pal & Dasgupta, 2012) demonstrates the existence of positive relationship between JS and OCB. George and Jones (2012) found that satisfied employees have higher OCB because they want to reciprocate to the organization that already treats them well. According to these sources, task characteristics such as feedback, task routines, and intrinsic satisfaction are found to be significantly related to altruism, courtesy, conscientiousness, sportsmanship, and civic virtue whereas task feedback and intrinsic satisfaction have positive relationships with OCB. Similarly, Jahangir (2004) found that JS has a positive relationship with OCB. On the contrary, Allison et al. (2001) found that JS and OC have no effect on OCB. In the same vein, Darto et al. (2015) found no positive and significant influence of JS on OCB. Hakim et al. (2014) also found out a significant effect of JS and OS on OCB and performance of lecturers while OC showed a significant effect on performance but a negative effect on OCB in the context of higher education.

Problem Statement

Although instructors play pivotal roles in achieving institutional goals and are indispensable resources apparently known, ensuring their workplace commitment and passion determines institutional success more than anything else. Informal discussions made with some colleagues among the academic staff of Begemidir College of Teacher Education (BCTE) during chatting occasions, however, inform repeated complaints of different types. Everyone involved in the chatting complains either on the inconvenience of the job environment, remunerations, people assigned on the leadership position and the leadership practices they employ, the passion, the competence of his/her students or all of them. Those complaints likely inform the lack of internal cohesion, reluctance to abide the rules and regulations set, weak concern for their tasks and meager institutional performance. As Kaplan and Norton (1992) postulated, customer satisfaction and internal processes are among performance indicators of an organization. In aggregate, the discomforts surfaced seem to notify that instructors have no enthusiasm and demonstrate lack of concern for their college, which invites a contextual scrutiny of their OCB and its root causes.

Despite this fact, there are a substantial body of literature from which we can learn and change the experiences into advantage and reverse the problems mentioned above. In this respect, the same size of literature (Coyne & Ong, 2007; George & Jones, 1997; Lam, Hui, & Law, 1999; Mushtaq & Umar, 2015) suggest that OCB problems and their roots are different in different cultures and need contextually fit solutions. This implies that an OCB encouraging factor in a given culture may not necessarily be an encouraging factor in another culture. Podsakoff et al. (2000) substantiates this assumption in such a way that cultural context may affect the forms of citizenship behavior observed in organizations. Other different sources of literature (e.g., Bashir et al., 2012; Comeau & Griffith, 2005; Elanain, 2007; Farh et al., 2004; Golafshani & Rahro, 2013; King et al., 2005; Kumar et al., 2009; Mosalaei et al., 2014), consistently, contend an antecedent that explains OCB in a specific setting does not do the same in a different setting. Similarly, Bukhari (2008) argued different geographical contexts have different culture, values, norms and environment that necessitate a separate study for a better understanding and utility of OCB. Accordingly, nowadays, it necessitates employees to exhibit discretionary behavior and responsibilities beyond their formally prescribed jobs because the education system is steadily moving into an era of unprecedented competition, reorganization, and universalization coupled with a complex work environment (Sajid & Akhtar, 2020).

Examining OCB in various contexts is, therefore, very essential as specific cultural contexts should not be taken for granted. The problem described and the inconsistent findings and context dependence of OCB antecedents altogether elicited the current researchers to investigate the status of instructors' OCB in the contexts of BCTE.

The purpose of the study was, therefore, to examine the extent of OCB and its attributes among the academic staff of BCTE. In this endeavor, relationships of the antecedents of OCB (OS, OC and JS) with its five dimensions (altruism, conscientious, civic virtue, courtesy, and sportsmanship) were investigated. The research work was spearheaded by the following research questions: (1) To what extent do instructors of BCTE demonstrate OCB in BCTE? (2) How do the staffs rate the practices of OS, OC and their JS in BCTE? (3) Is there significant

relationship between the antecedents and dimensions of OCB? (4) To what extent do the antecedents of OCB (OS, OC and JS) predict its dimensions, controlling for the influences of the demographic variables of the staffs?

Methods

This study examined the status of instructors' OCB and the interplay of major antecedents with OCB in general and on its dimensions in particular. Correlational and survey research designs of the quantitative research approach were employed. According to Cohen et al. (2018) and Creswell (2015) relationship studies require the correlation design to estimate the strength of the relationship among the variables. Likewise, cross-sectional survey design, with the data collection at one point in time, was applied in the study because it helps to generalize from a sample to a population so that inferences can be made about some characteristic, attitude, or behavior of objects (Creswell, 2015).

The target population of the study was the academic staff of BCTE. All the 96 (86 male and 10 female) full-time instructors of the college were involved in the study through the comprehensive sampling technique. This was done not only due to the fact that the size of the participants is manageable enough but also Gay et al. (2012) advocate that surveying the entire population is useful and there is no reason for sampling so long as the population size is small, probably 100 or less. To protect the privacy of the respondents, on the other hand, this study was conducted based on their informed consent. To that effect, participants were instructed not only about the purpose and importance of the study but about the confidentiality of the data sources as well during data collection.

Data were collected using a questionnaire that contained three parts: demographic data; antecedents of OCB; and the dimensions of OCB. The dimensions of OCB were measured using items adapted from Podsakoff et al. (1997) OCB questionnaire, the most widely used OCB study instrument in the literature that measures the five dimensions of OCB using 24 items. On the other hand, OC, consisted of nine items, was measured by adapting Cook and Wall (1980) and Mowday (1979) OC questionnaire (OCQ). Regarding the measurement of JS, the Weiss et al. (1967) short version of Minnesota Satisfaction Questionnaire (MSQ) that incorporated 11 items was adapted. The questionnaire developed by Rhoades and Eisenberger (2002) and Wayne (2002) that incorporated eight items was adapted to measure OS. The instruments were freely available in their respective websites. The response to each item in the study was measured on a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

To ensure validity, finally, two senior and experienced staff members from the department of educational planning and management within the college of education commented the instrument. This helped to confirm the clarity of the items and their content. On the other hand, reliability was examined using Cronbach's alpha reliability coefficients. All components of the instrument were found at an acceptable status because different sources of literature (e.g., Aberson, 2019; Creswell, 2015; Larson-Hall; 2010; Meyers et al., 2013; Pallant,

2016; Tabachnick & Fidell, 2013) suggest that 0.60 can be taken as the threshold of coefficient alpha for determining whether the scale considered has internal consistency.

Table1

Reliability Statistics of OCB Dimensions and Its Antecedents

Variable Category	Variables	Cronbach Alpha	No. of Items
Dimensions of OCB	Altruism	.872	5
	Conscientiousness	.749	6
	Civic Virtue	.801	4
	Courtesy	.839	5
	Sportsmanship	.827	4
	Overall OCB	.924	24
Antecedents of OCB	OS	.902	8
	OC	.825	9
	JS	.904	11

In this study data analysis was made by using both descriptive and inferential statistics. Means and standard deviations were the descriptive statistics used whereas one sample t-test, correlation and regression analysis were the inferential statistics employed. One sample t-test was applied to gauge the status of instructors' OCB and the antecedents of OCB. While correlation coefficient was used to determine the relationship between antecedents and dimensions of OCB, hierarchical multiple regression was employed to examine the predictive power of the antecedents over the dimensions of OCB, after controlling for demographic variables. The assumptions for running the regression analysis such as missing values, outliers, multicollinearity, normality, linearity, and homoscedasticity were checked before computing the analysis. IBM SPSS version 23 statistics software was employed in the entire data analysis process. In this study Cohen et al.'s (2018) and Muij's (2004) interpretation of the correlation coefficients (Cohen's d effect size) that considers scores between $0 < r < 0.1$ as weak, $0.1 < r < 0.3$ modest, $0.3 < r < 0.5$ moderate, $0.5 < r < 0.8$ strong, and $0.8 < r < 1$ very strong (all in absolute values) was applied. Similarly, Cohen's d, regression weights (β) were also interpreted as follows based on the same sources: $0 < β < 0.3$ weak effect, $0.3 < β < 0.5$ moderate effect, $β > 0.5$ strong effect. Likewise, Terrell (2021) has suggested Cohen's d (d) effect size for one-sample t-test as follows: $d < 0.2$ small, $0.2 < d < 0.5$ medium, and $d > 0.5$ large effect size.

Results

In this study 87 (90.5%) questionnaires were found usable out of 96 questionnaires distributed. The rest 9 (9.5%) were rejected because they were found incomplete. The obtained data were presented and analyzed based on the research questions. The data were collected, analyzed and interpreted basically on three major areas i.e., the state of OCB and its antecedents, the relationship between antecedents and dimensions of OCB, and the contribution of the antecedents of OCB in predicting its five dimensions.

The Status of OCB and Its Antecedents

One sample t-test was employed to examine the state of instructors OCB in BCTE and its antecedents. Table 2 displays the mean scores of the dimensions and antecedents of OCB. All the mean scores of the OCB dimensions were significantly greater than the expected mean (3.0) at $p < 0.001$. The overall result indicates that instructors demonstrate extra role behaviors at work place beyond the formal requirement of job description to enhance the performance of their college. Besides, using the guidance suggested by Terrell (2021) on interpreting Cohen's d (d) effects sizes for one-sample t-test, it was found out that the instructors of the college highly exhibit OCB because the effect size (d=1.73) is greater than 0.5. With respect to the antecedents, too, all the mean scores exceed the test score significantly ($p < 0.05$), despite the differences in the levels of significance. The result shows that the college provides support that inspires the commitment and JS of instructors. Moreover, as the measure of effect size indicated the instructors of the college are moderately satisfied with their job and are provided with moderate OS (d=0.26 for OS, and d=0.27 for JS, where $0.2 < d < 0.5$), whereas they are highly committed to the college (d=0.97 > 0.5).

Table 2

One Sample t-test for Dimensions and Antecedents of OCB (Test Value = 3.00, N=87, df = 86)

Variable Category	Variable	Mean	SD	Mean Difference	t	Sig. (2-tailed)
Dimensions of OCB	Altruism	3.74	.682	.326	10.056	.000
	Conscientiousness	3.98	.583	.567	15.646	.000
	Civic virtue	3.75	.693	.337	10.055	.000
	Courtesy	4.10	.583	.691	17.629	.000
	Sportsmanship	3.83	.691	.418	11.174	.000
	Overall OCB	3.88	.508	.878	16.107	.000
Antecedents of OCB	OS	3.22	.821	-.193	2.465	.016
	OC	3.59	.603	.176	9.067	.000
	JS	3.21	.754	-.200	2.598	.011

The Relationship among OCB Dimensions and the Antecedents

The Pearson product moment correlation coefficient (r) was used to investigate the link between each dimensions of OCB and its antecedents. Table 3 portrays relationships among the dimensions and the antecedents of OCB. To begin with, OS has a moderate and positive association with altruism (r=.365), civic virtue (r= .340), sportsmanship (r=.404), and overall OCB (r=.386), P<0.01. However, it has a modest correlation with conscientiousness (r=.192) and courtesy (r=.180). Similarly, JS has a moderate and positive correlation with altruism (r=.338), civic virtue (r= .369), and sportsmanship (r=.423) all at P<0.01 whereas it has a modest relationship with courtesy (r=.226, P<0.05) and conscientiousness (r=.143). This implies that though instructors perceived that BCTE creates favorable working condition and is satisfied with their job, the role of these precursor factors in prompting instructors' OCB in

the college ranges from modest to moderate across OCB dimensions. These antecedents may induce the instructors constrained themselves in doing what is formally required in their job description rather than exhibiting willingness to highly perform extra roles.

Table 3

Correlation Analysis between OCB Dimensions and the Antecedents

Variables	1	2	3	4	5	6	7	8	9
1. OS	1								
2. OC	.463**	1							
3. JS	.722**	.595**	1						
4. Altruism	.365**	.520**	.338**	1					
5. Conscientiousness	.192	.478**	.143	.542**	1				
6. Civic virtue	.340**	.598**	.369**	.352**	.435**	1			
7. Courtesy	.180	.532**	.226*	.569**	.645**	.492**	1		
8. Sportsmanship	.404**	.522**	.423**	.435**	.641**	.585**	.580**	1	
9. Overall OCB	.386**	.676**	.391**	.738**	.816**	.739**	.822**	.828**	1

Note. ** $p < 0.01$; * $p < 0.05$

The Influence of OCB Antecedents on OCB Dimensions

The influence was assessed by using multiple linear regression analysis. The prediction power of the antecedents of OCB over its dimensions has been examined after controlling for demographic variables. The analysis was conducted in separate hierarchical regression with demographic variables – sex, age, academic rank and work experience – entered first for controlling purpose. Incidentally, the demographic variables jointly accounted for 13.9% of the variance over the overall OCB (F (4, 82) = 3.323, p < .05), among which academic rank (R^2 change = 8.9%, β = .339, p< .01) took the significant share of the variability on OCB. The inclusion of the antecedents under examination on the regression equation escalated the variation OCB into 53.3% (F (7, 79) = 12.882, p < .001). Altogether, accordingly, the antecedents of OCB explained 39.4% of the variance in OCB, OC and OS subsequently being the most powerful predictors among the antecedents taken in to account by the current study. Among the antecedent variables, OS (R^2 change=12.8%, β = .362, p < .001) and OC (R^2 change=26.3%, β = .587, p < .001) explained the variation of OCB significantly with moderate and strong effect size respectively.

The predictive power of each antecedent variable considered in this study over the dimensions of OCB, however, varied from variable to variable. Regarding altruism, to begin with, the demographic variables accounted for 4.9% of its variance (F (4, 82) = 1.052, p > .05), despite all the demographic variables considered had insignificant contributions in explaining it at P > 0.05. The inclusion of the antecedents produced a total of 31.9% variation on it, which means the antecedents accounted for 27% of the change on altruism (F (7, 97) = 5.280, p < .001). Among the antecedents, only OS (R^2 change= 13%, β = .365, p <.001) and OC (R^2 change= 14%, β = .428, p <.001) have statistically significant contribution to the variance in altruism with moderate effect size.

Regarding conscientiousness, demographic variables predicted 16.1% of its variance (F (4, 82) = 3.930, P<0.01), sex (R^2 change = 3.4%, β = -.234, p< .05) and academic rank (R^2 change = 11.6%, β = .370, p< .01) solely explaining the variance. The entry of the antecedent

variables elevated the predicting power to 36.6% (F (7, 79) = 6.503, P<.001), implying that the antecedent variables explaining 20.5% of the variance in conscientiousness. Among the antecedent variables considered, OC influenced the variance in conscientiousness exclusively (R^2 change= 14.8%, β =.440, p < .001) with moderate effect size. OS and JS demonstrated statistically insignificant contributions (P>0.05) despite the fact that they distinctively explained 2.7% and 3% of the variance respectively.

Table 4

Hierarchical Regression Analysis for Predicting OCB Dimensions

Variable category	Variables	Altruism	Conscientiousness	Civic Virtue	Courtesy	Sportsmanship
Demographic variables	Sex	-.121	-.185	-.098	-.142	.052
	Age	-.084	.037	-.097	-.056	-.048
	Academic rank	.188	.387***	.263*	.189	.312*
	Experience	.009	.104	.363***	.097	.179
Antecedents of OCB	OS	.365***	.167	.317***	.174	.367***
	OC	.428***	.449***	.506***	.543***	.398***
	JS	-.037	-.290	-.049	-.093	.049
	F	1.052	6.503	10.212	5.224	6.319
	R^2	.319	.366	.475	.316	.359
	R^2 change	.270	.205	.294	.257	.252

Note. The entries in the table are standardized β**s**; *****p<0.05; P******<0.01; P*******<0.001.

With regard to civic virtue, the demographic variables explained 18.1% of the variance, F (4, 82) = 4.529, p < .01. The result revealed that academic rank (R^2 change = 5.4%, β = .263, p< .05) and working experience (R^2 change =10.9%, β =.363, p < .001) have solely and significantly explained the variance in civic virtue. Entering the antecedents of OCB on the regression model raised the explanation power to 47.5% of the variance of the civic virtue (F (7, 79) = 10.212, P<0.001), which informs that OCB antecedents predict 29.4% of the change on civic virtue after controlling demographic variables. The output of the regressing, moreover, indicated that OS (R^2 change= 9.8%, β =.317, P<0.001) and OC (R^2 change= 19.6%, β =.506, P<0.001) distinctively exhibited statistically significant influence on civic virtue with moderate and strong effect size respectively.

On the other hand, it was found out that none of the demographic variables yielded significant variance on courtesy, although they explained 5.9% of its variance in aggregate. The entry of the antecedent variables to the regression model resulted in a variance of 31.6% (F (7, 79) = 5.224, p < .001) where OC (R^2 change= 22.5%, β = .543, p<.001) has a predominant impact on it with strong effect size. In connection with sportsmanship, the demographic variables explained 10.7% of the variance (F (4, 82) = 2.445, P<0.05). The output showed that only academic rank (R^2 change = 7.5%, β =.312, P<0.05) has a uniquely significant influence on sportsmanship. The inclusion of the antecedent variables predicted 35.9% variance in sportsmanship (F (7, 79) = 6.319, p < .001). In the study, JS does not show significant influence to sportsmanship whereas OS (R^2 change = 13.1%, β = .367, P<0.001) and OC (R^2 change =

12.1%, β = .398, P<0.001) have exclusively explained its variation with moderate effect size. Altogether, the antecedents of OCB explained 25.2% of the variance in sportsmanship.

Discussion

In contrast to the concerns about the OCB of academic staff explained in the problem statement, **t**he mean scores of each OCB dimension informed that the instructors of BCTE demonstrated more than average OCBs. This is meant that the staff of BCTE demonstrated discretionary behaviors to expend extra-effort for a better performance of the college as confirmed by the one-sample t-test output that depicted mean scores significantly greater than the average (expected) score. On the one hand, the college is characterized as lacking OCBs which might have an effect on its performance as reported in the problem statement whereas respondents claimed they have more than average OCB, in contrast to the problem stated from the outset in this study. This may imply that, as a range of literature documented, other precursors such as the staff personal characteristics (Chahal & Mehta, 2010; Chiaburu et al., 2015) and the task characteristics (Somech & Ron, 2007; Podsakoff et al., 2000) or any other demographic or personality related factors might have played indispensable roles to the staff of the college in displaying OCBs. The current result, in general, is consistent with Sajid and Akhtar (2020) and Tahseen (2014) who reported high level of teachers' OCB in HEIs whereas it has discrepancies with Samuel et al. (2023) and Endris and Dawit (2019) who indicated the meager engagement of teachers in OCB.

Similarly, one sample t-test results about the antecedents of OCB considered have portrayed significantly greater mean scores than the expected mean value. Besides, the effect size depicted that the job satisfaction of the instructors and the support they received from the college are found to be moderate while they are highly committed to the college. Accompanying with the correlation analysis, this informs that all the antecedents are functioning moderately to galvanize instructors' OCB toward effectiveness. Despite the three antecedents that function as activators of OCB showed statistically significant higher mean scores than average in contrast to earlier findings (such as Niehoff & Moorman, 1993; Organ & Ryan 1995; Schnake et al., 1995); nonetheless, their presence did not highly catalyze OCB toward organizational effectiveness in BCTE. Although most sources of literature advocate that employees who have JS (e.g., Alizadeh et al, 2012; Hemakumara et al., 2018; Hemakumara, 2020; Lee & Allen, 2002; Günay, 2018; Mohammad et al., 2011; Murphy et al., 2002; Organ & Konovsky, 1989; Pal & Dasgupta, 2012) at a workplace demonstrate OCB to a higher level, the current finding did not comply with all these sources. The present study, however, is consistent with results of previous studies who revealed employees at a workplace demonstrate modest to moderate OCB when they perceive favorable OS (e.g., Chiaburu et al., 2015; Firmansyah et al., 2022; Rosafizah et al., 2020; 2015; Wayne et al., 2002), and feel OC (Feather & Rauter, 2004; Grego-Planer, 2019; Organ & Ryan, 1995; Wagner & Rush, 2000; Zayas-Ortiz, 2015). In sum, though the respondents of the study reported the availability of those antecedents in the college, the existence of those antecedents did not elicit instructors'

OCB to a higher level in the college in a way to enhance performance, indicating the need to incorporate various contextual factors in future studies.

Alike the findings by different authors (e. g., Wagner & Rush, 2000), moreover, all the three antecedents jointly predicted 39.4% of the variance in OCB. OC was found the most important variable in predicting OCB with 26.3% prediction power followed by OS that explained 12.8% of the variance. These findings, however, contradicted with William and Anderson (1991) as well as Allison et al. (2001) who found out no effect of OC on OCB. In line with Allison et al. (2001) but in contrast to Murphy et al. (2002), Organ and Ryan (1995) as well as Smith et al. (1983), JS did not significantly explain OCB in BCTE.

On the other hand, the antecedents of OCB in aggregate affected each dimension of OCB differently. Jointly, those antecedents explained 27% of the variance in altruism, 20.5% in conscientiousness, 29.4% in civic virtue, 25.7% in courtesy, and 25.2% in sportsmanship. Regarding the role of OS, the current findings go in line with past research outputs (e. g. Shore & Wayne, 1993) that informed the predictive power of OS over OCB. With respect to the roles of OC and JS, however, the current findings produced both convergent and divergent outputs. On the one hand, they converged with Organ and Ryan (1995) and Smith et al. (1983) who found out JS predicting all OCB dimensions but diverged from Allison et al. (2001) who found no effect of JS and OC on OCB, on the other. The present findings also associated and dissociated with Hakim et al. (2014) who, on the one hand, displayed that JS and OS have a significant effect on OCB and a negative effect of OC on OCB.

A closer look at the effect of each antecedent variable on each OCB dimensions disclosed a mixed result. Although it has unveiled a moderate and positive association with and is a predictor of altruism (13%), civic virtue (9.8%), and sportsmanship (13.1%), OS lacked to correlate to and predict courtesy and conscientiousness in the current study. This converged with varying sources of literature (such as Shore & Wayne, 1993). That is, in line with earlier findings (Ehigie & Otukoya, 2005; Organ, 1988; Podsakoff et al., 2000; Shore & Wayne, 1993; Wayne et al., 2002), favorable OS (such as rewards, fairness and decent working conditions) at workplace encouraged instructors to carry out extra tasks, to provide attention for the image and well-being of their organization, to tolerate inconveniences and impositions and maintain a positive attitude in difficult circumstances so much so to the extent of willingness to sacrifice personal interests for group interests. Unlike those sources, in contrast, OS lacked both to associate with and predict courtesy, to maintain social order and group harmony by preventing chaos and conflict among employees (Lam et al., 1999; Organ, 1988; Organ et al., 2006), and conscientiousness, which require no or low absenteeism and attention for deadlines, obeying rules and regulations as well as dedication to organizational effectiveness, (Bukhari, 2008; Mushtaq & Umar, 2015; Organ, 1988; Vieten et al., 2006). The finding by Jehanzeb (2020), however, coincided with the current finding which found that the relationship between OS and OCB is insignificant. The possible explanation for the current finding might be because probably the instructors' perceived OS was not good enough to motivate them to take on extra tasks for the benefit of their organization. Otherwise, although instructors have perceived OS, it does not necessarily guarantee them to carry out extra role toward the effectiveness of the college.

In the current study OC explained 14%, 14.8%, 19.6%, 22.5%, and 12.1% of the variation in altruism, conscientiousness, civic virtue, courtesy, and sportsmanship respectively. Those figures inform the dominant power that OC has on each dimension of OCB if one compares the proportions with the joint effect of the antecedents of OCB mentioned above. These findings coincided with previous findings (such as Feather & Rauter, 2004; Kim, 2006; Organ & Ryan, 1995) that reported the existence of at least a moderate and positive effect of OC on all the five dimensions of OCB, and contrasted with William and Anderson (1991) who claim that OC does not explain every dimension of OCB.

With respect to JS, surprisingly, although the findings of the present study revealed its correlation with altruism, civic virtue, and sportsmanship moderate and positive, it explains none of these dimensions significantly. In this respect, the current finding is in line with Allison et al. (2001), and contrasted with other earlier research findings (such as Murphy et al., 2002; Organ & Ryan, 1995; Smith et al., 1983). This implies that although instructors perceived that the college creates favorable working condition, and they are satisfied with their job, these factors did not help instructors to boost their OCB to a higher level, and they found them merely limited to performing what is formally required by their job description rather than exhibiting further willingness to perform jobs beyond their roles. This seems possible in the context of most employees in Ethiopia because employees with clearly defined duties and responsibilities may be reluctant to go beyond the officially stated job requirements. In other words, although instructors have significant JS and commitment, as the mean value dictates, it does not necessarily guarantee the instructors to display OCBs in an extraordinary manner for the better improvement of college performance.

Conclusion and Recommendations

This study attempted to examine the role of the major antecedents that impact instructors' OCB in BCTE. Accordingly, the findings of the current study about the relationships among the antecedents and the dimensions of OCB demonstrated mixed results. Thus, the association between the antecedents and dimensions of OCB is context dependent because the relationship is embedded within and moderated by demographic, personal and cultural aspects of the staff and their organization. An antecedent that predicted OCB or its dimensions independently in one organization may not predict alike or equivalently in another organization. This in turn implies that the development of OCB in an organization is subject to understanding what factors determine it in that specific organizational culture. Hence it is very important to examine the contextual characteristic of the interdependent variables thoroughly before getting into an intervention to empower OCB among employees.

On the basis of the results of the study, recommendations are forwarded. Since OC and OS predicted OCB and its dimensions, the college under study shall give emphasis for these two factors to optimize the OCB of the staff and the effectiveness of the college.

Additionally, in principle and empirically, too, the more satisfied an employee is the more s/he performs extra roles in her/his work place. JS, however, did not predict any of the three OCB dimensions in the context of BCTE despite its significant correlations with three of them.

Hence, it is very important to examine the role of JS as a function of staff OCB and college effectiveness in BCTE, particularly by incorporating ~~data~~ from in-depth interview to resolve the fallacy between the principle and the current finding.

Finally, the role of demographic and personality factors as well as of organizational culture on OCB shall be examined in future studies to understand more about the factors that affect the OCB of the staff and the effectiveness of BCTE.

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Preparing competent citizens through appropriate instructional approach: How do instructors in three Ethiopian universities conceptualize and practice 21st century pedagogical skills?

