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ABSTRACT
In this age of rapid technological development and educational reform, there is an indisputable need for a combination of mediation tools (cloud computing tools) that significantly teach language skills. Thus, this study aimed to investigate the perceptions of tertiary-level EFL teachers and students regarding the tool mediation experience in reading skills in cloud computing teaching and learning environment. Simple random sampling was employed to select 156 first-year students and 32 teachers who participated in this study at Bahir Dar University (BDU). In this study, two sets of questionnaires, comprising 47 items for each of the three parts, were distributed to collect quantitative data from students and teachers of BDU. The quantitative data from questionnaires were analysed using descriptive statistics, one-sample, and two-sample t-tests, and Pearson product-moment correlation. The results showed that teachers positively perceived the importance of mediation tools or parameters for reading tasks. Nevertheless, teachers' practice of mediated learning experience tools does not utterly reflect their perceptions of the application of mediation tools. The current finding also revealed that considering technology as a mediation tool in reading sessions at the university level, teachers had below-average responses in implementing mediation tools even though they had a positive perception of it. Finally, educational institutions, researchers, and academic staff in BDU should take the initiatives to equip university language teachers with mediation tools in cloud computing English classrooms and to design a national technology-based learning policy and strategy.

Keywords: mediation, tool, cloud, computing, perceptions, mediated learning experience

INTRODUCTION

In the era of digital humanities, the key to international competition is the role of language teaching in high-quality human capital because of scientific and technological progress. The current advent and fast-growing improvement of technology have considerably contributed to the change in teaching reading or instructional practices (Lin, Chen, Su & Lai, 2017) in a second language. In this flourishing of educational technology and the proliferation of software applications and resources (Rashid & Asghar, 2016; Teng & Wang, 2021), instructors and students are necessitated to improve their computer literacy and utilize technology for instruction and learning to read (Ismail, Hamed & Abdu, 2012), and they need to realize how these tools improve the learning process. Despite recent advances in technology-mediated learning research, it continues to trail behind improvements in practice (Alavi & Leidner, 2001; Akram, Abdelrady, Al-Adwan, Ramzan, 2022). During the Covid-19 epidemic, however, there were glorious chances to apply technologies to extend open instructional resources and practices (Bozkurt & Sharma, 2020; Chukwuemeka et al., 2021; Mengistie, 2020).

For instance, the outbreak in Ethiopia and throughout the world has resulted in a learning and teaching change marked by a wave of emergency digitalization (Lucas & Vicente, 2022). Before the pandemic, researchers advised and underlined the need to change teaching approaches to include digital learning concepts (Huang et al., 2019). Nevertheless, some hesitated to adapt their teaching techniques to the situation (Kerres, 2020). As a