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Abstract

This study aimed to investigate how instructors at three Ethiopian universities conceptualize and practice 21st century skills in classrooms. To achieve this purpose, a qualitative case study design was employed. Using a purposive sampling method, three universities in the Amhara national regional state of Ethiopia were selected. From these universities, ten participants were selected purposively. Semi-structured interviews and observation were used to collect data essential for the study. The data collected through these methods were thematically analyzed. The results revealed that participants had a limited understanding of 21st century skills. To be specific, their conceptions reflected the conventional pedagogical approach rather than the pedagogy of the 21st century. On the other hand, participants believe that 21st century skills are important for both instructors and their students. However, they had difficulties to practice these skills in the teaching-learning process. Finally, the implications of these findings for future research and policy initiatives are presented.

Introduction

Until the introduction of modern curriculum ideas by Bobbitt (1918), educational thoughts were largely rooted in traditional contexts. By emphasizing a more systematic and scientific approach to curriculum development, Bobbitt's ideas revolutionized educational systems, curriculum design, and pedagogical practices. Building upon Bobbitt's work, later scholars such as Slattery (2006) have delved into postmodern curriculum theories. Postmodernism has led to a greater emphasis on diversity, inclusivity, and critical thinking within curricula. Pinar (2004), who introduced the re-conceptualist view of curriculum and pedagogy, also further expanded the

discourse on educational practices. This approach encourages educators to critically examine and challenge existing educational structures and practices.

Later, in the third millennium, the concept of 21st century skills gained prominence. The term refers to a set of competencies that are deemed essential for individuals to thrive in the modern world. These skills go beyond traditional academic knowledge and focus on equipping individuals with the tools they need to succeed in an increasingly complex and interconnected global society (Corinne, 2022; Pink, 2005; Trilling & Fadel, 2009). The skills include critical thinking, creativity, collaboration, communication, digital literacy, and global awareness, among others (Binkley et al., 2012; OECD, 2011; Partnership for 21st century skills, 2009).

Different organizations and scholars (e.g., Binkley et al., 2012; Chalkiadaki, 2018; Clarke & Care, 2017; Hixson, Ravitz & Whisman, 2012; Mills & Kim, 2017; OECD, 2011; Owen & Vista, 2017; and Partnership for 21st century skills, 2009) have tried to indicate the dimensions of 21st century skills. Binkley et al. (2012), for instance, identified four domains, starting with "ways of thinking" encompassing creativity, critical thinking, problem-solving, decision-making, learning to learn, and meta-cognition. The second domain covers "ways of working," including communication and collaboration (Binkley et al., 2012). The third domain is "tools for the working" that includes information and ICT literacy, emphasizing the importance of technology as a learning tool that enables students to engage in productive learning (Binkley et al., 2012). The fourth domain, "living in the world," includes local and global citizenship, life and career skills, personal and social responsibility, as well as cultural awareness and competence (Binkley et al., 2012). Similarly, OECD (2011) classified 21st century skills into three categories: the skills to use interactive tools, the ability to collaborate with heterogeneous groups, and the ability to act independently.

The concept of 21st century skills has gained prominence in educational discourse as educators and policymakers recognize the need to prepare students for the challenges and opportunities of the digital age. The emergence of these skills has necessitated a shift away from traditional curriculum and pedagogy models that primarily focused on content delivery and memorization. Instead, there is now a greater emphasis on developing students' abilities to think critically, solve problems, and adapt to an ever-changing global landscape. In this regard, Ornstein and Hunkins (2018) argue that education should be more student-centered, with a focus on fostering creativity, innovation, and interdisciplinary learning. Additionally, UNESCO (2018) has played a significant role in promoting the integration of 21st century skills into educational systems worldwide. UNESCO's initiatives aim to ensure that learners are equipped with the necessary skills to navigate the complexities of the modern world.

The 21st century pedagogical skills are of utmost importance in the education, pedagogy, and socioeconomic sectors. Scholars have highlighted these skills as crucial tools for facilitating critical pedagogy in the teaching-learning process (Giroux, 1992). These skills also encourage experimental-based instruction that empowers students to exercise their future work and learn through inquiry and thinking, as advocated by Freire (1972), Dewey (1933), and Reeves (2004). Furthermore, engaging in 21st century pedagogical activities enables instructors to develop domain-specific and pedagogical competencies, enhance creativity, and adapt to new situations

for teaching and learning (Zhao, 2009). For this purpose, instructors need to be equipped with these skills to effectively teach and orient learners with the conceptual age, which requires competencies beyond subject-specific knowledge (Lee & Tan, 2018; OECD, 2011).

The contemporary skills of the 21st century not only contribute to pedagogy and education but also play a significant role in socioeconomic transformation. Critical thinking, problem-solving, reflection, interaction, and transaction skills are essential for addressing sociocultural problems and making societies fit for personal and social responsiveness (Doll, 1993; Zhao, 2009). They facilitate the transition from a manufacturing-based economy to knowledge-based economies and empower individuals and communities to cope with the challenges of the digital age, such as artificial intelligence, robotics, and virtual reality (Pink, 2005; World Economic Forum and Asian Development Bank, 2017). Moreover, 21st century skills are valued as a reliable means of producing new knowledge and solutions to complex problems in the contemporary world (Binkley et al., 2012; Friedman, 2017).

The Problem

Despite the importance of the 21st century skills, their implementation in education faces several challenges. These include resistance to change, technological infrastructure limitations, teacher training and professional development needs, and curriculum design and assessment considerations (Binkley et al., 2012; Jeffery & Craft, 2001; Kay, 2010; World Bank, 2005).

One of the primary challenges in implementing 21st century pedagogical skills is related to curriculum and assessment. Traditional curricula often focus on rote memorization and standardized testing, which do not align with the goals of these skills (Ornstein & Hunkins, 2018)). Implementing 21st century skills requires a shift in curriculum design to emphasize critical thinking, problem-solving, collaboration, creativity, and digital literacy. However, designing and implementing new curricula incorporating these skills is challenging due to factors like time constraints, standardized testing requirements, and resistance from stakeholders (Lee & Tan, 2018; OECD, 2011). Moreover, traditional assessment methods may not effectively measure students' mastery of 21st century skills. Developing new assessment strategies that accurately evaluate proficiency in these skills is essential.

The successful implementation of 21st century pedagogical skills heavily relies on well-trained and knowledgeable teachers. However, many educators did not receive adequate training or professional development opportunities to effectively integrate technology and modern teaching methods into their classrooms (Lee & Tan, 2018; OECD, 2011). Likewise, the implementation of 21st century pedagogical skills necessitates a shift in the roles of educators. Teachers are no longer just providers of information but facilitators of learning experiences. They need to adapt their instructional strategies to foster student-centered learning environments that promote collaboration, critical thinking, and creativity. This shift can be challenging for educators who are accustomed to more traditional teaching methods and may require support and training to effectively transition into their new roles (Lee & Tan, 2018; OECD, 2011).

Technological infrastructure is also a significant challenge in implementing these skills. Schools need reliable internet connectivity, up-to-date hardware and software, and appropriate

digital tools and resources. Yet, many schools, particularly in developing countries, lack the necessary infrastructure to support these advancements (OECD, 2011; UNESCO, 2018; World Bank, 2005).

Coming to Ethiopia, the introduction of transformative 21st century pedagogy in the country's education system has been recent. Due to this, higher education institutions continue to implement traditional pedagogical practices (Damtew & Muluken, 2020; Daniel, 2004; Tadesse & Melese, 2016; Worku, 2021). Many teachers in Ethiopia have been trained using traditional teaching methods. Because of this, they lack exposure for innovative 21st century pedagogical skills. As Kedir (2009) noted, instructors have been deskilled and de-professionalized, resulting in lesser knowledge and skills attained by teachers upon graduation. Furthermore, there exist gaps between pedagogical skills and assessment (Mulugeta, 2012; Tadesse et al., 2018), inadequate differentiation of instructional practices (Melese, 2019), and limited alignment between teaching methods and the world of work (MoE, 2018; Mulugeta, 2011).

Another challenge is the lack of adequate infrastructure in many parts of Ethiopia. Access to technology and internet connectivity is limited, especially in rural areas (OECD, 2011; UNESCO, 2018). This hinders the implementation of modern teaching methods that heavily rely on digital tools and online resources. Without proper infrastructure, it becomes difficult to integrate technology into classrooms and provide students with the necessary digital literacy skills.

In addition to these challenges, there are other factors that hinder the implementation of 21st century pedagogical skills in Ethiopia. These include limited funding for educational initiatives, a large student-to-teacher ratio, inadequate learning materials and resources, and a predominance of the knowledge mastery concept in the education system (OECD, 2011; UNESCO, 2018; Worku, 2023).

Therefore, this study aims to provide empirical evidence on instructors' conceptualizations of and competence in practicing 21st century pedagogical skills. For this purpose, the study is organized under the following research questions: (1) How do instructors conceptualize 21st century pedagogical skills? (2) How do instructors understand the importance of 21st century pedagogical skills? (3) How do instructors practice 21st century pedagogical skills?

Methods

Design

As indicated earlier, the purpose of this study is to investigate instructors' understanding of 21st century skills and their ability to apply them in the teaching and learning process. To achieve this goal, a qualitative research approach with a case study design was utilized. The case study design was chosen because it was found to be appropriate provide a detailed description of research participants' understanding and pedagogical competence in practicing the 21st century skills (Kumar, 2011).

Sampling

The study was conducted at three purposively selected public universities located in the Amhara National Regional State, Ethiopia. The universities were selected based on their varying levels of experience in terms of the number of years they have been established. Specifically, Bahir Dar University (first-generation), Debre Tabor University (third-generation), and Injibara University (fourth-generation) were selected. The proximity of these universities to the researchers was also considered for ease of access and data collection.

From these universities, 30 participants (21 instructors and nine students) were selected. To be specific, 10 participants (seven instructors and three students) were selected from each university. Five of the participants were drawn from different natural science faculties/colleges (two from engineering, two from agriculture, and one from mathematics) while the remaining five were from social science colleges (two from the College of Business and Economics and three from the College of Education and Behavioral Sciences). The participants were selected purposively based on their prior experiences. Participants who have experiences in relation to the issue were selected with the consultation of academic leaders.

Data Gathering

The primary data gathering instrument of this study was semi-structured interview with seven open-ended guiding questions. The interviews were conducted with 10 participants (7 instructors and 3 senior undergraduate students) at each of the universities selected. The interviews focused on instructors' understanding and competence in teaching 21st century skills. All interviews lasted approximately an hour, and the data were recorded, transcribed, and narrated according to the identified themes.

The other data collection instrument was observation anecdotal note. It was conducted by the researchers themselves. The purpose of the observation was to understand instructors' competence in practicing the 21st century skills in their respective classrooms. The observations were made in two classrooms of the first-generation university (one from engineering and another from educational planning and management departments) and one in the classroom of a instructor member from the third-generation universities (in the department of accounting). Each observation took approximately 50- 60minutes in the selected three classrooms.

The interview was conducted with 10 participants (seven instructors and three undergraduate senior students) at the three selected universities. The interview focused on the conceptualization and actual competence of instructors in teaching 21st century skills. Each interview with a study participant was carried for an hour. The data were first recorded, then transcribed and narrated as per the themes coded in relation to the basic questions.

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from the third-generation universities (in the department of accounting). Each observation took approximately 50- 60minutes in the selected three classrooms.

Data Analysis

Data analysis was done qualitatively through descriptions and narrations. From the transcripts, the data were labeled into categories that help to describe instructors ' conception and competence in practicing 21st century skills. For a better description of the issue, similar contents were placed together based on the explanations of most participants, as indicated by (Creswell, 2015). Anecdotal notes of observation data were used to explain further the observed practices of instructors on the 21st century pedagogical skills.

Results and Discussion

Instructors' Conceptualization of 21st Century Pedagogical Skills

This theme examines the conceptions of instructors regarding skills like critical thinking, creativity, communication, collaboration, information and communication technology skills. As prominent scholars of the field consistently indicated, these skills fare at the heart of the teaching and learning process and are especially relevant in modern-day teaching (Voogt & Roblin, 2012; Kivunja, 2015; Partnership for 21st Century Skills, 2015; Urbani et al., 2017).

Despite this, the data collected from the research participants revealed that instructors have a limited understanding on the practical application of 21st century skills. The following verbatim epitomizes this.

> In my perspective, the pedagogy for developing 21st century skills involves designing and executing learning plans alongside monitoring progress through evaluations. This approach aims to translate education plans into practical application. However, I personally lack the necessary practical experience in honing pedagogical skills that encourage learners to attain 21st century skills and integrate them into assessment practices (Instructor 1, personal communication, March 24, 2023).

Other instructors also shared their perspectives on 21st century pedagogical skills. One view, as expressed by Instructor 2, is that these skills encompass a range of competencies that promote student-centered learning, including subject matter expertise, technology proficiency, and facilitation of self-directed learning. Effective assessment, such as assessment for learning and assessment as learning, is also a key component (Instructor 2, personal communication, March 24, 2023).

In addition, the development of 21st century pedagogical skills entails employing diverse teaching methods and instructional strategies. These skills are not only competencies but also instructional approaches. Yet, "many of our colleagues, as well as myself, lack sufficient knowledge and understanding of these skills, leaving us unsure how to teach or assess students in these areas" (Instructor 3, personal communication, March 24, 2023).

Instructor 4 also highlighted the importance of 21st century pedagogical skills as an innovative teaching approach. However, this respondent noted that many instructors lacked familiarity with these skills and believed that they were not essential to the teaching and learning process. Meanwhile, Instructor 7 expressed that 21st century skills were often limited to delivering prescriptive content knowledge, with teachers acting as the sole knowledge source and students simply following instructions. This teaching style was a reflection of their traditional practices and did not align with the innovative strategies of 21st century pedagogy.

Unfortunately, many of the participants in the study shared a similar misconception, equating 21st century pedagogy with conventional teaching practices. They failed to recognize that these skills could transform teaching and learning, encouraging student-centered approaches that fostered creativity and critical thinking. Furthermore, the participants did not integrate 21st century skills in their assessment methods.

Observational data also indicated that instructors lacked an understanding of 21st century pedagogical skills in the contemporary context. Instructors had limited conceptions of critical thinking, often overlooking the importance of evidence-based arguments and comparative analysis. Similarly, creativity was not valued as a means of generating original ideas and concept mapping. Furthermore, the participants did not view communication as a dialogical process, and they failed to recognize the value of utilizing ICT tools to facilitate e-learning, blended learning, and information sharing. Ultimately, instructors favored traditional lecturing methods and were not using the latest pedagogical methods that utilize 21st-century skills.

The participants in this study prioritized Shulman's (1986) categories of knowledge, which included knowledge of content, general pedagogy, the curriculum, and Pedagogy Content Knowledge (PCK), when it came to their traditional pedagogical practices. However, their conceptualization of pedagogical competence did not align with the expectations established by various organizations and scholars, such as OECD (2011), Partnership for 21st Century Skills (2009), Binkley et al. (2012), National Research Council (2012), UNESCO (2015), and European Commission (2013).

The instructors' understanding of the practical skills related to teaching and learning in the 21st century was not expressed in the modern-day context. They did not reflect an adequate conception of the practical skills of the 21st century as important components of teaching and learning and as necessary components for students' future employment as discussed in Dede (2010). Their ideas of 21st century skills did not reflect the core values of the teaching and learning process in 21st-century education and were not in line with various notable frameworks (Partnership for 21st Century Skills, 2015; Roblin, 2012; Urbani et al., 2017; Voogt & Kivunja, 2015).

To sum up, instructors exhibited a lack of understanding of the various dimensions of 21st century skills, particularly in relation to the teaching and learning process. In their conventional pedagogical practices, they demonstrated limited knowledge and understanding of the lower levels of 21st century skills. In addition, they faced difficulties in utilizing non-traditional assessment methods, including assessment as learning. Consequently, in the universities studied, the

development of 21st century skills was not given the attention required and instructors' pedagogical competence was limited to traditional pedagogy.

Instructors' Conceptions on the Importance of 21ˢᵗ Century Pedagogical Skills

The participants interviewed expressed that the mastery of 21st century pedagogical skills by instructors presents challenges. They believed that these skills are important and shared the following insights:

> These skills are demanding but they are also relevant. They enhance the academic experience for students and are imperative for their entrepreneurial and employability development. Interestingly, we find that possessing these skills is more critical than subject matter knowledge. It's unfortunate that many graduates with subject matter knowledge are currently jobless. Therefore, integrating these skills into the instructional process needs to be compulsory for our higher education institutions (Instructor 3, personal communication, March 24, 2023).

> Teaching these skills is important and I have no desire to return to a discipline-based pedagogy. It is my belief that mastering these skills is essential to become competent and ready for employment. Communication is the key to success in the world of work and possessing information and communication technology (ICT) skills would make us apt to fit into the fifth generation of technology utilization. These skills have an interdisciplinary nature which fosters success in any workplace (Student 2, personal communication, March 26, 2023).

> There is no doubt about the importance of these skills; they are demanding because the world is dynamic, and they are necessary to adapt to change. Cooperation is essential for problem-solving and technology-driven societies require not only technology in teaching and learning but also in any activity. Our lives are gradually becoming more dependent on technology and this trend is expected to continue (Instructor 7, personal communication, March 25, 2023).

During the interview, other participants also highlighted the importance of 21ˢᵗ century skills for learners, urging that educational practices need to evolve from the usual practices. These skills can provide opportunities for performing more creative and unique tasks that differ from rote work. According to Student1 and Instructor 4, understanding these skills will enable learners to be more effective in the workplace and to increase employability. Instructor 5 too stated that integrating content knowledge with 21st-century skills will make students full-time workers who take responsibility in their jobs. Quite in a similar fashion, Instructor 6 noted that these skills are advantageous in preparing students to succeed in modern scientific fields.

Overall, the majority of participants agreed that instructors should prioritize the importance of these skills in their instructional methods. Teaching skills such as critical thinking, creativity, communication, collaboration, and technology use can transform discipline-based pedagogy into an innovative and interdisciplinary way of solving complex issues that affect global society.

Leveraging these skills can help prepare students for the information age and ensure the success of their careers through working creatively and uniquely.

This study's findings align with concepts discussed in existing literature. UNESCO (1996) outlines the four pillars of education as key components of 21st-century thinking. These pillars include skills like communication, collaboration, critical thinking, numeracy, self-management, problem-solving, study skills, and information technology, all of which are necessary for higher-order thinking (Dede, 2010; Marsh, 2009).

The findings also reflect the views of critical pedagogy educators. These educators, such as Doll (1993), Freire (1972), and Giroux (1992), stress the link between authority, power, and knowledge from a critical perspective. By engaging in problem-solving, reflective action, interaction, and transaction, critical pedagogy can emancipate individuals from any socio-cultural issues. The study also highlighted rising global, social, economic, environmental, and political issues that require contemporary global education (Biggs, 2003; Kirkwood, 2001; Partnership for 21st Century Skills, 2019; Sibbel, 2009).

Generally, the results of the study are consistent with the views of the scholars mentioned above. As such, instructors of selected Ethiopian universities acknowledged the importance of 21st-century pedagogical competence as a means of innovatively improving pedagogical practices.

Instructors' Practice of 21st Century Pedagogical Skills

The study found that the instructors lacked competence in developing 21st century skills. According to one respondent (Instructor 3), their ability to teach these skills was limited due to various factors. They were only able to teach the reasoning aspect of critical thinking, rather than developing it fully. Additionally, they struggled to promote effective communication as their classroom interaction was one-way, with the lecturer lecturing and the students listening. The respondent also aimed to complete the course in less time than allocated in the syllabus. Most of the students preferred to be grouped with those from the same ethnic group and want to communicate in their mother tongue during group discussions. This hindered collaboration and reduced the creativity aspects of 21st-century teaching competence. As evidenced by this participant (Instructor 3), instructors were not encouraged to be innovative or generate new ideas in their instruction. When it came to using technology as a learning tool, the respondent believed that the students were not keeping up with the increasing demand for technological fluency as they only relied on PowerPoint presentations.

In connection with this, instructors 1, 2, 4, 6, and 7 revealed that they have not effectively implemented 21st century skills due to the time constraints they faced in covering the syllabus in just one and a half months of a semester. As a result, students were not able to fully comprehend these essential skills such as critical thinking, creativity, communication, and collaboration. While Instructor 7 acknowledged some efforts to incorporate 21st-century pedagogy, he observed that the teachers' approach remained largely traditional, transferring content knowledge in a one-way communication style. Moreover, the individualistic culture among the instructors limited collaboration and resource sharing, creating difficulties in forming diverse groups of students. Instructor 2 also reported that students preferred to group themselves according to their ethnic

backgrounds, hampering inter-ethnic collaboration. This approach resulted in limited dialogue and interaction in the classroom, as evidenced by the students' subdued response during lectures.

In addition, students who took part in the study also praised their professors' perspectives, with one stating the following:

> From my perspective as a student, there is little emphasis placed on 21st-century pedagogy, and it is rarely utilized in the classroom. Teachers aim to teach us new things, such as recently selected seeds, and encourage us to participate in new projects. However, in terms of classroom communication, students are mostly listeners while teachers do most of the talking. We tend to focus more on PowerPoint presentations, and there is little practical use of technology as a learning tool. The attention is more on theoretical knowledge (Student1, personal communication, March 26, 2023).

Furthermore, another participating student (Student 3) echoed this sentiment, expressing that in the university they attend, the professors fail to foster innovation, critical thinking, and the ability to perform 21st-century skills among their students. They claimed that the teachers' primary responsibility was to cover course content while ignoring teaching standards.

The data presented above suggests that the pedagogical practices of instructors were insufficient. Even techniques for teaching specific skills were only occasionally utilized. The instructor seemed to adhere to their traditional, teacher-centered approach to pedagogy. They appeared to be resistant to modern teaching methods that focus on cultivating creativity, critical thinking, communication, collaboration, and the use of ICT.

The data collected indicates that the pedagogical practice of instructors was inadequate and showed little indication of change. Even existing practices for specific skills were discovered to be infrequent. The instructors tended to stick to their traditional method of teaching, one that is dominated by them. They do not appear to be very receptive to modern trends that are linked to the development of creativity, critical thinking, communication, collaboration, and the utilization of ICT.

Furthermore, the results obtained from classroom observation complemented the data gathered from interviews. The instructors seem to overlook the goals of facilitating students' ability to analyze complex problems, investigating questions without clear-cut answers, and evaluating different points of view or sources of information. They also showed little emphasis on developing students' ability to draw appropriate conclusions based on evidence and reasoning to generate and refine solutions to complex problems.

The observed classrooms appeared to have very limited use of technology, with the utilization of ICT being minimal. For instance, instructors' use of technology was limited to PowerPoint presentations, with no use of e-learning, blended learning, sharing, or analyzing information.

The combined data indicated that instructors' pedagogical proficiency did not meet the required competence issues. The trend observed seems resistant to modern pedagogical practices centered on developing creativity, critical thinking, communication, collaboration, and the use of ICT.

The above results of the study are found to be consistent with various research findings. According to previous research, instructors in universities lack competence in practicing 21st century pedagogical skills. For instance, Kouwenhoven's (2003) study revealed weak teaching and learning processes in generic competencies, while Voogt and Roblin (2012) found that educational practices were similar to the industrial model of schooling. Furthermore, Kasule et al. (2014) reported that teachers' competencies were unsatisfactory in several areas, including innovating, facilitating knowledge society, collaborating and networking, developing higher education, and entrepreneurship. Due to these findings, the OECD (2019) recommended the re-skilling of current teachers and upgrading their knowledge base to incorporate 21st century skills such as problem-solving, collaboration, communication, and creativity.

The instructors' competence in Ethiopian universities also did not meet the expectations set by the Ethiopian Higher Education Proclamation (FDRE, 2009) and the Education Road Map (MoE, 2018). The proclamation aimed for a competitive higher education system with a curriculum focused on creativity, critical thinking, and maintaining professional values that address global perspectives. Similarly, the Education Road Map of the ministry of education emphasized balancing domain and generic skills, as well as using ICT for academic and research purposes, none of which were satisfactorily practiced in the sample universities of this study. Therefore, the study results suggest that policies should be implemented to improve the pedagogical competence of instructors in developing 21st century skills.

Conclusion and Implications

The purpose of this study was to examine instructors' understanding of 21st century pedagogical skills and their ability to put those skills into practice at selected universities in the Amhara national regional state, Ethiopia. The results revealed that instructors' understanding of 21st century skills was mainly based on conventional teaching practices. They mostly relied on lectures and focused on content coverage, neglecting pedagogical aspects, such as inquiry-based teaching, innovation, and creativity. Their assessment methods also did not incorporate essential skills like employability and value judgments.

Despite this, the study found that instructors appreciated the significance of 21st century pedagogical skills. In this regard, they acknowledged that they assist students in acquiring self-management, independent thinking, and entrepreneurship skills. Moreover, students can learn and adapt to different global and local contexts and improve employability prospects. This shift towards comprehensive and transformative pedagogical skills advocated a sustainable education system and aimed to empower graduates to tackle the ever-changing challenges of the workplace.

However, the study found that instructors' pedagogical competencies were inadequate in implementing 21st century skills. Their instructional methods emphasized teacher-dominated pedagogical approaches over creativity, critical thinking, communication, and collaboration. The use of innovative teaching materials, including technology, was also limited. This could lead to graduates lacking essential skills for success in the workplace.

The findings of this study have far-reaching implications. To begin with, they imply an urgent need for universities to re-evaluate their curriculums and provide appropriate training to instructors. The task needs to be geared towards enabling instructors to grasp the key concepts of 21st-century pedagogical skills and employ them effectively in their classrooms. It is through this approach that instructors can make a meaningful shift from conventional, teacher-centered methods to a more creative, imaginative, and collaborative approach and incorporate value judgments, innovation, talent, and other essential 21st century skills in their teachings.

Further, a disparity between instructors' knowledge and practical competency was observed, indicating a need for universities to bridge these gaps. In this regard, universities need to provide a platform for global knowledge sharing, information, and technology to create a new generation of innovative and talented graduates. Finally, educational institutions need to integrate 21st-century pedagogical skills in their curriculum and classroom practices, from kindergarten to tertiary education. This will ensure that graduates are equipped with the necessary skills to meet the ever-changing needs of society.

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An investigation into effects of teacher mediation on students' writing skills self-efficacy belief

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Abstract

This study investigated the effects of teacher mediation on students' writing skills self-efficacy beliefs. To achieve the purpose of the study, a quasi-experimental research design was used. The research was done at Hawassa University in the Institute of Technology, and Main Campus which were selected using available sampling technique. The research participants were two sections of first-year undergraduate Natural Science students enrolled in the 2022 academic year. Sections 18 (n=31) and 43 (n=31) were chosen at random among the 76 sections. Tests and questionnaires were employed to collect data. The results revealed that the experimental group outperformed the control groups in their levels of mastery experience, adult-based vicarious experience, social persuasion, and physiological and emotional state when they write essays and paragraphs. Cohen's d test results also showed that teacher mediation affected self-efficacy beliefs sources. The study indicated that employing teacher mediation would enhance students' writing skills self-efficacy beliefs. Further studies on the applicability of the MLE approach in other language skills are needed.

Introduction

Writing skill seems complex due to its challenging and dynamic linguistic, cognitive and psychological aspects that prevent students from achieving adequate performance. Scholars in the field state that it obliges students to consider these features together and make them meaningful (Cheung, 2016; MacArthur, et al., 2016; Olive, 2017). Ferris and Hedgcock (2014, p.24) describe that to convey a message adequately, a writer needs to bring together multitudes of issues such as "semiotic, communicative, cognitive, and creative functions". Researchers like Graham (2019) also state that writing is the most rigorous and challenging skill for students to develop as it entails recursive steps. Due to its demanding nature, students struggle to obtain the necessary level of self-efficacy belief that enables them to generate good writing.

In the Ethiopian case, there are broader contexts for using English language writing skills relative to other skills. For example, it is used for business communication, political discourse, international relations, mass media, and education (Ebabu, 2019). Particularly, university students need basic writing skills to complete academic tasks (Geremew, 1999). Given the benefits, it is taught utilizing a traditional approach to instruction from primary through universities to assist students in practicing and achieving the desired level of performance (Zeleke, 2017). However, it appears clear that students seem unable to execute at the desired level. For instance, studies by Zeleke (2017), Ebabu (2018), and Tamiru (2020) revealed that students who finished high school and enrolled in universities had unsatisfactory performance in writing skills. This seems to result in their low level of self-efficacy beliefs to produce commendable writing.

The former university curriculum included a "Basic Writing Skills Course" for first-year undergraduates, now integrated into communicative English skills parts I and II (MOE, 2013; MOE, 2020). However, students struggled with expected performance and self-efficacy due to inadequate teaching approaches by teachers (Mesfin, 2013).

Therefore, it is important to investigate various teaching strategies that might improve students' perceptions of their writing abilities. The use of a Mediated Learning Experience (MLE) is one of the approaches to instruction that is currently promoted to address issues with traditional second language teaching (Poehner & Infante, 2015). MLE is a pedagogical approach that uses a mediator to modify stimuli, enabling students to achieve learning objectives. It involves real-world problem-solving, managing misconceptions, and selecting appropriate experiences. MLE assumes humans possess unique cognitive modifiability, allowing humans to adapt to changing environmental demands, better explaining cognitive modifiability than direct unmediated experiences (Feuerstein, 1980; Sanceverino, 2016; Tzuriel, 2001). Teacher mediators address perceptual gaps in input, elaboration, and output phases, adjusting lesson contexts, intensity, order, and frequency using MLE principles (Feuerstein et al., 2010; Leask, 2001; Tzuriel, 2013).

MLE-based instruction improves writing skills and self-efficacy beliefs of the skill, impacting cognitive transformation and language acquisition potential. It can optimize students' potential for language acquisition, according to Brown (2002).

Statement of the Problem

English language writing skill is one of the skills that learners are required to develop as it is becoming increasingly significant in the international and national communication contexts. The need and practices of teaching the skill, thus, are growing in English as a foreign language (EFL) pedagogy (Deane, 2018; Weigle, 2002). Students are expected to develop their writing abilities because it is one of the primary ways of learning and communicating with teachers (Selvaraj & Aziz, 2019). However, foreign language learners usually encounter challenges to becoming proficient enough in the skill (Grab & Kaplan, 1996; Harmer, 1998; Selvaraj & Aziz, 2019). They struggle with skill acquisition and perceive mastery as challenging, leading to reluctance or skepticism when asked to write (Bonyadi & Branch, 2014; Buis, 2007; Raoofi et al., 2012). The hesitation in writing exercises may stem from a lack of motivation and low self-efficacy. Factors like teachers' instructional approaches that can limit

or access exposure to the target language input, physiological and cognitive aspects, and psychological factors can impact students' writing skill self-efficacy views (Al-Zoubi, 2018; Graham, 2019; Karafil & Oguz, 2022; Kroll, 1990; Raimes,1983). Researches also highlight the importance of focusing on these psychological factors for producing high-quality writing (Arslan, 2012; Pajares, et al., 2007; Sophie et al., 2022; Usher & Pajares, 2008).

Ethiopian university students' writing skills self-efficacy belief is less than standard due to the instructional approaches pursued by the teachers, indicating they may not produce effective writing. Empirical research and teaching experiences reveal this issue. The present researchers taught a Basic Writing Skill course for years, identifying gaps in students' self-efficacy beliefs and confirming that their writing skills are not satisfactory. Empirical research findings also confirmed that students' writing skill self-efficacy beliefs are not satisfactory (Dawit, 2011; Ebabu, 2018; Ebabu, 2019; Mesfin, 2013; Zeleke, 2017).

Therefore, the researchers tested whether teaching writing skills at Hawassa University using MLE theory would increase students' self-efficacy views in their ability to write essays and paragraphs. Based on the presumptions, the following hypotheses were formed.

Null hypothesis (Ho): There is no statistically significant difference between the students who received teacher mediation and those who did not receive in paragraph and essay writing skill self-efficacy belief sources of mastery experience, vicarious experience, Social persuasion, and physiological and emotional state.

Alternative hypothesis (H1): There is a statistically significant difference between the students who received teacher mediation and those who did not receive in paragraph and essay writing skill self-efficacy belief sources of mastery experience, vicarious experience, social persuasion, and physiological and emotional state.

The following were the research questions posed: (1) Are there statistically significant differences in students' self-efficacy beliefs sources about their paragraph and essay writing skills before and after mediation? (2) Is there a statistically significant difference in students writing skills performance between pre-mediation and post-mediation as a result of the enhancement of self-efficacy belief? (3) What are the degrees of influence of teacher mediation on students' writing skill performance self-efficacy beliefs?

Review of Related Literature

The concept of mediation emerged from Vygotsky's sociocultural learning theory, which critiqued behaviorist and innatist learning theories. Behaviourists believe that learning occurs in the presence of a stimulus and response while innatists emphasize learning as the acquisition of knowledge. Both theories failed to address the need for a human mediator to facilitate learning. Vygotsky and his supporters explored alternative learning theories, leading to the development of mediation (Kozulin, et al., 2003; Vygotsky, 1978). A human mediator assists learners in their environment, using tools and conditions tailored to their needs. This human agent helps them master psychological functions like perception, memory, and attention, providing informed support through literacy tools like artefacts, signs, texts, and graphic organizers (Kozulin, et al. 2003; Vygotsky, 1978).

Mediated Learning Experience (MLE)

MLE theory is designed by Feuerstein, one of the advocates of Vygotsky. According to Tzuriel (2013, p. 60), MLE refers to ''a special quality of interaction between a mediator and a learner''. In other words, learning through MLE can be realized where there is a mediator. Feuerstein et al. (2010) state the learning situation where there is mediated learning experience as follows: ''MLE occurs when a person (mediator) who possesses the knowledge, experience, and an intention mediates to the world, makes it more understandable and imparts meaning to it by adding to the direct stimuli'' (Feuerstein et al., 2010, p. 24).

According to Brown (2002), MLE in the context of foreign language learning refers to students' interactions with the learning environment through the language teacher, who acts as a human mediator. He argues that MLE serves them in different ways students stand to gain more benefits from it. Feuerstein et al. (1988) designed the parameters that can be applied when employing MLE. The parameters include:

> Mediation of intentionality and reciprocity, meaning, transcendence, feeling competent, self-regulation and control of behaviour, sharing behaviour, individual and psychological differentiation, goal-seeking and goal-achieving, challenge, awareness of the human being as a changing entity, an optimistic alternative, and feelings of belonging. (Brown, 2002, pp. 2-8; Feuerstein et al., 1988, p. 61).

The theory suggests that using MLE principles in the classroom improves students' cognitive functioning regardless of age, aetiology, or severity of conditions. These principles aim to dispel the myth surrounding the intelligence quotient (IQ) and facilitate structural cognitive modification (SCM), which involves meaningful changes in human cognition. Structural modifiability involves generalizability, while cognitive actions involve conscious psychological actions. Changes are limited, specific, and local, with poor durability compared to SCM(Feuerstein et al., 1988).

Teachers are the adults who can act as mediators employing the MLE principles, so teacher mediation is the support provided through social interaction between the instructor and the student to enhance the student's learning experience. According to Tzuriel (2001), teacher mediation is an instructional technique that emphasizes thoughtful didactical intervention, focusing on intentional education (Brown, 2002; Mason, 2000; Poehner & Infante, 2015; Tan & Seng, 2008; Tzuriel, 2001; Tzuriel, 2013;). The role of the mediator is to adjust the instruction based on the dynamic instructional needs for cognitive modifiability. A mediator can improve the overall instructions by adjusting the intensity, order, context, and frequency of stimuli (Tzuriel, 2013). Furthermore, Feuerstein et al. (2010, p. 32) state that the role played by the mediator is encouraging students to ''compare, collect, and classify data and to assign significance to the current experience concerning the previous experience''.

Teachers can effectively mediate students' language use through the appropriate use of language forms for communication and the transformation of communicative abilities and mental functioning utilizing psychological tools. Gaining control of language's forms, patterns, and meanings can help with this (Lantolf, 2012). Students' writing abilities and self-efficacy views can be improved with MLE-based help. The idea that students with low self-efficacy

continue to struggle even after getting assistance is refuted by this strategy. As it has been demonstrated to be effective in diverse circumstances, MLE-based instruction tackles this perplexing issue.

Self-Efficacy Belief

Self-efficacy belief is one of the psychological constructs that determine how much effort students are willing to put into a certain task. Bandura (1997) defines self-efficacy belief as the belief that one pertains to his capacity to organize and carry out the course of actions expected to accomplish forthcoming situations. The theory is grounded on the perspective that says human beings have traits that mediate their activities and help involve proactively in the direction of their progress (Arslan, 2012; Pajares et al., 2007; Usher & Pajares, 2008;). Bandura (1997) highlights self-belief as a personal factor enabling individuals to evaluate their control over "thought, feeling and actions". He further stressed the determinant nature of self-efficacy belief and explains that "what people think, believe, and feel affects how they behave" (p. 25).

Bandura (1997) also argues that self-efficacy belief differs according to the task he/she has at hand. He affirms that self-efficacy differs "across the realms of activities under different levels of task demands within a given activity domain, and under different circumstances". Self-efficacy views vary, impacting students' task performance and engagement in classroom settings when faced with challenges in tasks, such as writing assessments or reading to classmates (Limpo & Alves, 2017; MacArthur et al., 2016).

Self-efficacy belief mediates writing skill performance, affecting learners' achievements by facilitating or debilitating their abilities based on appropriate or inappropriate beliefs. (Limpo & Alves, 2017). Pajares and Valiante (1996, p. 4) state that ''self-efficacy belief affects what students do by influencing the choices they make, the efforts they extend, the persistence and perseverance they exert in the face of adversity, and the anxiety they experience''. Additionally, results of empirical investigations support the need to increase students' self-efficacy because it affects their level of concentration, perseverance, and effort in the classroom (Bandura, 1997; Limpo & Alves, 2017; Raoofi, Tan, & Chan, 2012;). Furthermore, it is the main factor that consistently predicts students' writing skill performances (Bonyadi & Branch, 2014; Pajares et al., 2007; Raoofi et al., 2012; Usher & Pajares, 2008).

Researchers are focusing not only on how students' self-efficacy beliefs affect the quality of their compositions but also on the origins of those beliefs. This enables them to channel their support through that source. Bandura (1997) divides the sources into four. Mastery experience involves students analyzing academic outcomes, forming aptitude views, and acting accordingly. Effective efforts increase self-efficacy, while unsuccessful efforts decrease it. Students should analyze their work to form beliefs about their aptitude for other tasks (Pajares et al., 2007). Cited in Pajares et al. (2007) and Calkins (1994), students believe their work is effective if they perceive its significance. The vicarious experience involves learning from others' efficient task completion, improving views, and mediating through modelling successes (Bandura, 1997). Pajares et al. (2007, however, claim that these types of sources are not strong enough compared to mastery experience. They believe that modelling has strategies to develop students' self-efficacy beliefs (Bandura, 1997; Pajares et al., 2007). Social persuasion impacts students' capabilities and perceptions, with positive influence

inspiring and empowering, while negative can undermine self-efficacy (Pajares et al., 2007). Students assess skills based on physiological and emotional states, revealing mental and emotional moods (Bandura, 1997). Pajares et al. (2007) explain that negative ideas and fears in students reduce self-efficacy perceptions, causing stress, agitation, and subpar performance.

Methods

Research Design

The study investigated the effects of teacher mediation on students writing skill self-efficacy belief. To achieve this, a quasi-experimental design was employed. This design was used because it provides chances of using intact groups without random assignment of the study participants (Creswell, 2014; Mujis, 2004). This is because, in the case of Ethiopian higher education institutions, students are pre-assigned to their various groups, making it impossible to reassign them at random.

Research Setting and Participants

The study was done at Hawassa University's main and IoT campuses. Participants of the study were the University's first-year undergraduate Natural Sciences Education Department students, enrolled in the 2022 academic year and assigned to the main campus and Institute of Technology (IoT). The two campuses were selected because all first-year undergraduate students of the university were allocated to these campuses. An availability sampling technique was used to choose the two campuses because as of the implementation of the new university curriculum, all first-year undergraduate students were assigned to these campuses. The Natural Science Stream had 76 sections, with 43 and 18 chosen randomly as control and experimental groups respectively. Each group had 32 students, but one student did not complete surveys or take tests, resulting in 31 members in each group.

Instruments and Methods of Data Analysis

This investigation utilized two instruments: a writing skill test from IELTS, frequently used by language testers to assess students' writing efficacy and a practice writing skill test. This study specifically used the test to evaluate students' levels of writing efficacy. The test consists of four items: 20-minute paragraphs on deforestation's effects on the environment, process analysis on the water cycle, 40-minute essays on university study cost sharing or government full cost covering and table interpretation. Students were required to discuss relevant content, organize ideas, and use mechanics, grammar, and vocabulary. The test assessed learners' self-efficacy beliefs.

A questionnaire was used to prompt learners' self-reported data about their efficacious beliefs in the targeted skills (Petric & Czal, 2003). It consists of four parts. The first was a five-point Likert scale inventory used to prompt the importance of the mediation principles with possible answers (ranging from 'very important' to 'not at all'). The second part of the questionnaire was a five-point Likert scale inventory on the teachers' use of mediation principles with five possible answers (ranging from 'very often' to 'not at all'). The two

questionnaires were taken and adapted from (Abiy, 2005; Wogari, 2010). The adaptation includes changing 'Tell you the meaning of the lesson and why a particular speaking activity is important' to 'Tell you the meaning of the lesson and why a particular writing skill activity is important'. The third and fourth parts of the questionnaires were adapted from Pajares (1997), Dawit (2008), and Anteneh (2005), focusing on students' confidence in their writing skills and sources of self-efficacy belief. The third part used a scale from 0 to 100, while the fourth part used a Likert scale.

A Statistical Package for Social Sciences (SPSS) version 24 was used to analyze data from writing performance tests, teacher mediation principles inventory, and self-efficacy belief. Statistical tests included Pearson Product moment correlation coefficient, paired sample t-test, independent samples t-test, and Cohen's d. Heaton's (1990) rubrics were used to score the test. Ratters divided points further, and the normality of data distribution was checked during pre- and post-mediation.

Preparation of New Writing Skills Material

The researchers designed a new writing skill teaching material based on the theoretical assumptions and principles of teacher mediation set by Feuerstein MLE and Walqui's (2008) writing skill instructional scaffolding model. Besides, the guidelines for designing instructional materials provided by EFL instructional materials development researchers were used (Cunningsworth, 1995). New material aims to improve students' writing skills and self-efficacy by providing linguistically rich input. The study considered both paragraph and essay writing due to their close ties and students' gaps in skills. Self-belief in one can influence the other, either positively or negatively. Feuerstein et al. (2010) suggest mediators improve foundations to identify stimuli based on learner needs, focusing on skills needed to meet students' demands. It is divided into six thematic units, including Managing Learning, Culture, Environment, Technology and Human Life, Health, and Peace, the Only Way to Peace. It was reviewed and validated by two associate professors and two MA holders before the investigation.

Procedures of the Study

Two English language lecturers were selected based on their academic specializations and teaching experience. They took a three-day, 12-hour training on the investigation's goals and methods. Teacher 01 was the main mediator, while Teacher 02 assisted with test scoring.

The mediation approach was interactionist allowing mediators to identify cognitive difficulties and modify activities to address students' real misunderstandings. In the interventionist case, predesigned moves, hints, and prompts can be used, with minimal chance of employing extra mediational activities (Poehner, 2008).

The mediator applied MLE (an independent variable) to improve students' writing skill self-efficacy belief sources, focusing on mastery experience, vicarious experience, social persuasion, physiological and emotional status and their writing skills performance which are the dependent variables.

The study lasted 16 weeks from May 9-15, 2022, with teacher mediation held for 14 weeks. The first week was pre-mediation, followed by the last week August 22-28, 2022, for post-mediation. The pre-mediation stage involved administering a pre-test and questionnaire to both control and treatment groups, comparing them with the post-test. Inter-rater reliability was computed to check ratters' scores' reliability. Then, it was provided to the two raters for marking using the rubric-based weightings for the indicator: content relevance 30%, organization 20%, grammar 25%, vocabulary 20%, and mechanics 5%. Based on each signal, a different amount of points was awarded to each writing assignment. For example, relevant material receives 30% of the overall points. The findings of the Likert scale questionnaire were also computed and recorded for comparisons to be performed after mediation.

During the mediation phase, learners received a print copy of the newly prepared material. The mediator utilized an instructional scaffolding procedure for writing skills, including modelling, bridging, contextualizing, schema building, representing, and developing metacognition. The mediator introduced the lesson theme, led a discussion, and read a text to prepare students for the writing session, activate schematic understanding, and contextualize their work.

Then, a specific writing task (paragraph or essay) was pursued, along with its related subtopics on rhetorical focus, model writing, language focus (vocabulary specifically related to that genre, tense), model writing analysis, and metacognitive activities (brainstorming, planning, drafting, editing, proofreading, and presenting). Students were instructed to write similar pieces on suggested subjects at both course points and end, representing a new text. The mediator continuously modified the lesson utilizing MLE concepts as he created the lesson. For instance, the mediator applied the "Mediation for Meaning" approach by using teacher-student interactions to explain why practicing a certain writing skill is crucial. A dialogic interaction was a mediational interaction that encouraged group participation in assignments to lead students to innovative ways of thinking. To address the learners' self-efficacy gaps in a particular lesson and cognitive issues linked to blurred and sweeping, impulsive, and episodic perception problems demonstrated at the input, output, and elaboration, the mediator employed the MLE (Feuerstein et al., 2010). As a result, the mediator conducted evaluations and modifications. A specific writing lesson was adjusted by adjusting its frequency, sequence, intensity, and circumstances. According to Tzuriel (2013), a mediator is advised to modify these areas.

The mediator helped students improve mastery of targeted skills by producing relevant content, organizing thoughts, and employing grammar, vocabulary, and mechanics. The mediator intervened by changing stimuli context, frequency, intensity, and order where needed. The mediator utilized peer-based vicarious experience through sharing behaviors like pair work and classroom presentations. The mediator utilized sample sentences, essays, and tables to support adult-based vicarious experiences. He promoted social persuasion, provided critique opportunities, and encouraged feedback during mediation movements. Through interaction, awareness-raising, task analysis, learning management demonstrations, and metacognitive techniques, the mediator helped students control their physical and emotional states while writing (Tzuriel, 2013).

In the control group, in contrast, a conventional instructional procedure was applied for both paragraphs and essay lessons. The group did not receive a mediation and remediation scheme for writing skills self-efficacy belief instruction based on the 12 mediation principles and Walqui's (2008) model of instructional scaffolding for writing skills. Instead, the instruction was run through the common procedures which consist of introduction, presentation, and practice phases. The introduction and presentation were commonly used phases by the teacher. He focused on the conceptual explanations definitions, classifications, features of paragraphs, essays and table interpretations using the lecture method. There were some attempts to provide students with practical exercises. The majority of the practical parts of the lessons were left to be done as assignments and homework without sufficient MLE-based support. The teacher did not investigate what students encountered and adjust frequency, order, contexts, and intensity per the student's needs. In other words, students had little chance of getting additional instructional remedies when they failed to achieve the intended objectives.

The post-mediation was the 16th week of investigation in which the post-mediation writing test and questionnaire were administered.

Results

Analysis of Pre-test Results

The data gathered through tests and questionnaires was analyzed in this section to look into participant writing skill self-efficacy beliefs and performance during the pre-test and post-test. The results are shown below with the corresponding comparisons.

Table 1

Pre-test Scores Correlation Coefficient for Inter-raters Reliability Test

Overall correlations	1	2
1. Control group	--	.88**
2. Treatment group	.92**	--

Note. 1= the experimental group (n = 31). 2 = the control group (n = 31). ** $p < .001$,(2 tailed)

As indicated in Table 1, a Pearson correlation coefficient was run to examine the relationship between the two raters' overall pre-mediation writing skills performance scores. The result revealed that there was a strong correlation. The control group $r = .88$ and the experimental group $r = .92, p = < .001$. This demonstrates that the groups' results in the writing of paragraphs and essays were reliable.

Analysis of Independent Samples t-test

Tests for Data Distribution Normality and Outliers

Shapiro-Wilk test was run to see whether the data were normally distributed. W (62) = (976), (.277), p > 0.05 was the test's outcome. It demonstrates the normal distribution of the data. There were no outliers, according to the test that was computed to check for them.

Table 2

Independent-Samples t-test Results in the Pre-test Writing Skills Performance

		Experimental		Control					
	N	M	SD	M	S D	t	df	P	Cohen's d
Overall performance	62	26.77	12.70	25.44	17.54	.341	61	.734	.341

Note. **P is significant at 0.01 level (2-tailed).

The independent samples t-test was conducted to determine if there was a significant difference between the groups in overall writing skills performance at the outset of mediation and the test disclosed that there was no a statistically significant difference between the experimental group (*M* = 26.77, *SD* = 12.70) and the control group (*M*= 25.44, *SD* = 17.55, *t* (61) = .341, *p* > .05). The experimental and control groups had comparable writing performance before the investigation. Students' self-efficacy belief and writing performance were related. As a result, the independent samples t-test was computed to evaluate writing self-efficacy before mediation.

Table 3

A Pre-test Independent Samples t-test Students' Rating scales in their Self-efficacy Belief

		Experimental		Control					
	N	M	SD	M	S D	t	df	P	Cohen's d
Students' rating on their self-efficacy-belief	62	38.76	7.55	40.16	7.86	-0.72	61	.476	

Note. p > .05 level (2-tailed).

Table 3 above indicates independent samples t-test of the experimental and control group students' scale ratings in pre-mediation self-efficacy belief. The mean of the experimental group (M = 38.76, SD = 7.55) and the control groups (M = 40.16, SD = 7.86; t (60) = -0.72, p > .05). The test showed no statistically significant differences in pre-mediation and post-mediation between experimental and control groups, indicating comparable efficacious beliefs and performance levels. Below is a presentation of the post-mediation data.

Analysis of Results of the Post-tests

Table 4

Paired Sample t-test of Experimental Group Ratings on the Importance and Use of the MLE Principles

		N	M	SD	t	df	P	Cohen's d
Piar1	Pre-importance	62	2.70	.279				
	Post-importance	62	3.74	.655	-12.63	61	.000	2.22
Pair2	Pre-use	62	2.80	.330				
	Post-use	62	3.82	.590	-11.81	61	.000	2.22

Note: ** p significant at 0.01 (2-tailed).

Paired sample t-test was computed to investigate students' reflections on the importance and the mediator's use of mediation principles. There was a statistically significant difference in the mean scores between pre-mediation and post-mediation regarding the importance of mediation principles in the pre-test (M = 2.70, SD =.279) and post-test (M = 3.74 and SD = .655) t (61) = -12.63, p < .001). Chen's d = 2.22. It shows a strong effect on the importance of the criteria. As to the mediator's use of mediation principles, there was also a statistically significant difference between the pre-test (M = 2.80, SD =.330) and post-test (M = 3.82 and SD = .590; t (61) = -11.81, p < .001). Cohen's d = 2.22. It showed a strong effect of the teacher's use of the criteria. Before calculating post-test findings, a Pearson correlation coefficient test is used to determine the reliability of the scores rated by the two raters.

Table 5

Overall Pearson Correlation Coefficient of Rater 1 and 2 inter-rater reliability

Overall correlations	1	2
1. Rater 1 experimental group	--	.96**
2. Rater 2 Control group	.99**	--

Note. 1= the experimental group sample (n=31). 2 = control group (n=31). *P< .05, ** p < .001 (2-tailed). r1= Rater 1, r2 = Rater2.

As depicted in Table 5, a Pearson correlation coefficient was computed to assess the relationship between the overall post-mediation performance scores of raters 1 and 2. There were strong correlations between the two raters. The experimental group *r* = .96 and the control group *r* = .99, *p* < .001. This shows that the groups' results in the writing of paragraphs and essays were consistent and reliable.

Effects of Teacher Mediation on Studnts' Writing Skills Performance

In this subsection, a paired-sample-test, independent samples t-test, and Cohens'd tests were computed to investigate student performance during the pre-test and post-test and between the control and experimental groups and the strength of the effect of teacher mediation.