result, during the pandemic, most educators primarily replicated their teaching approaches in higher education using digital technological tools (Kerres & Bucher, 2022; Divjak, Rienties, Iniesto, Vondra & Zizak, 2022).
Although there are discrepancies in the pandemic experiences of rural and urban Ethiopians, as well as those fro m various socioeconomic backgrounds (Harris et al., 2021), the pandemic must be used as a turning point for Et hiopian universities in to bring about long-term change (Mengistie, 2021). Furthermore, a very valuable experience for educational practice (Herwin, Shabir, & Asriadi, 2022) that paved the way for the utilization of various digital applications and learning resources are available via the tools for teaching and learning (Hidayat, Lee, Mason & Khaerudin, 2022). During this time, BDU teachers and students also used various technological tools or platforms, including BDU learning management (https://lms.bdu.edu.et/login/index.php).
In fact, to practice English and engage in authentic language use environments, using technology gives students with unprecedented chances (Kramsch & Thorne, 2002). Literacy, especially teaching reading, for tertiary-level students is a fundamental skill that has immense importance (Jarvis & Pastuszka, 2008) for their academic success. Because learning is obtained through reading as one way, individuals must find ways how to develop and improve their reading comprehension skills. Particularly, reading for tertiary-level courses is demanding since university students need to read vast information to achieve their academic goals (Wright, Fugett & Caputa, 2013; Udeozor, Abegão, Glassey, 2023). It is also the skill that underpins academic achievement in all disciplines (Nel, Dreyer & Kopper, 2004).
In the meantime, many academic institutions in different countries have also been concerned about students' reading skills, and teachers encounter many pupils who either cannot understand what they read or, in some circumstances, who cannot even read the texts (Hendricks, Newman & Stropnik, 1995). According to Tsegaw (2022), many learners have difficulty mastering reading skills; these difficulties might prevent future accomplishment in students' lifetime academic performance. Tsegaw continued to say that, particularly in Ethiopian educational institutions, the challenge of mastering reading skills has become a means of obstruction from the primary to tertiary level, as educational quality has remained a concern. MoE(2023)confirms that, in the exam given in 2022, 896,520 students took the exam in both fields of study (social and natural), of which only 29,909(6.67%) students scored above 50% and joined the university. MoE also claims that the implications of this year's examination are the manifestation of many problems and the hidden status of our education system, which is the responsibility of all education stakeholders.
To address these issues, information communication technologies (ICTs) have been adopted by many educational institutions around the globe (Buabeng-Andoh, 2012; Ulfa, Susanto & Purwati, 2022). ICTs offer benefits to English language learners such as learner independence (Frith, 2005), motivation enhancement (Schoepp & Erogul, 2001; Fauzi, 2017), and skill acquisition (Galavis, 1998; Chen, Hung, Chang & Lai, 2018). Within the Ethiopian context, on account of seeing that ICTs are of utmost importance, the Ethiopian Ministry of Education (MoE) has delivered ICT subjects, computer laboratories, e-learning resources, and offline digital libraries for different levels of educational institutions (https://elearn.moe.gov.et). The use of ICT by students and teachers, as well as their perceptions of using ICT to study English, has received little attention despite the fact that universities in Ethiopia have invested extensively in technology in classrooms. This is because learning is changing due to digital technology and its greater emphasis on reading instruction (Gahala & Hoium, 2001).
Integrating new technologies or ICTs when teaching reading can also help both the teacher and learners (Francisco, David, & Rodney, 2011) because technology becomes a mediation tool for reflection in learning, particularly those that have considered and applied technology as a mediation tool (Guerrero, 2007; Lin, 2021). Meanwhile, mediation is the basic construction of learning that can be an act by a peer, teacher, or parent (Feuerstein, 1990) or a mediative tool, such as a toy or a text (Vygotsky, 1978). In a learning environment, the presence of symbolic mediators, humans, or tools present in interaction with the social context facilitates the development of the human being's cognitive and metacognitive processes (Latva, 2015).
Likewise, mediation primarily refers to the efficient use of auxiliary tools or objects to execute an activity. The creation and application of artificial auxiliary means of acting on the mental, social, and physical levels is known as mediation (Lantolf, 2009). These auxiliary resources, such as technological tools, are simple to use in our tasks. Although Rouet (2009) notes the need to identify the tools conditions that encourage learning from web-based and other online reading materials, it is unclear what makes for an ideal reading environment, i.e., a reading software program and its features in which a digital reading task or text is presented and embedded to the students (Freund, Kopak, & Brien, 2016).
Therefore, in this study context, mediation tools or cloud computing tools refer to the delivery and the use of ICT tools (software, platforms, and infrastructure) in systematic language teaching and learning service through creating a worthy environment by facilitating classroom interaction and fostering the negotiation of meaning. Cloud computing tool is recognized as a new paradigm in computing resources with their dynamic scalability and usage of virtualized resources in cloud computing language classroom. As technology advances, many print-based applications become obsolete, and computer-based software quickly replaces print-based systems (Gahala & Hoium, 2001; Grenawalt, 2007). Because students require opportunities to acquire capabilities outside of print-based reading, studies have made valued contributions to our understanding of reading in

relation to digital technologies, which are related with engagement, cooperation, creativity, and networking (Lankshear & Knobel, 2011).

Correspondingly, Kim (2007) states that L2 teachers should give their students opportunities to utilize the computer to access internet information and sources, and enhance language learning (Nagy, 2021). Students can effectively use new language learning tools if they learn how to control new technologies. Cloud-based learning technologies are advanced in mediating educational practice (Utami et al., 2022). Therefore, reading teachers' role is to foster an environment where learners construct meaning through various reading materials on the web. Language instruction with digital technology, on the other hand, has yet to be revolutionized, and many teachers have been hesitant to embrace (Hidayat, Lee, Mason & Khaerudin, 2022) this expanded understanding of literacy (Lotherington & Jenson, 2011).

Given that mediation is an instrument for students' cognitive and affective changes (Abiy, 2005), exploring their experience or conception with mediational tools within web-based learning environments remains a key consideration in this study. To put this into practice, teachers may have extensive personal familiarity with digital tools, but they do not always use them in the classroom (Burnett, 2011; Chik, 2011). Since the conceptions of students and teachers play a significant role in adopting computer-mediated instruction (Seden, 2004; Coffin & MacIntyre, 1999; Tsai, 2004), there should be improvements to be made in tertiary education regarding the availability and use of technology-mediated instruction and teacher preparation (Parker, 1996). Virtual learning is also an essential innovation that should be clearly visible in higher education (Pallof, 1999; Porter, 1997; Effe, 2003; Perraton, 2000).