Table 6

Paired-sample t-test Results in the Post-test Performance

MLE Principles	Performance	N	M	SD	t	df	P	Cohen's d
	Pre-overall	31	26.77	12.70				
	Post-overall	31	61.36	17.20	-12.60	30	.000	2.31

Note. ** *p* significant at 0.01 (2-tailed).

A paired-sample t-test was computed to compare the performance of the experimental group. The overall paragraphs and essay writing performance showed a statistically significant difference between the pre-test (M = 26.77, SD = 12.70) and the post-test (M = 61.36, SD = 17.20; t (30) = -12.60, p = .000). Cohen's d = 2.31 which indicates the teacher's mediation strongly impacted the participants' performance.

Table 7

Paired Samples t-test Result on Students Rating Scaling Self-efficacy Belief

	N	Pre-test		Post-test					
		M	SD	M	SD	t	df	P	Cohen's d
Experimental	31	38.76	7.55	62.60	16.69	-7.44	30	.000	1.967

Note. ** *p* significant at 0.01 (2-tailed).

A paired-sample t-test was computed to compare the self-efficacy belief of the experimental group between the pre-mediation and the post-mediation times. There was a statistically significant difference in the scores of self-efficacy beliefs between the pre-tests condition ($M = 38.758$, $SD = 7.546$) and the post-test ($M = 62.603$ and $SD = 16.694$); $t (30) = -7.44$, $p < .001$). Cohen's $d = 1.967$. It shows that teacher mediation significantly improved participants' efficacy belief.

Table 8

An Independent Samples t-test on Rating Scales of Self-efficacy Belief

	N	Experimental		Control					
		M	SD	M	SD	t	df	P	Cohen's d
Students rating self-efficacy-belief	62	62.60	16.69	40.34	7.59	6.76	61	.000	1.833

Note: ** *P* significant at 0.001 (2-tailed).

Table 8 above shows the independent samples t-test of the experimental and control group's post-mediation paragraphs and essays writing skills self-efficacy belief. The experimental group ($M = 62.60$, $SD = 16.69$). The control groups ($M = 40.34$, $SD = 7.594$), $t (60) 6.76$, $p < .001$). The test revealed that there was a statistically significant difference between the experimental and control groups in the pre-mediation. Cohen's $d = 1.833$. This result revealed that the mediation move implemented in exhorted a strong effect on the experimental group.

Table 9

Paired Sample t-test on Writing Skills Self-efficacy Belief Sources

	Sources Self-efficacy Belief	N	M	SD	t	df	P	Cohen's d
Pair1	Pre-mastery experience	31	2.79	0.56		30		
	Post-mastery experience	31	4.58	0.87	-11.67	30	.000	2.50
Pair2	Pre-vicarious experience peer	31	3.05	0.70		30		
	Post-vicarious experience peer	31	3.19	0.63	-7.13	30	.481	0.21
Pair3	Pre-vicarious experience adult	31	3.39	.82		30		
	Post-vicarious experience adult	31	4.13	1.05	-3.18	30	.004	0.79
Pair4	Pre-social persuasion	31	2.97	0.52		30		
	Post-social persuasion	31	4.58	0.86	-11.67	30	.000	2.27
Piar5	Pre-physiological & emotional state	31	3.73	0.71		30		
	Post-physiological & emotional state	31	4.40	0.74	-5.495	30	.000	0.92

Note. ** p significant at 0.01 (2-tailed).

A paired-sample t-test was computed to compare students' self-efficacy beliefs on the writing skills mastery experience of the experimental group in the pre-mediation and post-mediation conditions showed a statistically significant difference pre-test ($M = 2.79$, $SD = 0.56$) post-test ($M = 4.58$, $SD = 0.87$; $t(30) = -11.670$, $p < .001$). Cohen's $d = 2.503$. Regarding the peer-based vicarious experience, however, there was not a statistically significant difference pre-test ($M = 3.05$, $SD=0.70$) and post-test ($M = 3.19$, $SD = 0.63$); $t(30) = -7.13$, $p > .05$). Cohen's d= 0.21. As for adult-based sources of vicarious experience, there was a statistically significant difference between the pre-test (M = 3.39, SD= .82) and post-test ($M = 4.13$ and $SD = 1.05$); $t(30) = -3.18$, $p < .001$). Cohen's $d =0.79$. Concerning social persuasion, there was a statistically significant difference between the pre-test ($M = 2.79$, $SD = 0.56$) and post-test ($M = 4.58$ and $SD = 0.87$); $t(30) = -11.67$, $p < .001$). Cohen's $d = 2.27$. The physiological and emotional state showed a statistically significant difference between the pre-test ($M =3.73$, $SD = 0.71$) and post-test ($M = 4.40$ and $SD = 0.74$); $t(30) = -5.495$, $p < .001$). Cohen's d = 0.92. Teacher mediation strongly impacted mastery experience and social persuasion, with a moderate effect on adult-based vicarious experience, social persuasion, and physiological and emotional state. Peer-based experience had weaker effects.

Table 10

Independent Samples t-test on Sources of Self-Efficacy Belief

Self-efficacy belief sources	N	Experimental		Control		t	df	P	Cohen's d
		M	SD	M	SD				
Mastery experience	62	4.58	0.87	2.81	0.62	9.34	61	.000	2.38
Vicarious experience peers	62	3.17	0.64	3.06	0.75	0.61	61	.546	0.16
Vicarious experience adults	62	3.58	0.60	3.04	0.67	3.34	61	.001	0.85
Social persuasion	62	4.58	0.87	3.73	0.83	3.95	61	.000	1.00
Physiological & emotional status	62	4.40	0.74	3.83	0.80	2.89	61	.000	0.74

*Note: ** p* significant at 0.01 (2-tailed).

An independent samples t-test was computed to determine if there was a statistical difference between means of experimental and control groups' self-efficacy beliefs sources originating from mastery experience, vicarious experience from peers, and vicarious experience from adults, social persuasion and physiological and emotional status. Mastery experience sources of the mediated group ($M = 4.58$, $SD = .087$) was significantly higher than the unmediated group ($M = 2.81$, $SD = 0.62$), $t(60) = 9.34$, $p = < .001$). Cohen's $d = 2.38$. However, the peer-based vicarious experience of the experimental groups ($M = 3.17$, $SD = 0.64$) was not a statistically significant difference from the control group ($M = 3.06$, $SD = 0.75$), $t(61) = 0.61$, $p > .05$). Cohen's d = 0.16 showed week effect. There was a statistically significant difference between the experimental and control group in terms of vicarious experience from adults ($M = 3.22$, SD = 0.60) control group ($M = 3.58$, $SD = 0.60$), $t(61) = 3.34$, $p < .001$). Cohen's $d = 0.85$. The belief scores for social persuasion of the experimental group ($M = 4.58$, $SD = 0.87$) was significantly greater than the control group ($M = 3.73$, $SD = 0.83$), $t(60) = 3.95$, $p < .001$). Cohen's $d =1.00$ showed a moderate effect size. In terms of physiological and emotional state, the experimental group's score ($M = 4.40$, $SD = 0.74$) was

significantly higher than the control group's ($M = 3.83$, $SD = 0.80$ t (60) = 2.89, $p < .001$). Cohen's $d = 0.74$ indicates a moderate effect size. Mediation had a strong effect size on self-efficacy belief sources, with mastery experience having the biggest. Social persuasion, adult-based vicarious experience, and physiological and emotional state were moderate, while vicarious experience among peers had a weak effect size.

Discussion

This study aimed to investigate how teacher mediation affected students' perceptions of their writing abilities. Thus, the independent samples t-test result showed that the experimental group students had better mastery experience, vicarious experience from the adult, social persuasion, and physiological and emotional condition than the control groups. The results of the experimental group mean score of the paired sample t-test revealed statistically significant variations between the pre-test and post-test in mastery experience, social persuasion, and physiological and emotional state. Vicarious experience gained from peers, however, did not result in improvements on either test. This may be the case because students may believe the information on self-efficacy they learn from classmates is unimportant because they are at the same educational level. According to Cohen's d results, teacher mediation brought a strong effect on mastery experience and social persuasion efficacy beliefs. Adult-based vicarious experiences and physiological and emotional states belief sources have a moderate effect size, while peer-based sources show a weak effect. The independent samples t-test and paired sample t-test results on self-reported rating scales on writing skills aspects also showed a significant difference between the pre-test and post-test. The pre-test and post-mediation performance of the experimental and control groups differed statistically significantly, according to both the paired sample t-test and the independent samples t-test which asserted the students' of enhancement the efficacious belief. In both tests, Cohen's d result revealed a strong effect.

The contribution of mediational moves to writing skills self-efficacious behaviors enhancement was tracked and triangulated with participants' ratings on the mediator's classroom use importance of MLE. Hence, both paired sample t-tests on the mediator's classroom use and the importance of MLE showed a statistically significant difference.

Various previous studies revealed improved learners' writing skill self-efficacy belief sources related to mastery experience indicators such as writing relevant content, idea organization, vocabulary use, language use, and mechanics as a result of teacher mediation. For example, Khojasteh et al. (2021) showed that students who have an orientation to flipped-based mediation improved students mastery of writing relevant content, idea organization, vocabulary use, language use, and mechanics. Likewise, Vargas et al. (2020) investigation revealed a similar conclusion that mediation of text structure, cohesion, and coherence through conscious-raising tasks of essay writing improved experiential group performance. Poehner and Infante (2016) also revealed that the mediator guidance and support provided to Second Language students helped them acquire the tense aspects system. Alcaraz-Marmol (2021) came across a similar conclusion that students who engaged in mediation activities on receptive knowledge of vocabulary improved their receptive vocabulary. Furthermore, Tum's (2020)

finding concord with the present result that the implementation of texts mediation, mediating strategies, and concepts appeared to solve the writing skill challenges of EFL students.

Similarly, Todd (2019) revealed that teachers' help through vicarious self-efficacy belief sources by modelling strategies improve participants'/learners' beliefs. The result further agrees with Hood's (2018) findings which revealed an improved mastery and vicarious experience due to the writing workshops.

As with efficacious belief emerging from a physiological and emotional state, Tarkan-Blanco (2020) found that a process-and–collaborative-centred approach to teaching composition can be a feasible solution to reducing writing skills anxiety. Similarly, Ruzek et al. (2016) reported that teachers' emotional support on students' engagement and motivation indicated significant mediating effects on peer relationships that led to social persuasion. Kelly and Gaytan (2020) reported similar findings that instructor's mediation of perceived immediacy of behaviours and clarity positively influenced students' writing anxiety. The finding concord with previous investigations that reported social persuasion offered by teachers and trained peers' feedback contributed to the development of students' beliefs (Blackmore, 2011; Cui et al., 2021). Besides, Situmorang (2022) reported that participants' confidence increased due to verbal persuasion.

The investigations done by (Khojasteh et al., 2021; Poehner & Infante, 2016; Ruzek et al., 2016; Situmorang, 2022; Tum, 2020; and Vargas et al., 2020;) examined the effects of interventions on efficacious belief; this study opens new insights on improving belief sources based on rigorous and demanding classroom mediational moves in the ways of tackling curious self-efficacious difficulties students usually face in developing paragraph and essay writing skills.

Conclusions and Implications

Conclusions

The development of students' writing skills is a challenging task that inquires due consideration of their writing skill self-efficacy belief. Enhancements of self-efficacy belief sources require the provision of interventions through a teacher mediation instructional approach in which the mediator accesses sufficient, all-rounded, and rigorous support. The classroom use of the MLE in this investigation revealed positive effects on the development of students' self-efficacious belief sources. The approach contributed to the improvements of mastery experience, vicarious experience, social persuasion, and physiological and emotional self-efficacy belief sources.

Implications

As a result, it is vital to note that applying MLE-based instructional principles is advantageous to facilitate structural cognitive modifiability through qualified interactions and scaling up students' low-level self-efficacy beliefs. First-year students at Hawassa University in particular and students at other Ethiopian universities who have trouble writing coherent essays and paragraphs benefit from utilizing the MLE-based writing skill instruction. What

would be needed to apply MLE is, maximizing the mediator's roles by providing them with an orientation about the MLE theoretical and practical guidelines. This ensures effective implementation of the method/approach which entails the development of students' self-efficacy beliefs. The results of the investigation focused only on university first-year students. Similar research can be done at other levels because this kind of classroom investigation is vital to look into learners' beliefs system. Hence, conducting MLE based study might be possible to see how writing skill self-efficacious belief affects their composition skill across different grade levels and how it can be developed for further success.

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Declaration

The authors declare that there is no conflict of interest.

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The role of parents, schools, and social media use in influencing civic engagements of school adolescents in government schools in Addis Ababa

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Abstract

The study examined how parents, schools and social media use influenced civic engagements of school adolescents. It also assessed the mediation role of sense of community and perceived civic competence. Participants were 960 school adolescents (mean age = 17.7, range: 15-19 years; 53.5% females) who were selected using multistage sampling technique. The study employed a correlational design, conducted confirmatory factor analysis, and used structural equation modeling to investigate the direct and indirect (mediated) effects of parental civic socialization, school civic experiences and social media, and independent and combined contributions of predictors on civic engagement. Results have shown that parental civic socialization influenced more on perceived civic competence than sense of community connectedness. School civic experience had a direct influence both on students' sense of community connectedness and perceived civic competence. The influence of social media use on sense of community and perceived civic competence was not significant. All variables, except school civic experience predicted civic engagement. Parental civic socialization and school civic experience showed statistically significant indirect (mediated) effects on civic engagement, through sense of community and perceived civic competence. Social media use influenced civic engagement directly; however, the mediated effect of sense of community connectedness and perceived civic competence was not statistically significant. Conclusions and recommendations in light of the implications of findings for educational practice and parenting are drawn.

Introduction

Civic engagement has emerged over the past two decades as a substantive subfield within developmental science (Youniss, 2009; Zaff, Boyd, Li, Lerner & Lerner, 2010). It is a dimension of human development behaviorally expressed by involving in the social world, a means to facilitate citizens' participation in democratic processes, and it fosters adolescents' development (Flanagan & Christens, 2011; Pancer, 2014; Sherrod, 2015). It entails participation in voluntarism and informal helping (Horn, 2012), involvement in civic institutions, consuming civic and political information, and political socialization (Wilkenfeld, 2009; Karakos, 2015), and future voting (Eckstein, Noack, & Gniewosz, 2012). Others (Zaff

et al., 2010; Zaff et al., 2011) indicated that civic engagement involves individual and collective activities that intend to address issues of public concern and enhance the well-being of society. Adolescence is a critical period for civic development when civic values, skills and commitments take shape (Amna, 2012; Finlay, Wray-Lake, & Flanagan, 2010; Metzger & Ferris, 2013), and transition into roles providing societal continuity such as voting (Buchmann & Kriesi, 2011). Civic engagement serves as key contextual influences in promoting adolescent development (Mahoney, Vandell, Simpkins & Zarrett, 2009). Factors that necessitated studying civic engagement of school adolescents include increased awareness on the rights of adolescents, growing concerns about the apparent decline in the levels of civic engagement (Amna, 2012), and the impact of this decline on governance of society at all levels (Bermudez, 2012).

To understand which factors can foster adolescent civic engagement, it is key to considerer that adolescent development takes place within social contexts. Community connection contributes to developing relationships that are beneficial for adolescents' adaptive development (Lerner, Wang, Champine, Warren, & Erickson, 2014) and furthermore, it is this sense of community connectedness (SCC) which leads to common interests and actions that foster adolescent's sociopolitical participation (Schulz, Ainley, Fraillon, Kerr, & Losito, 2010). Speer, Peterson, Armstead, and Allen (2013) define SCC as a connection of an individual to communities through experiencing sense of belonging that foster a sense of common purpose and shared interests. SCC develops through positive experiences with peers and significant adults, contributes to the development of personal and social identities, sense of belonging, and positive developmental outcomes (Torney-Purta, Amadeo, & Andolina, 2010; Cicognani, Zani, & Albanesi, 2012; Wilkenfeld, Lauckhardt, & Torney-Purta, 2010).

Furthermore, SCC enhances shared emotional connection with peers (Chiessi, Cicognani, & Sonn, 2010; Speer et al., 2013) and reinforces adolescents' involvement in civic activities that benefit themselves and communities (Flanagan, Cumsille, Gill, & Gallay, 2007). The second precursor of civic engagement is perceived competence for civic action. Matthews, Hempel, and Howell (2010) indicated that civic discussion was positively associated with adolescents perceived civic competence. Civic competencies are prerequisites to develop active citizenship (Grütter & Buchmann, 2021) and perceived civic competence was associated with future intention to participate in civic activities (Lenzi, et al., 2015).

Research conducted in different socio-cultural contexts revealed the influence of developmental contexts on adolescent's sense of community, perceived civic competence and civic engagement. Family and schools help adolescents to acquire civic knowledge, skills, attitudes, and behaviors to become agents of social change (Lenzi et al., 2012; Rossi, Lenzi, Sharkey, Vieno, & Santinello, 2016). The family is the primary socializing unit and a source of social capital–understood as norms, institutions, and organizations that foster trust and cooperation among family members, neighborhoods, communities, and society– as well as an institution playing a fundamental role in accessing social networks, neighborhood, or school (Steinberg & Silk, 2002; Collins & Laursen, 2004). Parents can support adolescent civic engagement by instilling civic values (Kim, Flanagan, & Pykett, 2015) and socializing and encouraging to engage in civic activities (Cicognani, et al., 2012; Quaranta & Sani, 2016).

Schools can provide adolescents with opportunities to develop civic competence and sense of belonging (Prati, Cicognani, & Albanesi, 2018), strengthen interpersonal relationships

and community partnerships (Wang & Degol, 2016). Schools can offer students an environment for expressing opinions, debating on socio-political issues, and participate in school governance which increase their future commitments towards their community (Flanagan, et al., 2007). Furthermore, teachers' encouragement of student participation enhances students' sense of belonging (Chiu & Churchill, 2016). In a nutshell, schools can help adolescents to develop civic skills, values, and behaviors needed for civic engagement through a formal civic education as well as through extracurricular and community-based activities (Hess, 2009; Youniss, 2011).

Social media is the third contextual factor. Taking a social-functional perspective, Mauss et al. (2011) argue that establishing a sense of social connectedness is an integral aspect of human life. Previous research (Sheldon, Abad, & Hinsch, 2011; Ahn & Shin, 2013; Grieve, Indian, Witteveen, Tolan, & Marrington, 2013) recognized that social media use provides opportunities for adolescents to share civic information. Quinn and Oldmeadow (2013) indicated that sense of community can be promoted through engagement in appropriate social media platforms. Lenzi et al. (2015) found out that Facebook informational use was associated with higher levels perceived competence to engage in civic action, both directly and indirectly through the mediation effect of civic discussion with their parents and friends (offline) among 14-17 years old school adolescents. Higher level of perceived civic competence among adolescents was associated with higher intention to participate in civic activities in the future. Furthermore, adolescents' use of social media facilitates informed civic engagement and empowerment of young people (Jugert, Eckstein, Noack, Kuhn, & Benbow, 2013; Theocharis & Quintelier, 2016; Middaugh, Clark, & Ballard, 2017), and fosters their civic participation in the future (Gil de Zúñiga, Jung, & Valenzuela, 2012; Ozer, Newlan, Douglas, & Hubbard, 2013). Participation in peer-based social networks increases connection and engagement in school settings by teaching them about social issues. In Ethiopia, a study by Feyisa and Dawit (2018) on "Perceived benefits and risks of social media" found out that 70.6% of the 500 school adolescents aged 14-19 years reported using social media for social networking and entertainment purposes.

Despite many studies identifying influences of contextual factors on adolescents' civic engagement in other countries, studies analyzing the role of family, schools, and social media use in influencing the civic engagement of school adolescents in Ethiopia is rare. Except few studies (Belay & Yekoyalem, 2015; Yekoyalem, 2020), research conducted on adolescents and youth have heavily focused on the problems of young people than their capacities. Furthermore, an evaluation study on the effectiveness of adolescent empowerment project in Addis Ababa revealed that school adolescents have developed confidence and communication skills. However, the study did not explore the role of schools and families in facilitating the civic participation of adolescents (Save the Children, 2014). Disengagement or destructive engagement are common among adolescents in Ethiopia. A report by the then Ministry of Women, Children and Youth Affairs revealed that adolescents' and youth civic participation was still low and called on families, schools, and communities to support their civic participation (MoWCY, 2018).

Examining civic engagement among school adolescents appears even more pressing within the contexts of the current socio-political landscape of Ethiopia. Adolescents constituting a significant proportion of the population of Ethiopia, adolescence being a critical

period of civic development, and civic engagement being a core component of human development justify the need for examining civic engagement as a timely issue.

Thus, the purpose of this study was to examine how parents, schools and social media use influence civic engagements of school adolescents and the mediation role of sense of community and perceived civic competence. To closely examine the issue, this study addressed the following basic research questions.

1. Do parental civic socialization, school civic experience, and social media use predict civic engagement of school adolescents?
2. Do sense of community connectedness and perceived competence for civic action play a statistically significant role in mediating the relationship between parental civic socialization and adolescent civic engagement?
3. Do sense of community connectedness and perceived competence for civic action mediate the relationship between school civic experience and adolescent civic engagement?
4. Do sense of community connectedness and perceived competence for civic action mediate the relationship between social media use and adolescent civic engagement?
5. What are the individual and combined contributions of parental civic socialization, school civic experiences, and social media to civic engagement of school adolescents?

Methods

Design

The research employed a correlational design as the main purpose is to describe the relationship between the predictor variables (parental civic socialization, school civic experience, and social media use) and civic engagement of school adolescents. The purpose was to investigate non-causal relationships among variables and make predictions (Bhandari. 2022). This research also examined the mediating role of sense of community connectedness and perceived civic competence in the relationship between the variables studied.

Sampling

Participants were 960 urban school adolescents (53.5% female and 46.5% male, mean age=17.7, ages 15-19 years) who were attending classes in grades 9-12 in three secondary schools in Gulele Sub-City in Addis Ababa. Of the 10 Districts, five districts (1, 5, 7, 9 &10) were purposely targeted in the study where the six public secondary schools are located. Of the 6 secondary schools with total student population of 11, 300 (5, 198 males), three schools were selected using simple random sampling. Then, 18 sections from grade 9-12 were selected using simple random sampling. Each section having 50-60 students, a total of 960 students completed the questionnaire correctly. Inclusion criteria include school adolescents (males and females) whose ages ranged from 15-19 years, attending their education in grades 9-12, school adolescents who lived with one or both of their parents; students who had no severe disability, and those who were able to read and write Amharic (the national working language of Ethiopia), and students who were willing to spend at least one hour to participate in the research project.

Data Collection Procedures

Prior to initiating the study, the research project was approved, and ethical clearance was secured from the Research Ethics Committee of the School of Psychology, College of Education and Behavioral Studies, Addis Ababa University. The research project was approved on 11 August 2022, with Reference Number: Ref: SoP-Eth Co/004/2022. Then, the researcher contacted Gulele Sub-City Education Department which further connected the researcher with the sample schools. The researchers contacted school directors and got the necessary support to collect primary data from students. Surrogate consent was obtained from school directors and oral consent was obtained from all participants prior to data collection from students. The purpose of the study was explained to the participants, their participation in the research was totally voluntary, and they were informed that they would not get any direct benefit from their participation.

Instruments

Content validity of items was assessed by eight Developmental Psychologists. Content Validity Index (CVI) of items was computed to assess the validity of each item using Lawshe's content validity assessment method (Lawshe, 1975). Items with a Content Validity Ratio (CVR) of 0.75 and above were retained. In addition, Confirmatory Factor Analysis (CFA) was conducted to confirm the factors identified through the Exploratory Factor Analysis. The following self-report questionnaires were completed by participants.

Civic engagements

It refers to the behavioral aspect of civic engagements (reported civic actions) as measured by the existing sources and adapted scale: *Adolescents' Involvement in Community Services and Informal Helping* (Kahne, Middaugh, & Schutjer-Mance, 2005; Zaff et al., 2010; Wray-Lake, Metzger, & Syvertsen, 2017). It has 13 items (7 items measuring adolescents' engagement in community services and 6 items measuring their engagement in informal helping activities). Responses were rated from 0=*Never* to 4=*Always.* Alpha reliability for the scale was .843.

Parental civic socialization

It refers to adolescents' communication with their parents about social and political issues, and parental modeling of civic behaviors as measured by a five-point scale scored from 0-4, which is adapted from earlier researchers (Kahne et al., 2005; Syvertsen, Wray-Lake, & Metzger, 2015). Reliability of the items was reported to be α = .750

School civic experience

Refers to adolescents' perceived confidence in the effectiveness of school participation, perception of openness of classroom climate for discussion, and student exposure to civic learning as measured by student reports. It was measured using a five-point Likert scale adapted from Wilkenfeld (2009) and Schulz, et al. (2010), and responses were rated from 1 = *strongly disagree* to 5 = *strongly agree*. The scale had α=.828

Social media use

Measured how often adolescents share civic related messages using social media especially Facebook. Adolescents were asked to indicate their level of agreement (0 = never, 1 = rarely, 2 = sometimes, 3 = often, 4= Always). Items were adapted from Social Media Engagement Scale for Adolescents (Ni, et al., 2020), and the scale had a reliability value of α=0.86.

Sense of community connectedness

Measured using a 26 item five-point scale adapted Sense of Community Scale for Adolescents (Cicognani et al., 2012). The scale had excellent internal consistency (α=0.92). Responses were rated from 0 = *not true at all for me* to 4=*I definitely can.*

Perceived competence for civic actions

An adapted version of the competence for civic action scale (Flanagan, Syvertsen, & Stout, 2007) was a 7-item scale measuring adolescents' perceived ability to engage in civic action. Responses were rated from 0 =*I definitely can't* to 4=*I definitely can*. The items had a reliability of Cronbach's alpha 0.73.

Data Analysis

The first group of latent (predictor) variables of interest are parental civic socialization, school civic experience, and social media use. Sense of community connectedness and perceived competence for civic action are the second group of latent (mediating) variables. Civic engagement is the other latent (predicted) variable. The items in the different measures are observed variables. The data were analysed by Statistical Package for Social Sciences (SPSS) version 24 and Amos 26. Multicollinearity assumption was checked by computing Zero Order Correlations (Pearson r_s) between variables without controlling the influence of any other variables. The result shows that none of the r_s are greater than .47. Thus, the assumption of multicollinearity to conduct factor analysis was tenable. Confirmatory Factor Analysis (CFA) was conducted to confirm the factors, tested the hypothesized measurement model, and confirmed the use of structural equation modeling.

Structural equation modeling (with maximum likelihood estimation) was used to investigate the direct and indirect (mediated) effects of parental civic socialization, school civic experiences and social media, and independent and combined contributions of predictors on civic engagement. Kline (2005) suggested this model allows for the simultaneous estimation of all unknown parameters. It estimates the multiple and interrelated dependence in a single analysis, tests the fit of the model to the data, and specifies statistical models that more closely align with theory. As recommended by Byrne (2010), five model fit indices: Model Chi-Square (CMIN), The (Adjusted) Goodness of Fit (AGFI), Goodness of Fit Index (GFI), Comparative Fit Index (CFI), and The Root Mean Square Error of Approximation-RMSEA were used to test the general model adjustment. The value of CMIN/DF was < 5; AGFI, GFI, and CFI had values > .9 and RMSEA was <.08 for civic engagement, school civic experiences, parental civic socialization, social media, sense of community and perceived civic competence. According to Hair, Black, Babin, and Anderson (2010), if any 3-4 of the Goodness-of-Fit indices are within the threshold, then fitness of the entire model is regarded as acceptable.

Results

Socio-Demographic Characteristics

       Participants were 960 adolescents (53.5% female) whose ages ranged from 15-19 years. About 40.7% were 18 years, 22.8% were aged 19, 21% were 17 years, and 14.6% of them were 16 years old. Only .9% of the adolescent respondents were aged 15 years old. About 42% were in grade 12, 27.5% in grade 11, 19.5% in grade 9 and 11% in grade 10.

Result of Mediation Analysis

       In order to test the direct and indirect (mediated) effects of parental civic socialization (PCS), school civic experiences (SCE) and social media use (SMU) on civic engagement, as well as the direct effect of PCS, SCE, and SMU on mediating variables (sense of community connectedness and perceived competence for civic action), structural-equation modeling was used. Factors identified through exploratory factor analysis (EFA) and confirmed via confirmatory factor analysis (CFA) were employed and the following Path Model was identified.

Figure 1

Path Model
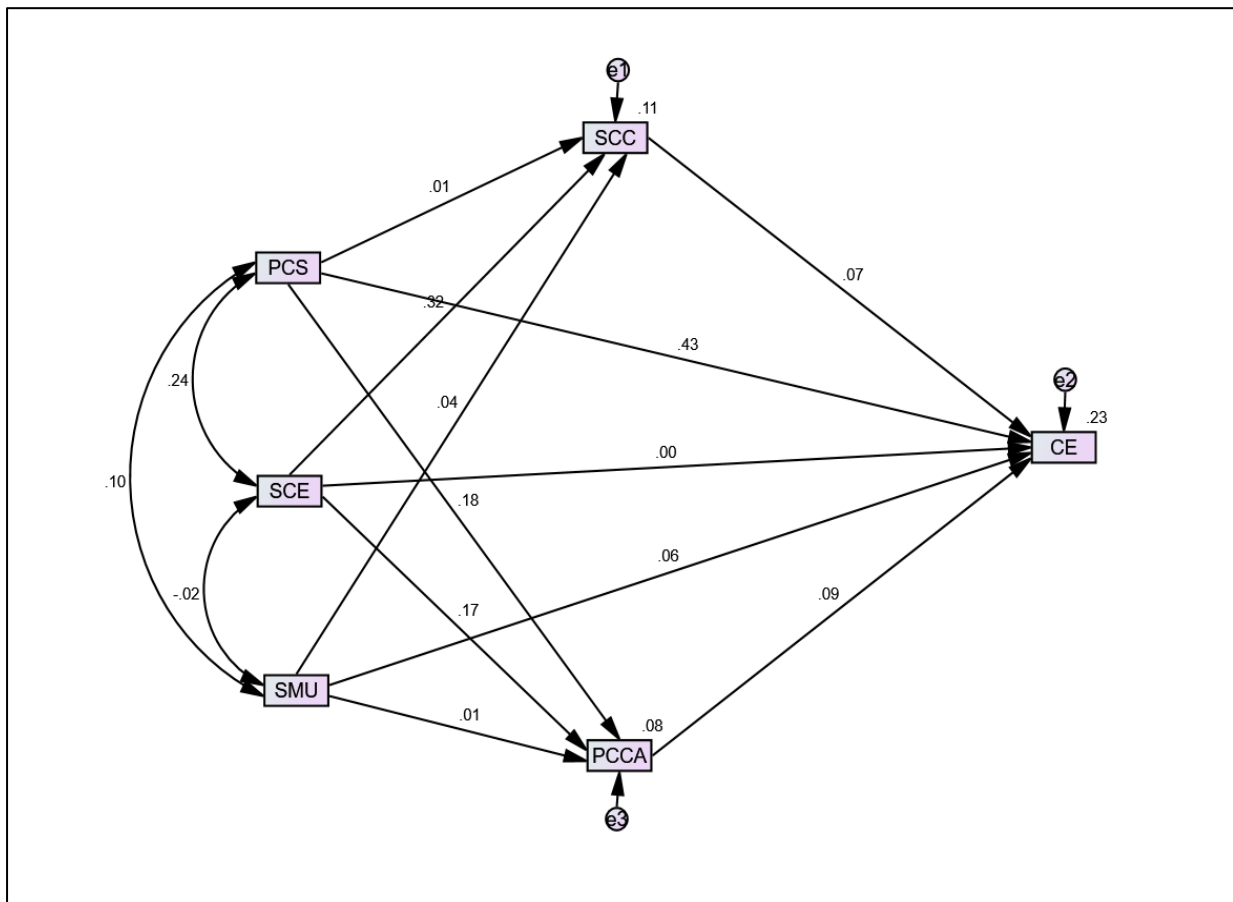
Note: PCS-Parental Civic Socialization, SCE-School Civic Experience, SMU-Social Media Use, SCC-Sense of Community Connectedness, PCCA-Perceived Competence for Civic Action, and CE-Civic Engagement

Direct Effects of Parental Civic Socialization, School Civic Experience and Social Media Use on Mediating Variables

This section presents the direct effects of parental civic socialization, adolescents' school civic experience and social media use on the mediating variables.

Table 1

Summary of Structural Coefficients for the Path Model (Direct Effects of Independent Variables on Mediating Variables)

Independent Variables	Mediating Variables	Standardized Structural Coefficients (β)
Path From ⟶ To		
Parental Civic Socialization (PCS)	Sense of Community Connectedness	.013
	Perceived Competence for Civic Action	.185***
School Civic Experience (SCE)	Sense of Community Connectedness	.322***
	Perceived Competence for Civic Action	.167***
Social Media Use (SMU)	Sense of Community Connectedness	.035
	Perceived Competence for Civic Action	.010

Note. *p < .05; **p < .01; ***p< .001

As depicted in Table 1, parental civic socialization influences more on adolescents perceived civic competence (β =.185, p<.001) than sense of community connectedness (β =.013, p >.05). Although both regression coefficients reached level of statistical significance, school civic experience had greater influence on adolescents' sense of community connectedness (β =.322, p<.001) than perceived civic competence (β = .167, p<.001). The influence of social media use on adolescents' sense of community connectedness and perceived civic competence did not reach level of significance.

Direct Effects of the Predictor Variables on Civic Engagement of School Adolescents

This section presents the direct effects of parental civic socialization, school civic experience, social media use, sense of community connectedness, and perceived competence for civic action on civic engagement of school adolescents.

Table 2

Summary of Structural Coefficients for the Path Model (Direct Effects of Predictor Variables on Civic Engagement)

Predictor Variables	Dependent Variable	Standardized Structural Coefficients (β)
From $\longrightarrow$	To	
Parental Civic Socialization	Civic Engagement	.431***
School Civic Experience	Civic Engagement	.000
Social Media Use	Civic Engagement	.059*
Sense of Community connectedness	Civic Engagement	.067*
Perceived Competence for Civic Action	Civic Engagement	.093**

Note. *p < .05; **p < .01; ***p< .001

As shown in Table 2, the direct effects of all predictors except school civic experience on civic engagement reached level of significance i.e., predicted civic engagement of school adolescents. Of the predictors of civic engagement, the highest influence was exerted by parental civic socialization (β = .431, p<.001), followed by perceived civic competence (β = .093, p<.01), then sense of community (β = .067, p<.05) and social media use (β = .059, p<.05). Compared to the other variables in the model, the direct influence of school civic experience on civic engagement of school adolescents was found to be minimal and not statistically significant.

Indirect Effects of Parental Civic Socialization, School Civic Experience and Social Media on Civic Engagement of School Adolescents

This section presents the mediational effect of sense of community connectedness and perceived competence for civic actions in the relationship between parental civic socialization, adolescents' school civic experience and social media use, and civic engagement.

Table 3

Summary of Results of Mediational Analyses

Relationship between Variables	Standardized Effects (β)		
	Direct	Indirect	Total
PCS ➔ (SCC, PCCA) ➔CE	.431***	.018**	.449***
SCE ➔(SCC, PCCA) ➔CE	.000	.037***	.037
SMU ➔(SCC, PCCA) ➔CE	.059*	.003	.062*

Note. *p < .05; **p < .01; ***p< .001

Table 3 shows that two of the three independent variables were able to exert statistically significant indirect effects on civic engagement. The indirect effect of parental civic socialization-PCS (β = .018. p < .01) on civic engagement was found to be positive and statistically significant. It means the mediated effect of sense of community connectedness and

perceived competence for civic action was found to be statistically significant. Further, the direct effect of PCS (β =.431 p < .001) on civic engagement and total regression effect of PCS (β =.449. p < .001) on civic engagement were found to be positive and statistically significant. It is interesting to note that school civic experience transferred all its effects to civic engagement indirectly (β =.037. p < .001). This means the sense of community and perceived civic competence as mediating variables fully mediated the relationship between school civic experience and civic engagement of school adolescents.

On other hand, adolescents' social media use influenced civic engagement directly (β =.059 P<.05). This means the mediation effect of sense of community connectedness and perceived civic competence in the relationship between social media and civic engagement is not statistically significant. The total regression effect of social media use on civic engagement was found to be positive and statistically significant (β =.062, P<.05). However, PCS was found to operate both directly and indirectly, with positive and significant effects on civic engagement.

Individual and Combined Contributions of Independent Variables on the Dependent Variable

This section presents the separate, pairwise, and combined contributions of the independent and mediating variables to civic engagement of school adolescents.

Table 4

Separate, Pairwise and Combined Contributions of Independent Variables to Civic Engagement

Contributions	Variables	R^2
Separate	PCS	.216
	SCE	.021
	SMU	.012
Pairwise	PCS, SCE	.217
	SCE, SMU	.033
	PCS, SMU	.219
Combined	PCS, SCE, SMU	.221

As can be seen in Table 4, parental civic socialization explained the largest proportion of variance (R^2 = 21.6%) in civic engagement followed by school civic experience (R^2 = 2.10%) and social media use (R^2 = 1.20%). Looking into the pairwise contributions, parental civic socialization, and social media use jointly contributed the largest variance (R^2 = 21.9%) in civic engagement, followed by parental civic socialization and school civic experience which contributed (R^2 = 21.7%) in civic engagement, and school civic experience and social media use jointly contributed the least (R^2 = 3.3%). As to the combined contributions of variables, parental civic socialization, school civic experience and social media use jointly contributed (R^2 = 22.1%) to the variance in civic engagement. According to Cohen's interpretation of effect size of R^2 (Cohen, 1988), R^2 between 0.13 <= R2 < 0.26 is considered as moderate. Overall, it

is parental civic socialization that accounted for the largest variance in the civic engagement of school adolescents.

Discussion

The results have shown that, parental civic socialization predicted civic engagement of school adolescents. The direct, indirect (mediated), and total effect of parental civic socialization on civic engagement were found to be positive and statistically significant. The role of family in influencing civic engagement of school adolescents is recognized in the previous research (Rossi, et al., 2016; Taylor et al., 2019). Parents are socializing agents in communicating civic values and messages with adolescents (Lenzi, Vieno, Santinello, Nation, & Voight, 2014). Discussion on social and political issues was associated with a range of civic values and behaviors (Hooghe & Boonen, 2015). Further, parental civic modeling was an important predictor of civic participation among adolescents (McLntosh, Hart & Younis's, 2007).

Parental civic socialization influenced civic engagement indirectly through influencing participants' perceived civic competencies and sense of community connectedness. During adolescence, sense of community develops due to positive experiences with family, peers and significant others and contribute to the development of personal and social identity and to positive developmental outcomes (Torney-Purta et al., 2010; Wilkenfeld, Lauckhardt, & Torney-Purta, 2010). Flanagan et al. (2007) found out that sense of community predicted adolescents' civic engagement by reinforcing adolescents; commitment to engage in civic activities. Sense of community has positive correlations with both civic activism and prosocial-oriented civic engagement, and has been linked to perceptions of belonging, community connectedness, group membership and civic engagement (Albanesi, Cicognani, & Zani, 2007). Further, when school adolescents participate in community decision-making, they develop greater confidence and agency, increased community connections, and higher level of empowerment (Krauss et al., 2014).

The findings revealed that school civic experience did not directly influence civic engagement of school adolescents. However, the effect of school civic experience on sense of school and community, and perceived competence for civic action (efficacy for civic engagement) reached level of significance. The effect of sense of community and perceived civic competence on civic engagement of school adolescents was also significant. Thus, although school civic experience did not directly influence their civic engagement, it has influenced indirectly through the mediated effect of sense of community and perceived civic competence. It seems that schools have played an important role in helping school adolescents to develop sense of community and school, boosting their perceived civic competence through civic education, civic discussion and facilitating extracurricular activities.

Consistent with the current finding, previous research (Ahmad, Rahim, Pawanteh, & Ahmad, 2012; Prati et al., 2018) revealed that schools can help adolescents develop perceived civic competence, develop sense of community connections, and play active role in their school governance and community-based civic initiatives. When students learn in a classroom that meets one's psychological and social needs, they are likely to experience greater well-being

and develop sense of community benefits from involvement in participatory practices (Mazzoni, Cicognani, Albanesi, & Zani, 2014). Furthermore, a study by Vieno, Perkins, Smith, and Santinello (2005) on democratic school climate and sense of community in school examined individual and school-level predictors of sense of community among adolescents aged 10 to18 years. The result showed that individual and contextual measures of perception of a democratic school climate were each significant predictor of school sense of community.

Schools civic experience did not directly influence civic engagement of adolescents. It appears that schools have exerted limited effort in helping students to engage directly in school and community-based civic activities such as school governance, participation in school and district child parliaments, voluntarism, informal helping activities, helping the most vulnerable students, and promoting awareness on the rights of adolescents. One's interest to participate in civic engagement activities may not necessarily lead to action due to structural and perceived barriers. Contrary to the current finding, Rossi et al. (2016) found out that schools can facilitate participation-based educational experiences such as student councils that promote the development of civic behaviors. Schools promote civic engagement by offering opportunities to learn civic values and skills and creating a democratic climate to engage in civic discussions (Lenzi et al., 2014). Activities implemented within the school could foster a democratic climate for participation and influence their present and future civic engagement (Kim et al., 2015).

Social media use had a significant positive (direct) effect on adolescent civic engagement; its total regression effect was also positive and statistically significant. However, social media use did not predict sense of community and perceived civic competence, and the mediated (indirect) effect on civic engagement was also not significant. A positive and direct influence on civic engagement implies that adolescents use social media to share civic messages with less emphasis on critically analyzing information to boost their knowledge and skills and develop sense of community connectedness and civic competence. Previous research (Theocharis & Quintelier, 2016: Middaugh et al., 2017) indicated that the use of social media advances informed and effective civic engagement of adolescents. Participation in peer-based or youth-based social networks using social media channels increases connection and their engagement helps them to share information and influence on social issues.

The indirect effect of social media use (i.e., through the mediating effect of sense of community connectedness and perceived competence, on civic engagement) on civic engagement of school adolescents was not significant. Evidence from previous research shows relationships between social media use and social connectedness (Sheldon et al., 2011; Ahn & Shin, 2013; Grieve et al., 2013; Allen, Ryan, Gray, McInerney, & Waters, 2014). Digital mediums facilitate opportunities for young people to interact with others and establish a sense of social connectedness. Lenzi et al. (2015) found out that Facebook informational use was associated with higher levels of perceived civic competence, which in turn was associated with a stronger intention to participate in the civic actions in the future. This entails Facebook could provide adolescents with additional tools to learn civic activities or develop the skills necessary to participate in civic platforms at the school and community in the future.

Conclusions and Recommendations

Conclusions

The study revealed the direct effects of parental civic socialization and school civic experience on the mediating variables, which are considered as precursors of civic engagement for school adolescents. Parental civic socialization influenced more on adolescents perceived civic competence than sense of community connectedness. School civic experience had a significant direct influence both on sense of community and perceived civic competence, exerting greater influence on sense of community than perceived civic competence of school adolescents. The influence of social media use on sense of community connectedness and perceived competence for civic action was not significant. All variables, except school civic experience predicted adolescents' civic engagement reaching statistical level of significance. The highest influence was exerted by parental civic socialization. The direct influence of school civic experience on the civic engagement of school adolescents was minimal and not statistically significant.

Parental civic socialization and school civic experience had significant indirect effects on civic engagement of school adolescents. Adolescents' sense of community and perceived competence for civic action played a statistically significant mediational role in mediating the relationship between parental civic socialization, school civic experience and adolescent civic engagement. Although social media use influenced adolescents' civic engagement directly and the total regression effect on civic engagement was positive and statistically significant, the mediation effect of sense of community and perceived competence for civic action on civic engagement was not statistically significant.

Parental civic socialization and social media use influenced civic engagement directly, and both parental civic socialization and school civic experience affected civic engagement indirectly through the mediated effect of sense of community connectedness and perceived competence for civic action, which are precursors of civic engagement.

Parental civic socialization (individual) explained the largest proportion of variance in civic engagement; parental civic socialization and social media use (pairwise) contributed the largest variance in civic engagement. The three predictor variables i.e., parental civic socialization, school civic experience and social media use jointly contributed ($R^2 = 22.1\%$) to the variance in civic engagement.

This study has certain limitations. Although the finding shows parental civic socialization, school civic experience and social media influenced adolescent civic engagement, it is not possible to establish cause and effect relationships between variables as this is fundamentally a correlational study. The use of self-report measures may be susceptible to social desirability. Some adolescents might have responded in a socially desirable way to present themselves, their parents, and schools in a positive way. Nonetheless, all the instruments used were based on a demonstrated reliability and validity in adolescent populations. Future researchers should collect data from family. teachers, and friends to have a comprehensive understanding of contextual factors influencing civic engagement.

Recommendations

The finding shows the significant role of parents in helping civic development of school adolescents. The role of parents in helping adolescents to develop civic responsibility is indicated in the National Child Policy (MoWCY, 2017). Thus, policy makers and implementers (government, civil society organizations and other stakeholders) need to support parents through training and mentoring to help school adolescents develop civic responsibilities, prevent them from engaging in socially destructive behaviors and help them become productive members of the society.

Schools can foster civic engagement of school adolescents not only by teaching rigorously civic content and skills but also by creating an open classroom climate for discussing democratic ideals and social issues, and through extracurricular after-school activities that seek to cultivate adolescents' interest and commitment to participate in civic engagement activities. Furthermore, schools can establish partnerships with key stakeholders to enhance students' civic participation that would lead to positive outcomes such as civic development, an active school and public life, and prosocial behaviors.

Schools, in addition to teaching civic contents which constitute democratic ideals, civic teachers should complement civic learning with practical exercises and projects that enhance students' civic skills and participation. This could include facilitating students' participation in school governance, participate as active member or a leader of school clubs and Woreda child parliaments, and engage in community-based awareness raising on the rights of school adolescents.

Parents and schools can encourage school adolescents to join adolescent/youth-led structures, which could help them to acquire knowledge and skills on their rights and responsibilities, exercise democratic participation, and leadership skills.

Reading news posted by social media such as through Facebook friends might not be sufficient to develop critical thinking to develop their civic knowledge and skills for school adolescents. This is true especially if adolescents do not question the reliability of the information. Thus, as part of civic education or social studies, schools should teach students how they can use social media information to stimulate offline discussion, verify and enrich the information gathered online through face-to-face interactions.

Along its contribution, the present study also acknowledged that there was scanty of research, therefore future researchers should collect data from family, teachers, and friends to have a comprehensive understanding of contextual factors influencing civic engagement.

The study was conducted in urban school adolescents with little consideration of other variables which could influence their civic engagement. Future research should consider rural and non-student adolescent population from different socioeconomic strata.

Although social media use influenced civic engagement of school adolescents directly, there may be a potential of using disinformation that might occur online and use it to engage in socially destructive behaviors. Thus, future researchers should develop a simplified and contextualized measure of social media informational use.

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Time management practice by college of teacher education students: Multitasking, procrastination, task prioritization, and technology use

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Abstract

This study attempted to examine the time management practices of students and the state of different factors of *time management (*multitasking, procrastination, task prioritizing, and technology use) *at Debre Markos College of Teacher Education.* Based on students' problem of meeting deadlines to properly carry out and submit assignments, students' time management practices, the status of the factors described, and differences among students based on sex and field of study regarding those factors were examined. The study employed descriptive survey design of the quantitative approach involving 113 students selected through a proportional simple random sampling technique. Questionnaire data were analyzed through mean, one sample t-test, independent samples t-test, and analysis of variance. Findings unveiled that students were not good enough in their time management practices. Paradoxically most students were multitasking, using technology, and procrastinating on the one hand and prioritizing their tasks, on the other. Although they do not have significant differences in their task prioritization, female students were more procrastinating than their male counterparts in their academic tasks. More male students than females were multitasking and using technology. Although patterns of moderate differences were observed in terms of fields of study, the statistical outputs imply that there were lots of variances among students both in their practice of procrastination and technology use.

Introduction

Needless to mention, time is an indispensable resource in everyone's life. Kostic and Chadee (2017, p.1) in this respect assert time as an essential dimension of our world "that significantly influences the shaping of our existence." Its role is highly significant in the field of education in particular complement that because all activities of education are time-framed and time management implies student achievement (Cyril, 2015; Das & Bera, 2021). Its management, therefore, plays a vital role because efficiency and effectiveness in time management is the most valuable tool that cannot be renewed or reversed. Accordingly, time management is not an easy task the effectiveness of which is influenced by different factors (Krause & Coates, 2008), which require the capability of organizing, planning, prioritizing,

goal setting as well as scheduling or splitting and allocating time between specific activities (Alyami et al., 2021). In short, it refers to handling time effectively so that the right time is allocated to the right work.

Hence, time management is a broad concept that covers multidimensional areas right from planning day-to-day activities to setting long-term goals. Eerde et al. (2004) claim that effective time management offers individuals the means to structure and control their activities. Similarly, Wang et al. (2011) state that time management is important elsewhere, and the ability to manage time properly optimizes the quality of life. According to Jackson (2009), a good time management capability enhances efficiency more than working tougher or harder because it helps to work smarter or assists in getting more work done in less time, even during tight deadlines and high-pressure situations.

In general, scholars (e.g., Das & Bera, 2021; Douglas et al., 2016; Kearns & Gardiner, 2007; Özer et al., 2009) claim that good time management practice by students renders significant contributions to their academic achievement. Kearns and Gardiner (2007), Kelly (2002), McKenzie and Gow (2004), and Krause and Coates (2008), consistently, argued that students with good time management practices demonstrated a positive influence on their learning outcomes. In the same line, other scholars (e.g., Adebayo, 2015; Al-Zoubi, 2016; Dalli, 2014; Eerde et al., 2004; Eid et al., 2015; Krause & Coates, 2008; Olowookere et al., 2015; Oyuga et al., 2016; Wang et al., 2011) assert that effective time management enhances the academic success of students. In contrast, Alani et al. (2020) argue that it is efforts and self-management rather than time management that influence the academic performance of students.

To effectively explain the role of time on students' learning outcomes, consequently, scholars identified major time factors that influence students' academic achievement. Among others, the major factors that are closely related to student behaviors included multitasking or trying to do more than one task at a time (Mancini, 2003; Tracy, 2013) procrastination or pushing the execution of task ahead (Karakose, 2015), task prioritizing or ordering tasks based on importance (Mancini, 2003; Tracy, 2013), and use of technology or supporting activities to manage time with technology (Kaya et al., 2012). It is worth noting that multitasking is a kind of problem in task accomplishment that refers to alternating between different tasks at the same time (Junco, 2012; Junco & Cotton, 2012).

Concerning multitasking, Junco (2012) found that students with multitasking behaviors demonstrated performance decrements in their academic outputs. Other researchers (Chun et al., 2011; Ellis et al., 2017; Junco & Cotten, 2011, 2012; Koch et al., 2011; Rosen et al. 2011; Tombu et al., 2011; Wood et al., 2012) uncovered that multitasking of students has an obstructive effect on their academic achievement. Junco and Cotton (2012, p.1), for instance, claimed that "using Facebook and texting while doing schoolwork were negatively associated with overall college GPA." Other studies (Baert et al, 2020; Burak, 2012; Wood et al., 2012) supplemented that multitasking, and more specifically the use of such technologies as smartphones while reading for example, is strongly associated with poorer achievement in their education by students. This is because the processing of information from multiple stimuli and performing simultaneous tasks at a time is hardly possible for human beings. In addition, Mokhtari et al. (2015), complements that multitasking is so costly because it increases the

errors people make and reduces productivity. Regarding technology use and procrastination, too, various researchers (e.g., Hargittai, 2008; Kaya et al., 2012; Wood, et al., 2012) reported that access to technological networks and appliances as well as adoption and use of technology by students affects their academic performance.

Nayak (2019) and Peng and Kamil (2017), similarly, reported that there was a significant positive association between procrastination (or time wasting) and academic stress among students with a spillover effect of poor academic performance whereas Sayari et al. (2017) found that procrastination is not significantly related to the academic performance of students. Peng and Kamil (2017) expounded that the academic performance of students is also a function of prioritization. In the same line, Sayari et al. (2017) asserted that prioritization is significantly associated with the academic performance of students. Bahadori et al. (2015), consistently claimed that prioritization of objectives and activities directly affects effective time management and performance of tasks. In general, good time management practice stems from identifying time management destructors and prioritizing tasks effectively.