Although research in the field of technology-mediated learning has certainly developed in the last 20 years (Chapelle, 2018), there appear to have been few studies of the issues, problems, and potential solutions relating to tools (Liang, 2021) on the tertiary level in the Ethiopian context. Rafi S. Feuerstein (2000) states that a high-level engineer, who works in a new technological environment, is likely to have difficulty learning effectively, similar to a child with Down syndrome who has trouble learning something quickly. Therefore, people like this can be similar to normal but culturally deprived child who gets a mediational deficiency and learns slowly and in a defective manner (Feuerstein, 2000). This kind of state can appear as well in a university student (Latva, 2001).

From the above insights, it could be understood that the virtual environment appears to be too little, too late. This could deprive reading skills for significant interventions or attention in the quality of reading instruction, the provision of reading materials, and in obtaining effective methods or theoretical principles that can be utilized to build an empowering learning environment. If reading problems are not quickly addressed with the contemporary learning atmosphere, the problems will continue to affect academic progress. While some instructors are still wary of technological advancements, others have embraced them. Sceptical people acknowledge that technology should be incorporated, but they think that more information about teaching reading in the digital age is necessary (Gahala & Hoium, 2001). Computers, for instance, may limit a broad range of teaching and learning to rote learning and disrupt students' attention (Collins & Halverson, 2018). In light of these acumens, the focus of this study was how mediation means a means of tool mediation learning experience during reading sessions at BDU.

This core view is built on Vygotsky's (1978) and Feuerstein's (1990, 1991) mediation theories, which are complementary to each other. Especially the theories of Structural Cognitive Modifiability (SCM) and Mediated Learning Experience (MLE) offer a comprehensive theoretical background to examine the two main theoreticians of mediated learning and their theoretical principles for conducting tool mediation to increase students' reading skills. Meanwhile, mediation is inherent in constructivism (Abiy, 2005). From a constructivist viewpoint, reading is viewed as a social interactional practice and an active constructor of students' learning environment.

Therefore, it needs to investigate constructivist-learning environments of mediated learning experience to foster the development of students' learning skills effectively. More important, the nature of MLE is best described by a series of parameters that reflect the structure of the interaction rather than its content or the language in which it is presented. These parameters are conceived as presenting both the energetic and dynamic principles affecting the nature of the interaction, its intensity, and the decisions determined by its intentions and meaning (Feuerstein Institute, 2014). Feuerstein (1991) distinguished a list of 12 parameters or tools that characterize MLE. These parameters are presented in different scripts, in a different order, and with slight phrasing differences, but the first ones are always mentioned first. These are: 1) Intentionality and Reciprocity, 2) Transcendence, 3) Mediation of Meaning, 4) Mediation of Feelings of Competency, 5) Mediation of Regulation and Control of Behaviour, 6) Mediation of Sharing Behaviour ,7) Mediation of Individuation/Psychological Differentiation 8) Mediation of Goal Seeking, goal setting and goal achieving behaviour, 9) Mediation of challenge: the search for novelty and complexity, 10) Awareness of the human being as a changing entity, 11) Mediation of the search of optimistic alternatives, and 12) Mediation of Feeling of Belonging.

This kind of study in the bound of mediation tools is still inchoate and continues to increase in importance for different bodies. Firstly, tool mediation offers many opportunities for both students and teachers. Many modern

technological applications are being employed by students at various stages of their social and academic environments at high schools, colleges, and universities. Thus, this study purports to create a web-based environment for students who experience simulations of environments they never could in conventional classrooms or instructions via mediation tools.

Likewise, the findings of this study redound to the benefit of teachers since they play an important role in the dimensions of learning or mediational implementation that may create opportunities for them to reflect on and improve their own practice. Therefore, the results of this study are expected to help teachers with better teaching techniques or mediational instruction tools to foster opportunities for digital-mediated learning. Within the context of this changed literacy pedagogy, it is timely that conceptions and the implications of mediational tools for reading comprehension should be considered. Therefore, with all the above insights about tool mediation on reading skills, we found it extremely appealing to examine the following research questions:

1. What perceptions do Tertiary Level EFL teachers have towards the tool mediation learning experience in reading tasks?
2. What perceptions do Tertiary Level EFL students have towards the tool mediation learning experience in reading tasks?