On the other hand, there are also sources of literature that claim that gender has roles in students' time management practice. Kaya et al. (2012**), for instance, disclosed that f**emale students were better than their male counterparts in their time management practices. In contrast, Sultana and Shakur (2022) found that males were much better at their time management skills than their female counterparts. Agormedah et al. (2021), on the other hand, found no significant difference between male and female college students in their time management practices.

The effects of time management dimensions also varied in terms of demographic characteristics such as gender, race, and socioeconomic status. Özer et al. (2009), for instance, found that female students were more procrastinating on their academic tasks than their male counterparts. On the other hand, Stoet et al. (2013) argued that Female students are better than males at multitasking, with some difficulty to generalize whereas Hirnstein et al. (2019) argued that there are no or only small differences between males and females in multitasking practices. Concerning technology use, similarly, Anderson (2001), Odell et al. (2000), Sherman et al. (2000) and Slate et al. (2002) suggest that male college students spend more time online than female college students implying that male college students are more technology users than their female counterparts. Bressers and Bergen (2002) and Jones et al. (2019) in contrast observed that female college students tend to use technology, such as the internet, more than their male counterparts do. Hence, noting the incongruence of the findings, this study aims to investigate the practice of time management by students at Debre Markos College of teacher education (DMCTE).

Problem Statement

Students have very busy and stressful lives due to multitasking (Wasserman et al., 2019). They have to attend classes, carry out assignments or homework, and study for exams. Other than their education, they have to accomplish their daily life routines that are necessary for their economic and social utility. These all require scheduling their time in terms of priority. That is because accomplishing everything at once is often challenging and overwhelming. That is why a time management strategy is necessary and students need to learn about time

management. An effective time management practice helps them to develop the capability and culture of planning their tasks and prioritizing upcoming duties and paves the way for keeping them prepared, well organized, and focused. This in turn enables them to complete their academic tasks on time and lead their daily lives at a well-composed pace instead of suffocating with the consequences of procrastination and hurly-burly (Hoover, 2007; Forsyth, 2007 & Khanam, Sahu, Rao, Kar & Qazi, 2017).

When we gauge students' time management practice in DMCTE, on this basis, different problems can be drawn. Primarily, teachers often complain that most of their students neither meet the deadlines of assignment submission nor carry out their assignments properly despite mutually scheduled time frames being set. In other words, they cannot accomplish a given task within the schedule and quality required. Besides, the problem is not only widespread among the majority of students and jeopardizing their academic success, but is also getting worse and worse over time (Aschalew, 2019 & Bedru, 2015). This triggered us to examine some of the common factors that are widely known in affecting the effective and efficient utilization of time by students.

Only a few local studies were found that were conducted on students' time management. *Alemu (2012) assessed the time management practices of summer students at Addis Ababa University. He employed descriptive methods to analyze data on time management factors which could not be inferred to the population. Similarly, Tesfay (2019) conducted a study regarding the effect of time management practice on the academic achievement of university students. This study exclusively dwelt only on whether students have a culture of long and short-range planning in which he did not touch procrastination, multitasking, task prioritizing, and technology use. Besides, Sayari*et al. (2017) have given recommendations about time management, however, it does not apply to the college of teacher education. Others such as Nasrullah and Khan (2015), Wolters and Brady, (2021) and Pérez-Sanagustín, et al. (2021) studied about the impact of time management on the students' academic achievements, college students' time management, flipped experience and, scaffolding and self-regulated learning strategies to improve learners' time management and engagement, respectively. None of them were studied at colleges of teacher education with a focus on procrastination, multitasking, task prioritizing, and technology use.

Therefore, the current study extended the investigation of those factors thoroughly*, in a different setting and with different participants by using inferential methods.* Although it may replicate a past study, *according to* Cohen et al. (2018) and *Creswell (2014), it is possible to investigate a* problem more that was examined somewhere else earlier so long as it involves different participants in a different setting or research site. According to Creswell, this method is especially important in quantitative studies because it generates broader information and either increases the values of earlier research outputs and their broader application or triggers controversies that inquire further examination.

*Consequently, the current research sought to examine the major factors that are often identifies determinants of students' academic success (*multitasking, procrastination, task prioritizing, and technology use) *in the practice of time management among the students of DMCTE.* To that effect, the study was spearheaded by the following research questions:(1) What is the extent of third-year students' time management skills in DMCTE? (2) What is the

extent of multitasking, procrastination, task prioritizing, and technology use among third-year students of DMCTE? (3) Are there statistically significant differences among students based on their sex and field of study in their practice of multitasking, procrastination, task prioritizing, and technology use?

Methods

This study intends to investigate the time management practices of students in DMCTE. The descriptive survey design of the quantitative approach was employed because this type of design allowed us to collect a variety of quantitative data from different departments to satisfy the research need. As stated by Creswell (2014), for one who needs to collect quantitative data and made generalizations from the sample to a given population, it is advisable to use a descriptive survey design. Data were collected from 113 (74 Males and 39 Females) third-year students (because there were no 1st and 2nd year students in the college during the time of data collection) recruited through Cochran's equation. The proportional simple random sampling technique was also considered to provide an equal chance of participation for males and females as well as for students from different fields of study (Cohen et al., 2018). As a result, the samples were taken from each department and sex proportionally (Education eight from 28, Mathematics 23 from 79, Language 44 from 148, Aesthetics five from 19, Natural science 21 from 79, social science 12 from 42). Whereas to ensure sex proportionality 74 males from 253 and 39 females from 136 were selected to be used as data source for the study.

A questionnaire was employed to collect data. It was adapted from the scale developed by Alyami et al. (2021) and consisted of 30 items, of which among those 10 items were for time management practice, and the rest 20 items were used for procrastination, multitasking, technology use, and task prioritization, five items for each. The questionnaire is a Likert type having five alternatives between strongly disagree to strongly agree. Data were collected after translating the instrument into the Amharic language, the mother tongue obviously because students are more proficient in Amharic than they are in English. Both Amharic and English teachers participated during the translation process to secure clarity and thereby validity of the instrument.

Before administering it, the instrument was piloted on 38 third-year students who were excluded from the final study. The content and predictive validities of the instruments were checked by professionals (experts) in the field. In addition, the administration of the instrument in the piloting stage after translating it into Amharic also contributed to obtaining information that assisted to optimize validity. Regarding reliability, Cronbach's alpha statistic was employed and demonstrated outputs that inform the reliability of the instruments (see Table 1).

Finally, data collected directly by the researcher were analyzed by using mean scores, one sample t-test, independent samples t-test, and one-way ANOVA. *Cohen's d* and *Tukey post hoc* tests were also employed to measure the strengths of mean score differences.

Table 1

Cronbach alpha Reliability Coefficients of Variables

Variables	Number of Items	Coefficient Alpha
Students' time management skill	10	0.813
Procrastination	5	0.791
Multitasking	5	0.902
Task prioritizing	5	0.874
Technology use	5	0.793

Results

In this study, fortunately, all data were not only secured from the participants but also found usable after screening. There were very little missing data from very few participants. In addition, the fitness test of the data to necessary assumptions confirmed the possibility of applying the required parametric tests. That is, normality, linearity homoscedasticity, multicollinearity, and equality of variances were checked and found at an acceptable level to employ statistical (inferential) tools described in the methods of data analysis section. Because it suffices the rule of thumbs, as a result, multicollinearity was checked through the level of tolerance (T) T≥0.2, variable inflation Factor (VIF)<5, and value of correlation(r)<0.8. Based on the rule of thumb for each of the assumptions, the same thing was applied.

Students Time Management Practice

Students' time management skills in DMCTE demonstrated almost an average practice of each of the necessary activities (see Table 2). The time management practice was gauged based on the average mean score or test score (M =3). The aggregated findings demonstrated contradictory feelings by students. That is, the figures in the table indicated higher mean scores than average that included the desire of students to manage their time daily, balancing their private and study time, the flexibility of priorities, spending time wisely, and avoiding time destructors on the one hand and lower mean scores than average in others including in the need for improvement in their time management skills, on the other. When viewed in terms of sex the figures in the table depict that males are better than females in their time management practices, except in meeting deadlines. It in turn implies that males seem to have only just the claim because females are better at meeting deadlines than males.

Table 2

Self-Reported Time Management Practices by Students (N = 113)

Time Management Scales	Participants					
	Males		Females		Aggregate	
	x̄	SD	x̄	SD	x̄	SD
I prefer to manage my time daily	3.28	1.384	3.02	1.388	3.15	1.383
I meet the deadline for any work	2.26	1.382	3.00	1.257	2.63	1.335
I balance my private time and study time	4.27	0.752	3.10	1.167	3.68	3.919
I can adapt and be flexible when changes occur and reassess priorities	3.40	1.334	3.00	1.298	3.13	1.320
I have a established plan for each week's tasks	3.39	1.341	2.24	1.203	2.82	1.316
I feel that my time management skill needs more improvement	3.20	1.271	2.63	1.158	2.88	1.240
I used to put my important dates on a single calendar	3.21	1.427	2.09	1.321	2.65	1.404
I spend my time wisely and avoid distractions	3.58	1.334	3.00	1.298	3.39	1.346
I effectively manage my workload	3.17	1.368	2.31	1.288	2.74	1.340
I am excellent at time management	3.43	1.405	2.33	1.158	2.88	1.357
Average Mean	3.32		2.67		3.00	

The time management practices of the students were also examined to gauge whether there were discrepancies between males and females. That was because there are researchers who argue the two have significant differences in this respect. The independent samples t-test portrayed by Table 3, in this respect, demonstrated that males and females have statistically strong differences in their time management skills (t = 5.872, df = 111, p < 0.05, d = 1.161).

Table 3

Independent Samples t-test of Students' Time Management Practices Between Sexes

Variable	Assumption	Levine's Test for Equality of Variances		t-test for Equality of Means				Cohn's d
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	
Time Management Practice	Equal variance assumed	10.198	.002	5.87	111	.000	3.236	1.161

Time Utilization of Students in Terms of Sex

Table 4 displays the role of different factors that either facilitate or hinder the effective time utility of students. All the mean scores in the table are significantly higher than the average score (Average Mean=3, p < .01 in all cases). It all implies that students are multitasked, use technology, and procrastinate on the one hand but prioritize their tasks, on the other. Still, their practices are contradictory. For instance, a student multitasked and prioritize tasks at the same time. Hence, it can be argued that students are characterized by inconsistent behaviors, despite their lower habit of procrastination and technology use. All their characteristics hinder a wise and effective utilization of time for their academic purposes, which might impact their academic performance.

Table 4

One-Sample t-test on Students' Time Management Practice (n=113)

Variables	Test Value = 3				
	Mean	SD	T	df	Sig
Multitasking	4.16	.46	82.182	112	.000
Procrastination	3.44	.554	54.399	112	.000
Task prioritizing	4.13	.438	83.415	112	.000
Technology use	3.59	.761	41.862	112	.000

Procrastination, Multi Tasking, Prioritizing Task, and Technology use by Students

Data was collected from students to know about the extent of procrastination, technology use, task prioritizing, and multi-tasking by students in DMCTE. As can be seen from Table 5, the extent of four elements were gauged based on the average mean score($\bar{x}$=3). Based on the aggregate results of students on the extent of procrastinating tasks and multi-tasking, it is possible to say that students are found in both procrastination and multi-tasking, however, there has been a slight mean difference between the extent of procrastination and multi-tasking (Aggregate mean of 3.44 and 4.16) respectively. In addition to procrastination and multi taskings, analysis was also made on prioritizing task and technology use by students. The results revealed that prioritizing task is also a problem of students at DMCTE. This is because all the item that were filled by them and later analyzed showed an average greater than the average mean value that is (M=4.13) which is greater than (M=3). Similarly, though its mean value was somewhat lesser than prioritizing tasks, DMCTE students self-reported item on technology use indicated that they are good in technology use (M= 3.59) which is greater than the expected average value three. From this result, it can be seen that though students claimed to have used technology, they have multitasking and task prioritization problem.

Table 5

Self-reported Procrastination, Multi-tasking, Prioritizing task, and technology use(n=113)

Procrastination	Aggregate Response	
	x̄	SD
I avoid setting personal deadlines and sticking to them	3.3009	0.342
I do not wait until the last minute to do things	3.8761	0.523
I often find it difficult to begin a paper or project	3.4336	0.228
I pack my schedule so full that I don't have time if an emergency arises	3.3062	0.312
I often do things quickly, but incorrectly, and then have to redo them	3.3009	1.365
Aggerate Mean and Standard Deviation	3.44	0.554
Multi-Tasking		
I start a task, put it aside, start another, put it aside, and continue doing this so that I rarely finish any one project.	4.5209	1.356
I pack my schedule tight to do many activities	4.8702	0.353
I over-schedule and take on too many commitments	3.8336	0.228
I become busy with overcrowded tasks	3.7362	0.112
I feel that I have plenty of tasks given from my teacher	3.851	0.252
Aggerate Mean and Standard Deviation	4.16	.46
Prioritizing Task		
I spent time on major tasks over the minor ones	3.459	1.319
I do not spend a lot of time on routine and trivial things	4.672	0.257
I am not bad at establishing priorities. I treat everything as if it were equally important	4.773	0.268
I do not spend time socializing instead of working	3.962	0.112
I do not read things that aren't essential to finishing the work at hand	3.832	0.232
Aggerate Mean and Standard Deviation	4.13	0.438
Technology use		
I have used computer to do educational tasks	3.683	0.979
I prefer to use online books and other sources to accomplish my tasks	3.574	0.757
I have used mobile phone to support my task	3.367	0.697
I have good internet access at my college	3.769	0.53
I have used technological tools to use my time effectively	3.576	0.832
Aggerate Mean and Standard Deviation	3.59	0.761

One of the factors that generate divergence in students' multitasking, and procrastination, technology use is sex. In this respect, Table 6 shows that male and female students have a moderate difference in multitasking (t = -2.488, df=111, d = -0.492), strong differences in procrastination (t=4.999, df=111, d = 0.989), and a very strong difference in technology use (t=6.910, df=111d = 1.367). But the two have no statistically significant differences in task prioritization (t = -.726, df = 111, p > .05). Based on the differences that are presented in Table 6, it can be argued that more males than females use technology and procrastinate more and in contrast, more females than males are multitasked. This implies the existence of mixed results whereby female students in DMCTE are relatively higher in procrastination and technology use but are more multitasked than their male counterparts.

Table 6

Independent Samples Test between Sexes Regarding the Four Variables

Variable	Assumption	Levene's Test for Equality of Variances		t-test for Equality of Means			Mean difference (M – F)	Cohen's d
		F	Sig.	T	df	Sig. (2-tailed)		
Multitasking	Equal Variance assumed	1.136	.289	-2.488	111	.014	-0.221	-0.492
Procrastination	Equal Variance not assumed	10.310	.002	4.999	111	.000	0.498	0.989
Task Prioritizing	Equal Variance assumed	.409	.524	-.726	111	.469	-0.063	-
Technology use	Equal Variance assumed	1.270	.262	6.910	111	.000	0.896	1.367

Time Utilization of Students in Terms of Field of Study

Comparisons were also made in terms of fields of study to examine whether DMCTE students have differences in their experiences with the aforementioned factors of time management. The outputs in Table 7 explain statistically significant differences only in their procrastination ($F_{(5,107)} = 14.703$, $p < .05$) and technology use ($F_{(5, 107)} = 17.637$, $p < .05$). This implies that the students of DMCTE have a different experience in procrastination and technology use.

Table 7

F-test among Students in Terms of their Field of Study

Variables		Sum of Squares	df	Mean Square	F	Sig.
Multitasking	Between Groups	50.705	5	10.141	2.001	.084
	Within Groups	542.198	107	5.067		
	Total	592.903	112			
Procrastination	Between Groups	350.931	5	70.186	14.703	.000
	Within Groups	510.786	107	4.774		
	Total	861.717	112			
Task prioritizing	Between Groups	20.592	5	4.118	.851	.517
	Within Groups	517.726	107	4.839		
	Total	538.319	112			
Technology use	Between Groups	733.155	5	146.631	17.632	.000
	Within Groups	889.837	107	8.316		

Table 8 depicts the Tukey *post hoc* test regarding the inter-field difference in students' level of procrastination. The results in the table unveiled that statistically significant mean score differences were observed between mathematics students and the students of education,

language, natural sciences, and social sciences (all at P<0.05). Therefore, based on table 8, it is observable that Education students have better than other department students.

Table 8

Post-Hoc Test in Terms of Fields of Study on Procrastination

No	Source of variation	Mean Difference					
		1	2	3	4	5	6
1	Education	0.000					
2	Mathematics	4.174*	0.000				
3	Language	0.114	4.288*	0.000			
4	Aesthetics	-1.800	2.374	-1.914	0.000		
5	Natural Science	0.000	4.174*	-0.114	1.800	0.000	
6	Social Science	0.750	4.924*	0.636	2.550	0.750	0.000

Note. * p < 0.05

Regarding the differences in the practice of procrastination, further scrutiny was conducted to know the strength of the difference (see Table 9). This was carried out by using the effect size test through *etha square* (η^2). It revealed that the interaction effect size in terms of field of study was moderate ($\eta^2 = 0.407$). The value 0.975 for the within-groups sums of squares (intercept) informs that there are a lot of variances among students in their practice of procrastination.

Table 9

Effect Size Test on Procrastination

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	350.931*	5	70.186	14.703	.000	.407
Intercept	20274.126	1	20274.126	4247.044	.000	.975
Procrastination	350.931	5	70.186	14.703	.000	.407
Error	510.786	107	4.774			
Total	34271.000	113				
Corrected Total	861.717	112				

Note. * R Squared = .407 (Adjusted R Squared = .380)

The other variable where a statistically significant mean difference was observed in Table 9, based on the field of study was technology use. Table 10 displays the post hoc test results to identify the specific destiny of the differences. Those statistically significant differences were found among different fields of study. Students from the department of education have significant differences with students of language, natural science, and social science. Similarly, mathematics students had significant differences with students of language, natural science, and social sciences. In addition, a significant difference was found between students of language and the aesthetic departments. Moreover, students of aesthetics have significant differences from natural science and social science students. All the differences are

at p < .05 level of significance. Therefore, from this, one can understand that the department students belong to is a factor for variations in their time management practice.

Table 10

Post hoc Analysis Among Departments Regarding Technology Use

No	Source of Variation	Mean Difference					
		1	2	3	4	5	6
1	Education	0.000					
2	Mathematics	2.750	0.000				
3	Language	7.364[*]	4.614[*]	0.000			
4	Aesthetics	2.750	.000	-4.614[*]	0.000		
5	Natural Science	7.560[*]	4.810[*]	.196	4.810[*]	0.000	
6	Social Science	7.417[*]	4.667[*]	.053	4.667[*]	-0.143	0.000

Note. * p < 0.05

In addition to gauging the significance of differences, a further investigation was conducted to measure the strength of the difference among students in terms of field of study. The interaction effect size manipulated by using *etha square* showed a moderate difference (see Table 11). The output revealed that the interaction effect of different fields of study produced a moderate ($\eta^2 = 0.452$) difference. The value 0.957 for the within-groups sums of squares (intercept) informs that there are lots of variances among students in their practice of procrastination.

Table 11

Effect Size Test on Technology Use of Students

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	733.155[*]	5	146.631	17.632	.000	.452
Intercept	19667.921	1	19667.921	2365.005	.000	.957
Technology use	733.155	5	146.631	17.632	.000	.452
Error	889.837	107	8.316			
Total	38199.000	113				
Corrected Total	1622.991	112				

Note. * R Squared = .452 (Adjusted R Squared = .426)

Discussion

Concerning their time management practices findings informed that students are not good enough because almost all mean scores on the scales indicated that activities are below average, especially for females. Unlike the arguments by different scholars who examined the role of time in life (such as Cyril, 2015; Das & Bera, 2021; Kostic & Chadee, 2017), consequently, students in DMCTE are not effectively utilizing such an indispensable resource in their academic life. In addition, males and females revealed statistically very strong differences in their time management practices. In line with Sultana and Shakur (2022) but in

contrast to Agormedah et al. (2021) and Kaya et al. (2012) **in the current study** context males were much better than their female counterparts in their time management skills and practices. As a whole, studies conducted across the world regarding the association between time management and academic performance by different scholars (e.g., Adebayo, 2015; Al-Zoubi, 2016; Dalli, 2014; Das & Bera. 2021; Douglas et al., 2016; Eid et al., 2015; Krause & Coates, 2008; Olowookere et al., 2015; Oyuga et al., 2016; Wang et al., 2011; Özer et al. 2009) reported lack of effective time management hindering the academic success of students and so the poor academic performance of students at DMCTE could be attributed to their poor time management.

The claim by Alani et al. (2020) that attributed efforts and self-management rather than time management to the academic performance of students did not work in the context of DMCTE. That is because students are good enough neither in their time management practices nor in their academic performance (as mentioned in the problem statement) which otherwise should not have been had Alani et al.'s (2020) argument been held in the college's context.

In addition, a closer examination made on the dimensions of time management that exposed students to the unwise use of time in DMCTE identified paradoxical practices. Students were multitasking, using technology, and procrastinating on the one hand and prioritizing their tasks, on the other. All their characteristics, except task prioritization, hinder a wise and effective utilization of time for their academic purposes, which likely affects their academic performance. These study results coincided with the findings of earlier studies (such as Baert et al, 2020; Burak, 2012; Chun et al., 2011; Ellis et al., 2017; Gayef et al., 2017; Junco, 2012; Junco & Cotten, 2011, 2012; Koch et al., 2011; Rosen et al. 2011; Tombu et al., 2011; Wood et al., 2012) in revealing not only the exposure of students for multitasking and technology use but also the destructive roles these behaviors played on the engagement and academic success of students. It meant that just like the findings by the abovementioned scholars, students of DMCTE were challenged with a shortage of time to accomplish their tasks with the necessary quality. This fits with those research reports which claimed that multitasking often enhances the possibility of errors students commit and the consequent decreases in their achievements, given that there is a plethora of factors that debilitate the effectiveness of students' achievements.

The participants of the current study also claimed that they are good at prioritizing their tasks, a practice that scholars such as Bahadori et al. (2015) and Peng and Kamil (2017) Sayari et al. (2017) advocate are significantly associated with a better academic performance by students. But this is not realized among the students of DMCTE as noted in the problem statement. Consistent to various researchers (e.g., Hargittai, 2008; Kaya et al., 2012; Nayak, 2019; Peng & Kamil, 2017; Wood, et al., 2012), however, DMCTE students were characterized by procrastination and its consequences. Besides the assertion made in the problem statement section about students' weakness in both their time orientation and performance in DMCTE, the current study disclosed that they were also affected by procrastination. This direct association between procrastination and the academic performance of students corroborates the findings by the scholars described above, on the one hand, but contrasts the finding by Sayari et al. (2017) who denied the positive correlation between procrastination of students and their academic achievement.

Besides the aggregate phenomenon, time management practice among DMCTE students was gauged in terms of the association of its dimensions with sex. In line with Özer et al. (2009), to begin with, in DMCTE female students were more procrastinating than their male counterparts in their academic tasks, although there are cases where differences cannot be discerned. On the other hand, unlike Hirnstein et al. (2019) who asserted no or only small differences between male and female students but like Stoet et al. (2013) who found more female students were better than males at multitasking, the current study found males were less multitasked than females. In line with Anderson (2001), Odell et al. (2000), Sherman et al. (2000), and Slate et al. (2002) and contrast with Bressers and Bergen (2002) and Jones et al. (2019) the current finding informed that more male college students than females use technology in DMCTE.

Besides sex, the perceptions of students about their time management practices were compared and contrasted in terms of their fields of study. In this respect, significant differences were observed only in procrastination and technology use. Regarding procrastination, statistically significant differences were observed between mathematics students and students of education, language, natural sciences, and social sciences. As a result, education students were found better than other department students. The differences among different fields of study regarding technology use, however, varied. Students of the education department have significant differences from students of language, natural science, and social science and at the same time, mathematics students had significant differences from students of language, natural science, and social sciences. Moreover, students of aesthetics have significant differences from language, natural science, and social science students. Although the differences in both cases are statistically moderate, the statistical outputs, in general, informed that there were lots of variances among students both in their practice of procrastination and technology use. So far there is no research on time management factors that compared and contrasted students in terms of fields of study and hence comparative discussions were not carried out. The differences in procrastination and technology use of students at DMCTE in terms of fields of study do not have clear patterns that require solutions peculiar to every field of study.

Conclusions, Recommendations. and Implications

This study was grounded on the problem that students lack to meet both the timetable and the expected quality of work. In support of this, findings of the current study unveiled that most of the students are not good enough at their time management or usage Although there are different factors (teacher competence and commitment, the teaching method employed, facilities and resources, academic background of students, passion of students for the profession, etc.) that determine students' poor time management competence likely played its role in impeding their time management practice at DMCTE. Generally, students' time management practice is found to be problematic that needs follow-up to improve. In addition to this, students in DMCTE were found multitasked and procrastinating. Thus, when compared to others, it is possible to conclude that multitasking and procrastinating are prevalent with large mean scores.

Time is part of every one's life, especially, it determines students' success. However, students of DMCTE had problem of time management. Therefore, to address this problem, college management and teachers shall devise a time management skills training package to empower students in improving their time orientation and have proper knowledge as to the role of time in their academic life. Also, an effort shall be made to mainstreaming time management skills in classroom teaching (advise students about the way they effectively utilize their time to accomplish tasks on time and put checkpoints for their students).

Time management is impacted positively or negatively from different directions. Then, the college management and teachers had better orient students on major factors that enhance or obstruct their time management implementation with particular emphasis on task prioritization, multitasking, procrastination, and technology use. In a very specific manner, multitasking and procrastination of tasks shall be given prior attention as they are the most prevalent in impacting students' time management.

Based on the findings and conclusions of this study, there were issues that call for further investigation through mixed approaches and rigorous statistical applications. Those are (1) the factors behind the divergence of education students in their practice of procrastination from students of other fields of study, (2) the factors that generated differences among students of different fields of study regarding technology use, (3) the relationship between time management practice and academic achievement of students, and (4) the contradictory behaviors of time management whereby students were found multitasking, using technology, and procrastinating on the one hand and prioritizing their tasks on the other hand calls for in depth investigation.