METHODS

The descriptive study was employed to explore the perceptions of tertiary-level EFL teachers and students regarding the tool mediation in reading skills. The study was conducted at Bahir Dar University (BDU) in 2022. For this study, we selected a sample of 156 first-year students from the total listed population of 546 students. Simple random sampling was employed to select these study subjects to give each member of the population an equal chance. Also, 32 teachers were selected using this method in this study among 65 teachers at BDU in the Faculty of Humanities.

In this study, two sets of questionnaires were prepared to collect the quantitative data from students and teachers of BDU. A Likert-scale questionnaire comprises three parts: the importance of each aspect of MLE tools, the usage frequency of MLE tools, and technology as mediation tools in reading tasks. The questionnaires were adapted from Williams and Burden's (1997) mediation questionnaire, Celik's (2013), and a questionnaire adapted by Chesini et al. (2013) from University of Witwatersrand. Since questionnaires undoubtedly provide a convenient and practical tool for researchers to study mediation (Gang & Zaho, 2015), these two sets of questionnaires were designed to explore the students and teachers' perceptions of mediational experience of the tools or MLE parameters in reading tasks. That is to say, the teachers' questionnaire was focused on their perception of mediational features and their views on the usage of mediation tools in reading sessions.

Identically, the students' questionnaire is designed about students' tacit perception of MLE features or their opinions on the usage of mediation tools inside and outside classrooms by their teachers. Furthermore, both questionnaires were designed on a five-point scale; experts reviewed the questionnaires at BDU before distribution. For all parts of the questionnaires, reliability was measured via the internal consistency reliability coefficient.

The quantitative data gathered from questionnaires were analyzed using Stata 17. Descriptive statistics (M-mean and SD-standard deviation), one-sample and two-sample t-tests, and correlations, were used for different purposes. One sample t-test was used to investigate whether there is a difference in teachers' or students' mediational tools perceptions concomitant with their actual practices. To determine if there are any significant differences between the groups, an alpha level of .05 was used for analyses. Therefore, the inferential statistical model of the t-test was employed to decide on the level of significance; the level of significance suggested to be used in education is 0.05 (p-value of 0.05) (Creswell, 2012). In the same way, a two-sample t-test was computed to see the mean test for teachers' application of the tools of MLE and students' perceptions on teachers' application of the mediation tools frequency in reading tasks. Pearson product-moment correlation analysis was employed to investigate teachers' perceptions of the value of mediation tools with the actual frequency of MLE tools.

RESULTS

Table 1: Summary Statistics: Total Mean Score of Teachers' Perceptions on MLE Tools Importance

Variable	Obs	Mean	Std. Dev.
MLE tools-importance	32	4.20	.456

Table 1 shows that the total mean score of students' perceptions on the importance of mediation tools is 4.20. It reveals that higher-education teachers value MLE tools' great importance during reading tasks.

Table 2: Summary Statistics: Mean Estimation for Teachers' Perceptions on Mediation Tools Importance Number of obs = 32

MLE tools	Mean(M)	Std. err.	[95%	conf. interval]
Intension_Reciprocity	4.23	.068	4.15	4.43
Transcendence	4.13	.096	3.93	4.32
Meaning	4.11	.091	3.92	4.29
Competency	4.18	.086	4.00	4.35
Regulation	3.98	.097	3.78	4.18
Sharing	4.19	.122	3.93	4.43
Individuation	4.09	.137	3.81	4.37
Goal	4.41	.118	4.16	4.64
challenge	4.28	.112	4.05	4.50
Awareness	4.47	.119	4.22	4.71
search	4.19	.138	3.90	4.46
Belonging	4.09	.151	3.78	4.40

The Table also depicts that 'awareness of the human being as a changing entity(M=4.47) has the highest mean score. Mediation of goal seeking, goal setting, and goal achieving behaviour(M=4.41), and Mediation of challenge: the search for novelty and complexity(M=4.28) take the second and third place successively. Additionally, to investigate the questionnaire's reliability, Cronbach Alpha coefficients were computed. The Cronbach alpha reliability coefficient was 0.91. this coefficient refers to a high degree of reliability as it is close to the plus one. Finally, as the above tables (see Table 1 and 2) compare the descriptive samples statistics, it may not be sufficient to conclude whether the differences are statistically significant or not. Therefore, to test these differences, a statistical model t-test would be employed to check whether the observed differences are statistically significant or not.