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Examining practices and challenges of authentic learning in Mathematics lessons in upper primary schools

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Abstract

The study aimed at examining the practice of employing authentic instruction and identifying predictors in upper primary mathematics lessons in Bahir Dar Special Administrative Zone, Amhara National Regional State, Ethiopia. The study employed a mixed-methods exploratory sequential design. Data were collected through observation, interviews, and questionnaires from upper primary school mathematics teachers. The authentic learning questionnaire was pilot tested, and the internal consistency was found to be .766. Qualitative data from interviews and observations were analyzed using content analysis while quantitative data from observations were analyzed using a one-sample t-test; on the other hand, quantitative data from questionnaires were analyzed using a one-sample t-test and hierarchical multiple regression. The results revealed that there was lack of effort to practice authentic instruction; the instruction did not situate learning in a real-life setting. The dimension level analyses showed that all ten dimensions of the authentic instructional model were poorly practiced. The findings also revealed that among several challenges, four factors appeared to be significant predictors: lack of understanding and skills in authentic learning, less suitability of mathematics curriculum, inflexible and short schedule and period, and large class size. The researchers recommended that responsible government bodies and teacher training institutions exert greater effort to change the situation. Training should be given for teachers to improve their understanding and skills, and the curriculum should be suited for authentic learning.

Introduction

Many modern instructional assumptions focus on authentic learning that helps learners put together the required attitudes, knowledge, and skills; organize individual skills that incorporate difficult tasks that can be performed with sustained investigation; and transfer their in-school learning to real-world or work situations (Rule, 2006). According to Trivedi et al.

(2017) and Christmas (2014), some educationists exerted effort and called for paradigm change from the conventional method to authentic pedagogy that supports real-life learning. Authentic learning contextualizes learning tasks in the context of real-world milieus and, in doing so, provides opportunities for learning by allowing students to experience the same problem-solving challenges in the curriculum as they do in their daily endeavors (Herrington et al., 2014). Authentic learning requires employing social and cognitive tactics, including investigating, collaborating, and expressing opinions; associating learning context requires participative and active students and teachers who use various approaches (Roelofs & Terwel, 1999).

Authentic learning demands students to engage in complex problem-solving processes in groups over an extended period of time, fostering learners' cognitive development. Authentic learning improves student achievement (Newmann et al., 2007); helps learners be motivated and persist in their task (Lombardi, 2007; Sawyer, 2006); and stimulates their intrinsic motivation (Sukumaran, 2012). It helps engage students in topics that have real-world, personal, or social relevance (Herrington & Oliver, 2000; Preus, 2013). Authentic learning also raises the application of learning by students and inspires them to develop applicable competencies and make use of what they learned for various aspects of their lives (Sawyer, 2006).

This study focused on mathematics. Mathematics is a relevant subject by itself, although it can be applied to other subjects. Because the quality of mathematics and science education (MSE) at the basic level is a key to developing human resources that can contribute to scientific and technological development, many African countries have been exerting greater effort to advance the quality of MSE at the primary and secondary levels (Mataka et al., 2014). However, a number of African countries are faced with challenges in MSE, one of which is students' poor achievement in national examinations (Matachi & Kosaka, 2017).

The Curriculum Framework of FDRE emphasized that mathematics is a useful subject matter whereby students need to actively acquire knowledge through doing and problem solving pertinent to their day-to-day lives (MoE of FDRE, 2009). It is also underscored that general education should focus on science and mathematics with content that emphasizes research and relevant knowledge (MoE of FDRE, 2002). Mulugeta (2023) emphasized that mathematics is one of the core subjects that play indispensable role in national development. As indicated in the different learning assessments and regional examinations, students' mathematics achievement is poor as compared to other subjects and the national policy standard, i.e., 50% (MoE of FDRE, 2010; MoE of FDRE, 2015). Students' lower scores have been mostly evident in mathematics and mathematics-related subjects compared to other school subjects (Dawit et al., 2016). Mathematics is considered as one of the most challenging subjects that requires high level of cognitive engagement, perseverance, great expenditure of effort to master it and competence Yalew (2005).

Realistic Mathematics Education (RME) claims that mathematics is essential to be in close contact with learner-oriented cases taking place in daily life (Karaka & Ozkaya, 2017).

Authentic learning is closely related to RME. A realistic approach is an approach that uses realistic problems as the starting point of mathematics learning based on the idea that mathematics is a human activity and that it must be linked significantly to the context of the student's everyday life as a source of development and as an application area (Karaka & Ozkaya, 2017; Wahyudi et al., 2017). One of the tenets of realistic mathematics education is its applicability by familiarizing students with mathematical approaches to everyday settings, and mathematical tasks should be contextualized with mathematical ideas by connecting them to real-world situations (Cobb et al., 2008). One of the problems characterizing the Ethiopian education system has been lack of relevance and decline in quality and standard (MoE of FDRE, 2002). Hence, it is underscored that students should become active participants in their own learning through exploring, observing, experimenting, and practicing rather than simply being passive receivers of knowledge and the content should be related to everyday life so that all students appreciate the relevance of their education (MoE of FDRE, 2009).

Many practices of conventional schooling consider knowing and thinking to go in the minds of individual secluded from the intricacies of the outside world (Herrington & Herrington, 2008). The conventional methods of teaching (lecturing) have been blamed for students' failure to transfer the learned knowledge into real-life situations; most students join the world of work hardly able to transfer learning to real-life situations (Bransford et al., 1990; Christmas, 2014). Herrington et al. (2010) indicated that numerous tasks undertaken by students are unconnected with the kinds performed by learners in their everyday work. Sukumaran (2012) believed that the conventional method of teaching results in the collapse of endeavors in passing on knowledge and developing skills to prove the qualities and competency required for a learner or graduate; this is mainly because education is not being practiced with purpose and values. According to Herrington and Herrington (2006), in conventional approaches, there are few opportunities for reflection, collaboration, and articulation; the majority of school and university learning continues to involve competitive relations. Hence, if the instructional problem is not clearly examined and measures are not taken, the problem perpetuates. However, there was no research that examined the practice of authentic learning in the area. This research was conducted to fill this gap.

Statement of the Problem

One of the problems in the educational systems of different countries is the detachment of learning from real-life situations. Schoolwork is often quite distinct from authentic activity or the ordinary practices of society; many of the activities undertaken by students are unconnected (not related) to the kind performed by learners in their everyday work (Herrington et al., 2010). King et al. (2009) noted that subject matter may be covered but not examined in ways that produce deep conceptual understanding. Reality and real-world practice are scarcely ever used as alternative views in learning settings (Herrington et al., 2003).

The major challenge for educators is connecting learner needs and pedagogy in order to build more participative, employable, and learner-centered environments that advocate 21st

century skills and promote self-governing learning (Parker et al., 2013). Bransford et al., (1990) similarly argue that one of the key challenges for educators is to teach relevant content in a way that facilitates thinking. Many students face problems applying the knowledge and skills attained through formal learning to everyday contexts (Lave & Wenger, 1991). In international instances, authentic learning was not practiced by most students and schools in the USA (Newmann et al., 2007), Germany (Fremerey & Bogner, 2015), the Netherlands (Roelofs & Terwel, 1999), and Turkey (Acat et al., 2010). In de-contextualized formal learning experiences, the acquisition of facts is secluded from the milieus in which they derive meaning (Cognition and Technology Group at Vanderbilt, 1993). Greatly de-contextualized and simplified knowledge leads to inflexible, incomplete (imperfect), and naive (immature) ideas (Spiro et al., 1991).

There were different studies that depicted the prevalence of conventional methods of instruction in Ethiopia. Conventional instructional methods (lectures) have the problem of being secluded, unrelated, and marginalized from mainstream real-world activity and performance (Herrington, 1997). To begin with, a study conducted at Jimma University depicted that lecturing is still the dominant teaching method teachers often use in mathematics classes (Kassahun, 2013). According to Solomon and Endalew (2015), the practices of constructivist teaching approaches in the secondary schools of Kamashi Zone of Benishangul Gumuz National Regional State were low. As indicated in the theoretical framework section, authentic learning is based on the assumptions of constructivism, mainly social constructivism. If a constructivist approach to teaching is not implemented, it is hardly possible to implement authentic instruction. Asrat (2017) found that the application of constructivism in primary schools is low.

The preceding paragraph expounds that there were some instances that revealed the prevalence of conventional methods of instruction at the national level in general and at the regional level in particular. These instances do not represent the national or the regional prevalence of conventional methods of instruction. In addition, the above studies focused on the status of the practice of constructivism and the challenges that affect it; they were not directly related to authentic learning. To clearly understand the situation, the researchers needed to systematically collect data and analyze it by taking a representative sample. Because of its accessibility and constraints on different resources, the current researchers focused on the Amhara National Regional State, mainly Bahir Dar Special Administrative Zone. The immediate factor that motivated the researchers was the passive instructional approach that they found out in the study area in 2017/18 academic year in Grades 7 and 8. This instance did not represent the Zone. Hence, representative data need to be collected and analyzed. There is a paucity of research conducted to assess the practice of authentic learning approaches in mathematics subjects in Ethiopia in general and Amhara Regional State in particular. Hence, the current researchers were set to conduct research that could involve a representative sample of schools and students. The researchers were also interested in identifying the possible challenges that may inhibit the practice of authentic learning in the study area. Based on the

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above arguments, the following research questions were raised: (1) what is the status of the practice of authentic learning? (2) What are the challenges that may inhibit practicing authentic learning? (3) Which of the factors are significant predictors of the practice of authentic instruction in upper primary school mathematics?

Theoretical Framework

The idea of authentic learning was drawn from the theory of social constructivism (Lasry, 2006; Ozur & Duman, 2019). Under the umbrella of social constructivism, authentic learning has originated largely from the model of situated learning (Herrington et al., 2010) and other instructional approaches, mainly cognitive apprenticeships and anchored instruction (Herrington & Herrington, 2006; Herrington et al., 2010). There are different frameworks for authentic learning. The current researchers employed the authentic instructional model, which was developed by Herrington and Oliver (2000) and has nine dimensions, which were indicated in Herrington et al. (2010) and Herrington et al. (2014). This is because this framework is more holistic, comprehensive, and more applicable in classroom situations than other contexts. The nine dimensions of this framework are authentic context, authentic activity, access to expert thinking and modeling, multiple perspectives and roles, collaborative construction of knowledge, reflection, articulation, coaching and scaffolding, and authentic assessment. Authentic learning was founded on a constructivist viewpoint in which students build understandings of new knowledge and practices by integrating their earlier experience (Roach et al., 2018; Bhagat & Huang, 2018). Prior knowledge is one of the most powerful predictors of student learning because new information is processed through the lens of what one already knows, believes, and can do (Ambrose & Lovett, 2014). Hence, the current researchers added one dimension (application of prior knowledge) drawing on the instrument developed by Alt (2014). The researchers adapted the characteristics to develop the instrument to collect data on the practice of authentic learning.

Methods

Design

The design of the present research was mixed-methods, mainly exploratory-sequential. The researchers employed this design because they were interested in exploring the possible factors that may affect the practice of authentic learning by first conducting interviews and then measuring these possible factors. This type of mixed-methods research begins with collecting and analyzing qualitative data and then describing the data quantitatively. The exploratory sequential mixed methods design involves first gathering qualitative data to explore a phenomenon, followed by collecting quantitative data to explain relationships found in the qualitative data (Creswell, 2012). The primary objective of this study was to examine the practice of authentic learning and then identify the challenges that may hinder its practice. The researchers first collected and analyzed qualitative data about the practice of authentic teaching

and the challenges that might inhibit the practice of authentic instruction. Then, they employed quantitative data collection and analysis methods to examine the practice and its challenges and explain their relationship.

Sampling

The participants of the study were upper primary school mathematics teachers in Bahir Dar city administrative zone. The upper primary schools in Ethiopia are the bridge to secondary education; that means, these grade levels are transitions from primary schools to secondary schools. For psychological reasons, the middle school years are the time when many students develop negative and incapacitating emotional responses to mathematics (Grootenboer & Marshman, 2016). The total number of teachers teaching mathematics was 68. Cluster sampling technique was used to take sample from the 68-teacher population. Seventeen schools out of 31 were chosen using simple random sampling. Then, at least one teacher from each grade level was chosen. In some large schools, where more than one teacher was available for each grade level, a teacher who had a large number of sections was selected; if the number of sections was equal, the participant was selected using simple random sampling. Hence, a total of 46 teachers were selected for the study. At least two participants from randomly selected eight schools were randomly selected for interviews and observations to collect qualitative data. Hence, a total of 16 mathematics teachers were observed at least twice while conducting lessons. Their instructional approach was evaluated against the guidelines of authentic learning.

Data Gathering

Interview

The researchers interviewed 16 grade 7 and 8 mathematics teachers to get pertinent information on the implementation and/or challenges of the instructional approach/ authentic learning. The researchers selected eight schools using simple random sampling, and on average, two mathematics teachers were interviewed. An unstructured interview guide was used to conduct the interview. The interviews were conducted flexibly by a data collector, probing possible factors. The interviews were arranged and conducted in the schools' compounds. With the consent of the participants, tape recordings were made. The interviews with each participant lasted 45 minutes on average.

Observation

In order to collect relevant data on the application of authentic learning, observation of the practice was conducted using an observation guide. Authentic instruction guidelines were used to conduct the observation. The levels of the scales were five: *(5) extremely observed; (4) adequately observed; (3) moderately observed; (2) slightly observed; (1) not at all observed.* The observations were conducted while mathematics teachers were teaching mathematics in grades seven and eight. The researchers conducted observations in eight schools. At least two

mathematics teachers were selected for observation from each school. Hence, sixteen mathematics teachers were selected, and they were observed at least twice. Finally, a total of 36 instructional lessons were observed. The observations were conducted by two data collectors who were given a half-day short training for the job. Based on the observation checklist, the data collectors qualified the ratings in words to help easily understand the meaning.

Questionnaires

The researchers used the guidelines of Herrington and Oliver (2000) model of authentic learning in preparing the questionnaire to evaluate the practice of authentic instruction then added items from "Application of prior knowledge." This questionnaire was original on its own. After preparing the items and adapting them, the researchers gave the questionnaire to experts for their judgment on content validity, and some revisions were made based on their evaluation. Accordingly, one item was moved from one dimension to another. In addition, two characteristics of coaching and scaffolding were merged.

The relevance of the items was judged using the scales "very relevant" (4), "relevant that needs minor revision" (3), "item needs some revision" (2), and "not relevant" (1). The clarity of the items was judged using the scales "very clear" (4), "clear but needs minor revision" (3), "item needs some revision" (2), and "not clear" (1). Based on the Lawshe (1975) method of judging the relevance of the items, the item level and scale level content validity were found acceptable. Regarding the clarity of the main instrument, except for one item (item 2.2), which yielded an I-CVI of 0.8; all the items have indices of 0.9 and above. The item, which had an index of less than 0.9, was subjected to revision for clarity. After revision, the item was accepted and included in the instrument. The scale-level index for clarity was 0.98. The questionnaire had a total of 46 items. The items were closed-ended, and respondents replied to them by using a Likert scale ranging from "always" (5) to "never" (1). The authentic instructional approach questionnaire was pilot tested, and it had a 0.766 alpha coefficient. The sub-scales yielded moderate to high reliability indices.

Another questionnaire was used to investigate the factors that may affect the practice of authentic learning in mathematics. The items were prepared after the researchers identified the possible factors using a qualitative data collection procedure that was interview. After the researchers identified the possible factors using the qualitative method, they prepared a questionnaire which was subjected to experts' judgement. The items were on a five-level Likert scale, ranging from "most serious problem" (5) to "not at all a problem" (1).

Data Analysis

To examine the practice of authentic learning, the researchers used qualitative and quantitative data analyses procedures. Qualitative data that were collected using interviews and observation were analyzed using content analysis. The quantitative observation data were analyzed using descriptive statistics (mean) and a one sample t-test. The questionnaire data were analyzed using a one-sample t-test. To investigate the factors that may hinder the practice

of authentic learning, the researchers employed qualitative and quantitative data analyses. First, the researchers collected data using interviews and analyzed the data using content analysis. This helped the researchers identify the possible factors that may affect the practice of authentic instruction and prepare a questionnaire to measure these possible factors. Then, the researchers collected data using this questionnaire and analyzed the data using a t-test. To identify the significant predictors of the practice of authentic learning, the researcher employed hierarchical multiple regression analyses.

Before conducting quantitative data analyses both observation and questionnaire data were entered into SPSS-version 23 for windows. The researchers then conducted exploratory data analysis (EDA) to check whether the data were free from errors, The researchers verified that the data were error-free by proofreading both the original and the SPSS-entered data. The researchers also checked the minimum and maximum values, means, and standard deviations.

Checking Assumptions

The questionnaire data were checked for assumptions. In a missing value analysis for authentic instruction, it was found that there were four missing values in the variables, and they were not above 5%. Hence, the values were replaced by series means. The Little's MCAR test did not turn significant (χ^2 = 305.082, DF = 315, Sig. = 0.645) suggesting missing completely at random. There was no any case that could be taken as a univariate outlier in all the items of authentic learning variables (items). was saved to detect multivariate outliers. Examination of Mahalanobis distances showed no multivariate outlier either in authentic learning variables or in the possible challenges. Skewness and kurtosis values did not suggest deviation from normality in the total score or in the sub-scales of the instrument. The researchers also checked the bivariate correlations and they confirmed that there was no problem with multicollinearity. Scatterplots were sketched with the criterion variable (TAL-Grand Total) and each of the predictor variables. Because the scatter plots were nearly oval, elliptical, or rectangular in shape, there was no problem of linearity.

For the possible challenges, two missing values in the variables were identified; the percent of missing values for each variable was not greater than 5%. The Little's MCAR test: Chi-Square= 47.617, DF = 50, Sig. = 0.570, was not significant, indicating that MCAR may be inferred. The researchers substituted the missing values using the series means. No case that was identified that could be taken as a univariate outlier in all the items of the factors. Analysis of Mahalanobis distances showed no multivariate outlier in the challenges that may affect authentic instruction. Skewness and kurtosis statistics showed little deviation from normality. Multicollinearity was not a problem because the bivariate correlations between the predictors were not high. Because the scatter plots were nearly oval, elliptical, or rectangular in shape, there was no problem of linearity.

Ethical Considerations

The present researchers tried to consider two major ethical issues: the protection of research participants and the avoidance of research misconduct. The researchers respected the autonomy of individuals by respecting personal dignity and valuing the honor and will of participants and their perspectives and ideas. This was achieved by obtaining informed consent from the participants. For example, consent to be a participant with the right to withdraw at any time from participation and consent to use a tape-recorder in interviews, etc. were obtained. Protecting participants from psychological harm and maintaining their privacy, confidentiality, and anonymity were observed as well. In addition, the researchers adhered to the research principles and avoided research misconduct.

Results

Qualitative Result on the Practice of Authentic Instruction

Interview results showed that majority of teachers do not employ authentic instruction. They rather dominantly use lecture (conventional) method of instruction. They reflected that they were not employing authentic learning as a method of instruction because of lack of understanding and skill. Even, some teachers reflected that they do not know authentic learning let alone practicing it. The textbooks are not largely suitable for applying authentic learning. Teachers always focus on the textbook tasks rather than relating the mathematical content to real-life situations. It was also found out that, the instructional activities were dominated by teachers though the participation of the students varies from lesson to lesson, The participant teachers stated that, they often revise the previous lesson, introduce the day's lesson, give explanations, and summarize it; they sometimes ask questions, or give class-work.

Analysis of observational data seem to confirm the results of interviews. Descriptions of syntheses of observational ratings on each of the assessed dimensions of authentic learning are presented on Table 1.

Table 1

Observation Data on the Authenticity of Mathematics Instruction

Dimension	Analysis Result
Providing authentic contexts	There was limited opportunity to provide real-world context that reflect the situation; the instructional process did not situate (connect) mathematics learning and knowledge with the real-life settings.
Providing authentic activities	Activities or tasks were not related to real-life; limited attempts were made to provide tasks that were related to real-life; the relevance of activities to the real world was minimal. Teachers did not engage students in sustained investigation of single, ill- defined, and difficult problems.

Dimension	Analysis Result
Access to expert performances and modeling	The instructional process did not provide access to expert performances or the modeling of processes. It did not enable learners to model processes or engage in expert thinking.
Providing multiple roles and perspectives	The instructional procedure did not provide multiple roles and perspectives. Similar, simple, and routine tasks were given, usually from the text, which did not enable students to see different perspectives and multiple roles.
Collaborative construction of knowledge	There was little endeavor made to support the collaborative construction of knowledge. Activities were not given in pairs or groups; individual activities dominate.
Promoting reflection	There was very little opportunity given for students to reflect. Students did not know the objectives of the lesson, and they did not contemplate checking the attainment of the objectives.
Promoting articulation	Students were not given the opportunity to organize ideas and express their ideas in front of other students and the teachers.
Providing coaching and scaffolding	There was little attempt to provide coaching and scaffolding; students had no collaborative groups to help each other. Teachers did not support students as per their need.
Application of prior knowledge	The application of prior knowledge was very limited. Teachers rarely help students construct knowledge and understand from prior knowledge in mathematics and other subjects.
Providing authentic assessment	There was no reliability of context for learning and no opportunity was available for students to be effective performers with acquired knowledge and to craft polished performances or products. There are no complex and well-structured challenges given by teachers. The assessments are not seamlessly integrated with the activity. Teachers do not set multiple indicators of learning that are valid and reliable with appropriate criteria for scoring varied products.

Quantitative Result

In order to get pertinent information on the practice of authentic learning, observation was conducted. Since two observers conducted the observation, it was commendable to conduct item- rater reliability using intra-class correlation (ICC). ICC performs a reliability analysis for two or usually more raters who have rated the same somewhat subjective behavior. The examination of the means in the Items Statistics table indicated that rater 1 rated authentic learning ($N = 36$, $M = 1.2953$, $SD = .15705$), which was lower than rater 2, which was ($N = 36$, $M = 1.3273$, $SD = .13452$). Hence, the researchers decided to use the average of the two ratings to get the final data to use in the study, given the two ratings had high reliability. In the ICC table (Table 2), the "average measures" indicated the reliability of the average scores between the two raters. The ICC was found to be 0.92, which was significant and very high. Therefore, the researcher conducted the analysis to examine the status of the application of authentic learning by averaging the two ratings. Results of the reliability analysis are presented in Table 2.

Table 2

Cronbach Alpha and Intra-class Correlation Coefficient (ICC)

	ICC	95% Confidence Interval		F test with			
		Lower Bound	Upper Bound	True Value	df1	df2	Sig.
Single Measures	.920[a]	.849	.958	24.035	35	35	.000
Average Measures	958[c]	918	.979	24.035	35	35	.000

To examine the practice of authentic learning two one-sample t-test (one for observational data and another one for questionnaire data) of comparison of observed mean and expected mean was used. Results (Table 3) of observational data (t= -70.72, df = 35, p =.000) and questionnaire data (t= -31.42, df = 45, p =.000). showed that the status of the implementation of authentic learning was poor in general terms.

Table 3

One-sample t-test Practicing Authentic Instruction

Data source	N	M (SD)	Expected Mean	Df	t	p
Observation	36	60.32 (10.38)	138	35	-70.72	.000
Questionnaire	46	89.92 (10.38)	138	45	-31.42	.000

Authentic learning dimension wise analysis of both observational and questionnaire data paint similar pictures. The t-tests conducted based on both observational and questionnaire data depicted that the observed mean of all ten dimensions was significantly lower than the expected mean suggesting the status of the implementation of each of the dimensions of authentic learning was low or nearly absent. While Table 4 presents dimension wise results of observational data Table 5 shows that of questionnaire data

Table 4

One-sample t-test Practice of Authentic Learning for each Sub-scale based on Observational Data

Variables	N	M (SD)	Expected Mean	df	t	p
Authentic context	36	4.19 (497)	12	35	-100.25	.000
Authentic activity	36	9.22 (1.61)	21	35	-43.77	.000
Access to Expert Performance & Modeling	36	4.64 (.65)	12	35	-67.91	.000
Multiple Perspectives & Roles	36	4.60(.83)	9	35	-31.96	.000
Collaborative Construction of Knowledge	36	4.47 (.72)	12	35	-63.03	.000
Providing Reflective opportunity	36	5.93 (1.13)	15	35	-47.95	.000
Providing opportunity for Articulation	36	3.69 (.99)	9	35	-31.10	.000

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Variables	N	M (SD)	Expected Mean	df	t	p
Coaching & Scaffolding	36	4.38 (.82)	9	35	-33.73	.000
Application of Prior Knowledge	36	10.00 (.78)	18	35	-61.24	.000
Authentic assessment	36	9.19 (1.23)	21	35	-57.76	.000

Table 5

One-sample t-test on the Practice of Authentic Learning for each Sub-scale based on Questionnaire Data

Variables	N	M (SD)	Expected Mean	df	t	p
Authentic context	46	7.45 (1.97)	12	45	-15.68	.000
Authentic activity	46	13.26 (3.66)	21	45	-14.35	.000
Access to Expert Performance & Modeling	46	7.50 (2.03)	12	45	-15.03	.000
Multiple Perspectives & Roles	46	5.96(1.19)	9	45	-17.32	.000
Collaborative Construction of Knowledge	46	7.65 (2.25)	12	45	-13.09	.000
Providing Reflective opportunity	46	10.00 (2.29)	15	45	-14.81	.000
Providing opportunity for Articulation	46	5.91 (1.44)	9	45	-14.51	.000
Coaching & Scaffolding	46	6.02 (1.77)	9	45	-11.41	.000
Application of Prior Knowledge	46	12.70 (2.72)	18	45	-13.25	.000
Authentic assessment	46	13.47 (3.42)	21	45	-14.92	.000

There was a difference between the observational quantitative data and the questionnaire data. The mean of the observation data was 60,32, and the mean of the questionnaire data was 89.92. The observation data were obtained by observations conducted twice for each teacher while teaching; whereas the questionnaire data were obtained from teachers' perceptions based on their long teaching experience. Hence because of limited observations the observational mean might have underestimated or the questionnaire mean might have overestimated the actual practice,

Identifying the Challenges

To identify the factors (challenges), the researchers first systematically collected data on the possible factors using individual interviews. The data obtained through the interview were analyzed using content analysis. Eighteen possible variables were listed by the participants. These variables were mentioned either by many respondents, some respondents,

or one respondent. Among these variables, researchers identified ten that were listed by at least half of the respondents.

Then the researchers prepared a questionnaire on the possible predictors of the practice of authentic teaching. Using the questionnaire data, the researchers ranked the predictors based on their mean. The first-ranking predictor was lack of understanding and skill in authentic learning; the second-ranking predictor was large class size. The third-ranking predictor was poor English language competence of students; the fourth-ranked predictor was students' lack of subject background knowledge; while the last- ranking predictor was poor motivation of students for their learning. Table 6 presents the factors along with their ranks.

Table 6

Mean and Mean Rank of the Ten Possible Predictors

Predictor	Valid Cases	Mean of each Predictor	Rank of Mean for Predictors
Teachers' lack of understanding and skills in authentic Learning	46	4.12	1
Large class size	46	4.1	2
Poor English language competence of students	46	4	3
Students' lack of subject background knowledge	46	3.99	4
Influence of the way teachers are taught and trained	46	3.95	5
Lack of different necessary resources and materials	46	3.91	6
Less suitability mathematics curriculum	46	3.8	7
Inflexible and short schedule or period	46	3.66	8.5
Lack of confidence of students in mathematics	46	3.66	8.5
Poor motivation of students for their learning	46	3.61	10

The ten variables mentioned in Table 6 might predict the practice of authentic instruction. However, the significant predictors are not yet known. To identify the best predictors of the practice of authentic instruction, the researchers employed hierarchical multiple linear regression analysis. Each independent variable is assessed at its own point of entry in terms of the additional explanatory power it contributes to the equation (Ho, 2006). In hierarchical regression (also called sequential regression), the independent variables are entered into the equation in the order specified by the researcher based on theoretical grounds (Pallant, 2010; Tabachnick & Fidell, 2013). Variables or sets of variables are entered in steps (or blocks), with each independent variable being assessed in terms of what it adds to the prediction of the dependent variable after the previous variables have been controlled for (Pallant, 2010). In the present study the dependent variable was the practice of authentic instruction, which was designated by TALGrandTotal.

Before running the regression analysis, the researchers first identified factors that were significantly correlated with the practice of authentic learning by using bivariate correlation to identify predictors to be included in the regression. Table 7 indicates the bivariate correlations of seven possible predictors that were significantly correlated with the dependent variable.

Table 7

Correlation Matrix of the Dependent Variable with the Predictors

Correlations		TAL Grand Total	Sig. (2-tailed)	N
LackUndSkT	Pearson r	-.50**	.000	46
InfTaughtTrainedT	Pearson r	-.20	.176	46
LackMaterT	Pearson r	-.26	.076	46
LessSuitCurrT	Pearson r	-.47**	.001	46
PoorMotT	Pearson r	-.39**	.008	46
InfScheduT	Pearson r	-.41**	.005	46
LackConfT	Pearson r	-.31*	.035	46
LargeClassSizeT	Pearson r	-.40**	.005	46
PoorEngCompT	Pearson r	-.29	.054	46
LowBackgroundKnT	Pearson r	-.38**	.010	46

Note.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

TALGrandTotal: The total score of all the 46 items of authentic learning

LackUndSkT: Teachers' lack of understanding and skills in authentic learning

InfTaughtTrainedT: Influence of the way teachers are taught and trained

LackMaterT: Lack of different necessary resources and materials

LessSuitCurrT: Less suitability of mathematics curriculum

PoorMotT: Poor motivation of students for their learning

InfScheduT: Inflexible and short schedule or period

LackConfT: Lack of confidence of students in mathematics

LargeClassSizeT: Large class size

PoorEngCompT: Poor English language competence of students

LowBackgroundKnT: Students' lack of subject background knowledge

Variables which were significantly correlated with the dependent variable were teachers' lack of understanding and skills in authentic learning, less suitability of curricula in mathematics to apply authentic learning, poor motivation of students for their learning, inflexible and short schedule or period, lack of confidence of students in mathematics, large class sizes, and students' lack of subject background knowledge. The need to examine the bivariate correlation was to screen the predictors that might have the power to predict the criterion variable (practicing authentic instruction). Variables that have no significant bivariate correlation cannot predict the dependent variable, and were therefore excluded from the equation.

For regression analysis, considering the sample size was an important requirement. The numbers of participants in the study were 46. Different authors use different numbers of cases

as a requirement in regression analysis. It is suggested that $n > 20 + 4m$ be the minimum sample size in regression analysis (Tabachnick & Fidell, 2013). In this suggestion, n stands for the number of cases required for a given number of predictors, and m stands for the number of predictors. Using this formula, the researchers took five predictors based on the strength of their correlations with the criterion variable (practicing authentic instruction). Even though their correlations were significant, two possible predictors, namely the lack of confidence of students in mathematics and their lack of subject background knowledge, were not entered into the regression analysis. This was because they had the lowest magnitude of correlation with the dependent variable. Moreover, it was found to have high multicollinearity with the other predictor variables, poor motivation of students for their learning with its low eigen value (.005) and high condition indexes (36.13) was dropped from the hierarchical regression test. Hence, the remaining four predictors were entered in the regression analysis.

To run the hierarchical regression, the researchers logically ordered the independent variables. Accordingly. a four-stage hierarchical regression was conducted. At the first stage, teachers' lack of understanding and skill in authentic learning was entered in the regression. Understanding and skill are very essential factors in the design of authentic learning. Even if other variables are fulfilled, if there is no understanding and skill, it is difficult to practice authentic learning. At stage two, the variable less suitability of mathematics curriculum to apply authentic learning was entered. The curriculum either facilitates if it is prepared to enhance authentic learning or inhibits if it is not suitable to practice authentic learning. The curriculum usually dictates the instructional approaches teachers may employ while teaching students. At the third stage, an inflexible and short schedule or period was added and entered in the regression. If it is not flexible and longer in duration, teachers may not begin authentic learning because authentic learning needs reasonable time for student engagement and a flexible schedule. A large class size was entered at the fourth stage, and poor motivation among students for their learning was entered at the fifth stage.

As indicated in Table 8, the hierarchical multiple regression revealed that at Stage 1, teachers' lack of understanding and skills in authentic learning contributed significantly to the regression model: $F(1, 44) = 14.619$, $p < .001$, and the adjusted R^2 was .232, suggesting that 23.2% of the variance in the design of authentic learning was contributed for by this variable. Introducing the second independent variable, less suitability mathematics curriculum to apply authentic learning, raised the coefficient of determination by an additional 12.8% which was a significant change $F(1, 43) = 8.879$, $p < 0.05$. Adding the third predictor, inflexible and short schedule or period, to the regression model explained an additional 9.3% of the variation in practicing authentic instruction, which was a significant raise in R^2 ($F(1,42) = 7.364$, $p < .05$). Inclusion of the last predictor (large class size) in the model, explained an additional 7.7% of the variation in practicing authentic instruction, and this change in R^2 was significant, $F(1, 41) = 7.001$; $p < .05$. In this model the adjusted R^2 was .504, meaning that 50.4% of the variance in the practice of authentic instruction can be explained by all the predictors (teachers' lack of understanding and skills in authentic learning, less suitability of mathematics curriculum,

inflexible and short schedules or periods, and a large class size) in the model. In this hierarchical regression analysis, the most important predictor of the practice of designing authentic learning was teachers' lack of understanding and skills in authentic instruction, which uniquely explained 24.9% of the variation in the practice of authentic instruction, followed by less suitability of mathematics curriculum to apply authentic learning, which uniquely explained 12.8%. It is essential to note that the beta coefficients of the predictors were negative, depicting inverse relations.

Table 8

Summary of Hierarchical Regression Analysis for Variables Predicting the Practice of Authentic Instruction

Variable	B	St. Error	β	t	Sig.	R	R^2	Adjusted R^2	ΔR^2	ΔF	df1	df2	Sig. F Δ
1 (Constant)	126.41	9.64		13.12	.000	.499[a]	.249	.232	.249	14.619	1	44	.000
LackUndSkT	-2.96	.77	-.50	-3.82	.000								
2 (Constant)	154.41	12.93		11.95	.000	.615[b]	.378	.349	.128	8.879	1	43	.005
LackUndSkT	-2.41	.74	-.41	-3.28	.002								
LessSuitCurrT	-2.28	.77	-.37	-2.98	.005								
(Constant)	167.67	13.02		12.88	.000	.686[c]	.471	.433	.093	7.364	1	42	.010
3 LackUndSkT	-2.52	.69	-.43	-3.66	.001								
LessSuitCurrT	-1.70	.75	-.27	-2.27	.029								
InfScheduT	-2.86	1.05	-.32	-2.71	.010								
4 (Constant)	185.39	13.90		13.34	.000	.740[d]	.548	.504	.077	7.001	1	41	.011
LackUndSkT	-2.20	.65	-.37	-3.36	.002								
LessSuitCurrT	-1.79	.70	-.29	-2.55	.015								
InfScheduT	-2.45	.10	-.27	-2.46	.018								
LargeClassSizeT	-2.84	1.07	-.29	-2.65	.011								
5 (Constant)	185.70	13.99		13.28	.000	.744[e]	.553	.498	.006	.495	1	40	.486
LackUndSkT	-2.09	.67	-.35	-3.11	.003								
LessSuitCurrT	-1.75	.71	-.28	-2.47	.018								
InfScheduT	-2.19	1.072	-.24	-2.04	.048								
LargeClassSizeT	-2.75	1.086	-.28	-2.54	.015								
PoorMotT	-.67	.947	-.08	-.70	.486								

Note.

LackUndSkT: Teachers' lack of understanding and skills in authentic learning

LessSuitCurrT: Less suitability of mathematics curriculum

InfScheduT: Inflexible and short schedule or period

LargeClassSizeT: Large class size

Discussion

Qualitative results revealed that authentic instruction was nearly absent in the study area. Mathematics teachers employed instructional methods that were completely alienated from real-life milieus or contexts. The instructional process did not situate learning in real-life settings (milieus); activities, tasks, or problems that were given by teachers were not related to real-life; the instructional process did not provide access to expert performances and the modeling of processes and multiple roles and perspectives were non-existent. Mathematics teachers reported that there was little endeavor to support the collaborative construction of knowledge, to encourage reflection and articulation, and to provide coaching and scaffolding. Moreover, application of prior knowledge in the instructional process and authentic assessment were not observed. The output for the t-test of the practice of authentic learning observation and questionnaire showed that the mean of the average of the total sample for the whole scale was significantly lower than the expected mean at a p =.000. The dimensional level analysis of the one-sample t-test results of the observation and questionnaire data also showed that the practice in all ten dimensions was significantly lower than the expected mean, at p =.000. The score of none of the ten dimensions was significantly above the expected mean, implying very low or little practice of authentic learning.

Learning experiences in schools are often quite distinct from authentic activities or the ordinary practices of society (Herrington et al., 2003; Herrington et al., 2010). Roelofs and Terwel (1999) found that In the Netherlands, none of the schools scored highly on the characteristics of authentic pedagogy; in Germany, as indicated by Fremerey and Bogner (2015), authentic instructional approaches were not common. King et al. (2009) and Newmann et al. (2007) indicated that for most students in most schools in the USA, the usual work demanded of students is hardly ever meaningful, noteworthy, or worthwhile. The approach taken by many teachers was simply a result of the way they were taught; they were repeating a tradition of formal teaching that ignored more recent theory and research into the way people learn (Herrington & Herrington, 2006). Learning contexts in Turkey were not real-life-related; they did not sufficiently recount students' experiences (Acat et al., 2010). Herrington and Herrington (2008) argued that knowing and thinking, in the conventional view, are assumed to go on in individual minds secluded from the intricacies of the outside world. In traditional pedagogy, students' abilities to think and reason and deep learning are not being developed (Cognition and Technology Group at Vanderbilt, 1993).

To investigate the possible predictors of the practice of authentic instruction, an interview was used. The interview helped identify eighteen possible factors. However, the factors that were common to more than half of the interviewees were ten. These ten possible predictors were ordered based on the mean rank of the factors as follows: The first-ranking predictor was lack of understanding and skill in authentic instruction, the second- large class size the third poor English language competence of students, the fourth students' lack of mathematics background knowledge, the fifth influence of the way teachers are taught and

trained, the sixth lack of different necessary resources and materials, the seventh less suitability of mathematics to apply authentic learning followed by two predictors, an inflexible and short schedule or period and a lack of confidence in students in mathematics. The last ranking predictor was poor motivation of students for their learning.

Seven factors were significantly correlated with the dependent variable, and then, considering the sample size, four possible predictors were considered to be included in the regression analysis based on the magnitude of the bivariate correlation, examination of multicollinearity. A four-stage hierarchical regression was conducted by logically ordering the independent variables. At Stage 1, teachers' lack of understanding and skills in authentic learning contributed significantly to the regression model, contributing 23.2%. The addition of the second predictor (less suitability of mathematics curriculum) in stage 2 raised the adjusted R^2 to 0.349, meaning 34.9% of the variance was contributed by the two variables in the model. As pointed out by Mulugeta (2023), in designing curriculum, emphasis needs to be given to the knowledge, skills, and dispositions relevant to the world of the profession or job. Mulugeta (2023) further indicated that education policymakers and curriculum developers in Ethiopia need to critically deliberate and consider the relevance of the curricula. Adding the third predictor variable (inflexible and short schedule or period), to the regression model, the adjusted R^2 was 0.433, suggesting that 43.3% of the variance in practicing authentic learning is jointly explained by those three variables in the model. When the fourth predictor variable (large class size in terms), was added to the model, the change in R^2 was significant. The adjusted R^2 was 0.504, meaning that 50.4% of the variance was accounted for by all the predictors in the model. Corroborating the results of the present study large class size is found to be one of the hitches in the educational sector that developing countries have been facing with (Grace et al., 2016). In Ethiopian context too class size is one of the most repeatedly stated challenges in using effective teaching methods (Dawit, 2023).

. The most important predictor of the practice of authentic instruction in the present study was teachers' lack of understanding and skills in authentic learning, which uniquely explained 23.2% of the variation, followed by a less suitability mathematics curriculum in, which uniquely explained 12.8% of the authentic learning practice.

Conclusion and Implications

The findings obtained from both qualitative and quantitative data revealed that authentic instruction was not applied in the upper primary schools in mathematics subjects in the study area. There was no implementation of authentic instruction. The researchers also attempted to identify the factors that might affect the implementation of authentic instruction using interviews and hierarchical multiple regression. Based on the interview, ten factors were identified. The output of the hierarchical regression analysis showed that four factors significantly predicted the application of authentic instruction. These four factors were: lack of understanding and skill in authentic learning; a less suitable curriculum of mathematics to apply

authentic learning; an inflexible and short schedule and period; and a large class size. So, what do these findings imply? In order to fully implement an authentic education framework, sound intervention attention of many stakeholders, including the government and major educational organizations, is required.

Hence, to enhance the practice of authentic instruction and mitigate the possible challenges, concerned bodies like the Ministry of Education, Education Bureau, Zonal Education Directorates, and teacher training institutions must exert greater effort in developing curriculum suited to authentic instruction. In addition, as the major stakeholders, mathematics teachers need to familiarize themselves with contemporary learning approaches, especially authentic instruction. Pre-service and in-service teacher training programs must include authentic instructional approaches. The schedules and period allotments must be convenient to implement authentic instruction. The number of students in one class should be minimized. More comprehensive researches that aim to examine the practice of authentic instruction and toidentify the possible challenges that hinder its implementation shall be conducted in a wider context.

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A review of "Action research for improving educational practice: A step-by-step guide, 2nd edition"

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Abstract

Valsa Koshy's book "Action research for improving educational practice: A step-by-step guide, 2nd edition" is a concise guide for teachers and school leaders (hereafter practitioners) seeking to understand the potential of action research as a research methodology for addressing social problems. It also serves as a guide to conducting action research for those interested in solving various practical problems related to their professional practices. While some of the contents may seem similar to previous works in the field, the clarity with which the author wrote the book and the practical examples included throughout the eight chapters makes it profoundly readable. This review attempts to familiarize readers with the main themes, strengths, some salient features, and contributions of the book.

Introduction

Nowadays, there is more trust in action research than ever with respect to the role it plays in improving teachers' professional development and thereby classroom practice (McKernan, 2013; Hine & Lavery, 2014). Its relevance lies in its focus on addressing real-world problems and challenges faced by practitioners. Unlike traditional research methods that often prioritize theoretical knowledge, action research emphasizes practical application and the active involvement of practitioners in the research process.

Valsa Koshy's book, "Action research for improving educational practice: A step-by-step guide, 2nd edition" is one of the valuable resources for educators and researchers interested in implementing action research in educational settings. This comprehensive guide provides a step-by-step approach to conducting action research, offering practical advice, examples, and tools to support the process. One of the aims of the author in writing this book is to help teachers and school leaders enhance their own professional practice. To achieve this aim, Koshy (2010) has explained the concepts and techniques of action research in eight interrelated chapters. In each chapter, the author discussed four to fifteen sub-chapters and provided a vivid chapter summary as closing remarks. In the chapters and sub-chapters, the author has gone

long enough to unpack action research procedures and techniques supported by living examples drawn from her extensive experience and the works of her advisees.

In this review, attempts are made to explore the key themes, strengths, and contributions of Koshy's book, highlighting its relevance and significance in the field of educational research. For this purpose, the review is organized under three parts. In the first part, an overview of the book is presented. Then, attempts are made to show the strengths, contributions, and some salient features of the book. Finally, a concluding remark focusing on the book's contribution for practitioners, especially for those working in education systems where the action research tradition has not yet satisfactorily developed, is highlighted.

Overview of the Book

Koshy's book is organized under eight chapters, each focusing on different aspects of action research. The book begins its discussion with the story of Laura (a pseudonym given by the author), one of the teachers who were interested in enhancing the learning opportunities of gifted children. The story informs readers, from the very beginning the entire steps of doing action research. The introduction also states the rationale behind doing action research as 'facilitating evaluation and reflection to implement changes in educational practice' (p. xii).

Then, in the first chapter of the book the author provides the meanings of action research. Here, the author showed that action research for different scholars (Lewin, 1946; Stenhouse, 1975; Car & Kemmis, 1986; McNiff, 1992) has different meanings. After this, Koshy (2010) made a deep analysis of these definitions and pinpointed commonalities of the definitions as 'better understanding, improvement, reform, problem-solving, step-by-step process, and modification' (p. 9). She also synthesized a new definition of her own as follows:

> [Action research refers to] constructive inquiry during which the researcher constructs his/her own knowledge of specific issues through planning, acting, evaluating, refining, and learning from the experience. It is a continuous learning process in which the researcher learns and also shares the newly generated knowledge with those who benefit from it (p. 9).

The author further dwells on explaining models of action research known in the action research literature (e.g., Lewin, Elliot, O'Leary, and Macintyre's action research models). In this section, Koshy (2010) advised readers not to take one model as a panacea because of the fact that 'excessive reliance on a particular model too rigidly may adversely affect the unique opportunity offered by the emerging nature and flexibility' (p.7). Instead, she advised action researchers to use their own model as far as it fits their purpose: improving own professional practice and learning from it.

Unpacking practical steps of action research is the next focus (chapter two), where the author raised a critical question 'why would practitioners do action research?' The answer she provided seems a sine qua non for current educational practice: she posited that teaching is concerned with developing the mind of the generation not with developing a set of technical competencies. This responsibility, according to her, can only be accomplished if teachers as practitioners take time to internalize ideas through reflection. In addition to its cyclic nature,

addressing practical problems, generating context-bound knowledge, enacting change, and engaging participants are epitomized as unique features of action research. She also described the steps to follow while selecting an action research title, and closed the chapter by presenting a list of alternative action research topics for readers.

Chapter three is devoted to reviewing literature in action research where the author has emphasized on three critical aspects: finding, organizing, and writing the literature. Reviewing the literature, according to the author, is mandatory to conducting action research because the 'production of new knowledge is fundamentally dependent on past knowledge' (p. 47). This is to mean that an action researcher needs to undertake a literature search and analysis to complement his/her reconnaissance. In fact, this is not compatible with previous understandings since there is a tendency to view literature reviewing as optional in action research. Koshy (2010) has identified the sources to consult while making a literature search as policy-related literature, theoretical literature, existing research, and research methods. She also reminds readers to visit important research databases for making a review of the literature.

Chapters four through six deal with planning action research, gathering data, and data analysis respectively. Accordingly, in the planning section, Koshy (2010) reminds readers that a good action research project does not happen by accident. Instead, it is carefully planned, employs flexible approach, and needs continuous reflection on the part of the action researcher. She also noted that before starting the project, practitioners should write the title, background (including professional context), personal motivation, aims, and specific outcomes. In this section and the sections that follow, the role of a critical friend (a friend who can see other dimensions of an issue which ordinary people may overlook) is magnified.

Regarding data gathering, the author made it clear that the sample size from where the data is collected is based on the principle of data saturation and personal theorizing. She also stated that in action research, using several methods for collecting data does not make the study any better, but the quality of the data matters. This means data which has no depth is not important for planning actions. Moreover, the author provides a brief account of the paradigms, research approaches, and methods of action research. In fact, she argued in favor of the naturalistic paradigm, qualitative research approach, and qualitative data-collecting methods for undertaking action research. Nevertheless, other authors such as McNiff and Whitehead (2006) and Altrichter et al. (2000) classify action research under the category of critical theory. Criteria to decide on the type and amount of data and instruments to use are clearly presented in this section. Koshy (2010) has also advised action researchers to employ a variety of data collection methods for triangulation purposes. The guideline to prepare and use tools and the merits and demerits of each tool are also well described.

Data analysis is the issue treated in chapter six, where the author showed the mechanism to sift through data and ways of analyzing and representing it. Koshy (2010) named this stage a critical stage where the action researcher is expected to create a coherent story from all the data collected. At this stage, she advised practitioners to revisit the aims and expectations of the project, and the research questions or hypothesis before starting the actual data analysis. The author closed this chapter by presenting the ways of synthesizing findings from qualitative data (data reduction, data display, and conclusion drawing and verification) and quantitative data (quantitative description). Finally, Koshy (2010) has reminded action

researchers to find out the emerging themes and patterns based on the data analysis they carried out.

In the last two chapters, the author deals with the writing and publishing of action research reports respectively. Accordingly, in chapter seven, she looked into the process of writing action research reports. While writing the reports, the author advised, 'the intention is not to make generalizable claims but to tell a story which is of interest to other practitioners who may want to learn from it, or replicate the study or apply the findings to their situations' (p.123). However, regarding the format of reporting action research results, she moved on silently without disclosing its flexible nature unlike what she did in the previous steps. Nevertheless, other authors (e.g., Hopkins, 2002; McKernan, 2013) provided alternative formats for reporting action research projects which can be used based on the choice of institutions. In the last chapter, which is unique to this second edition provides readers with directives on how to publish action research reports. Here, Koshy (2010) strongly insisted that action research reports like research reports from other designs should be published in academic journals and other dissemination platforms. In that regard, she has provided readers with a template that action researchers may use to organize their reports for publication.

Strengths and Contributions

One of the strengths of this book is its focus on how action research can be applied in real world educational settings. In this regard, Koshy (2010) presents several case studies from contexts demonstrating successful implementation of action research to address specific challenges and enhance teaching and learning outcomes. These case studies offer examples that readers can relate to and draw inspiration from when conducting their research.

Additionally, the author includes a variety of tools and templates throughout the book to assist readers in organizing their research activities. These resources encompass sample consent forms, interview protocols, observation checklists and frameworks for data analysis. By providing these tools, Koshy (2010) ensures that readers have access to resources that can support their action research projects.

Furthermore, the book emphasizes the significance of disseminating research findings to an audience. The author provides guidance on writing research reports, presenting findings at conferences, and publishing in journals. This emphasis on dissemination highlights the authors dedication to ensuring that action research contributes meaningfully to the community.

Another advantage of Koshy's book is that it is easily understandable for readers. The author explains ideas in a way that's straightforward and easy to follow making it appropriate for both beginner and experienced researchers. The step-by-step approach and the practical examples also help readers to comprehend the essential concepts of action research and successfully apply them in their own educational environments.

A further benefit of the book is its thorough examination of numerous facets of action research. In this regard, the author discusses not only the technical elements of the research but also the ethical concerns and problems that researchers might encounter. Overall, the author provides practitioners and interested readers with a concise and straightforward procedure to conduct action research, especially on issues related to education, and that makes the title self-

explanatory. Exemplary action research projects incorporated in the different parts of the book are helpful to readers to easily acquire the practical steps of doing action research.

With regard to research tradition, the author reminds the scientific community not to overlook this research paradigm since it is critical to improve self-practice and produce context-relevant knowledge, which the author called self-theorizing. In practice, however, the author seems influenced by the academic research tradition, where scientific rigor is a necessity. For instance, her positions reflected with regard to literature reviewing and publication seem unique from other scholars in the field of action research, which likely shift the focus of action research from improving practice to generating knowledge (second priority of action research). However, action research is not something that is too rigid and technical; it is flexible and aims at better understanding, improvement, reform, problem-solving, modification, and learning something new from self-practice that guides future practice. The focus of action research is neither mere researching nor action, but both action and research; i.e., the meaningful marriage between research and action, and out of this fusion, self-knowledge that guides one's practice would be derived.

Concluding Remarks

As already indicated, Valsa Koshy's book "Action research for improving educational practice: A step-by-step guide, 2nd edition" is a valuable guide that helps educational practitioners to successfully implement action research projects. In the book, the author provides concise and straightforward ideas and procedures useful to conduct action research.

In the same corollary, the book has practical importance for education systems where the tradition of action research has not yet developed. A good example in this regard is Ethiopia. As reported by some researchers (e.g., Firdissa, 2017; Mulugeta, 2017; Mulugeta, Dawit, & Andargachew, 2022), the practice of action research has not reached to the expected level due to the presence of many impeding factors. The reviewer strongly believes that Koshy's succinct, practical, and practitioner-friendly book will make a tremendous contribution to mitigating these impediments and strengthening the practice of action research in the country's education system.

The book under discussion, I argue, is of paramount significance, particularly for practitioners of the country's general education and TVET sub-sectors, as doing action research has become a mandatory requirement vis-à-vis their professional development and career growth. Hence, I invite them to read the whole book and consider its many benefits.

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