Table 3: Mean Test for Teachers' Perceptions on Mediation Tools Importance (One-Sample t test for MLE Tools)

Variable	Obs Mean	Std. err. Std. dev.	[95% conf. interval]
Mediation tools-importance	32 4.20	.08 .456	4.04 4.34
mean = mean (**MLE tools**)			t = 14.89
H0: mean = 3		Degrees of freedom =	31
Ha: mean < 3		Ha: mean != 3	Ha: mean > 3
Pr(T < t) = 1.0000		Pr(T > t) = 0.0000	Pr(T > t) = 0.0000

Table 3 shows the one-sample t-test of the mean scores of teachers' perceptions on mediation tools' importance. As noticed from the above Table, the respondents' mean scores on mediation tools are almost similar for individuals far from the mean.

Table 4: Summary Statistics: Total Mean Score of Teachers' Perceptions on MLE Tools-Frequency Descriptive Statistics

Variable	Obs	Mean	Std. Dev.
MLE tools _frequency	32	3.40	.65

As can be seen from Table 4, the overall mean score of teachers' perceptions on the frequency of mediation tools is 3.40, which is part of the optimal frequency range or category of the given questionnaire indices.

Table 5: Summary statistics: Mean Estimation for Teachers' Perceptions on Mediation Tools-Frequency Number of obs = 32

	Mean	Std.err.	[95%	conf. interval
Intension_Reciprocity	3.70	.11	3.48	3.92
Transcendence	3.50	.11	3.28	3.72
Meaning	3.51	.12	3.27	3.75
Competency	3.53	.11	3.30	3.76
Regulation	3.22	.13	2.97	3.48
Sharing	3.28	.14	2.98	3.57
Individuation	3.31	.14	3.03	3.59
Goal	3.34	.16	3.00	3.68
challenge	3.40	.16	3.07	3.73
Awareness	3.56	.17	3.20	3.91
search	3.15	.14	2.86	3.44
Belonging	3.28	.15	2.97	3.58

The summary statistics in Table 5 show the detailed results of teachers' perceptions on the frequency of twelve mediation tools. As can be viewed in Table 5, the top three tools with their mean scores are intentionality and reciprocity(M=3.70), mediation of meaning (M=3.51), and transcendence(M=3.50). Finally, the α coefficient for the items is 0.95, suggesting that the items have very high internal consistency.

Table 6: Mean Test for Teachers' Perceptions on Mediation Tools Frequency (One-Sample t-test for MLE Tools-Frequency)

Variable	Obs Mean	Std. err. Std. dev.	[95% conf. interval]
MLE tools-frequency	32 3.40	.11 .647	3.17 3.64
mean = mean (**MLE tools**)			t = 3.52
H0: mean = 3			Degrees of freedom = 31
Ha: mean < 3		Ha: mean! = 3	Ha: mean > 3
Pr(T < t) = 0.9993		Pr(T > t) = 0.0014	Pr(T > t) = 0.0007

From Table 6 above, it can be seen that there existed a significant difference (t =0.0014, df=31) in the mean test for teachers' perceptions of MLE tool frequency. This result proved that the observed mean score (3.40) is significant to some extent greater than the expected mean (3)

Table 7: Correlation of Teachers' Perceptions of the Mediation Tools Importance with the Actual Frequency on MLE
Matrix of correlations

Variables		(1)	(2)
(1) MLE: Importance		1.000	
(2) MLE: Frequency		0.004	1.000

From the above data (see Table 7), it can be seen that the correlation between teachers' perceptions on the mediation tools' importance with the actual frequency of MLE is very low/zero correlation among the MLE tools: importance and MLE tools: Frequency scores (r (32 = 0.004, p < .05).

Table 8: Summary Statistics: Students' Perceptions on Teachers' Application of the Mediation Tools Frequency in Reading Sessions

Variable	Obs	Mean	Std. Dev.
MLE tools	156	3.27	.676

As we can see in Table 8, the total mean score of students' perceptions of teachers' application on the mediation tools frequency in reading tasks (M=3.27) is lower than teachers' perceptions of the frequency of mediation tools (M=3.4, see Table 4).

Table 9: Summary Statistics: Mean Estimation for Students' Perceptions on Teachers' Application of the Mediation Tools Frequency in Reading Sessions
Number of obs = 156

MLE tools	Mean	Std.err.	[95%	conf. interval
Intension_Reciprocity	3.49	.055	3.37	3.59
Transcendence	3.19	.061	3.07	3.31
Meaning	3.37	.055	3.25	3.47
Competency	3.12	.063	3.00	3.25
Regulation	3.35	.058	3.24	3.46
Sharing	3.31	.094	3.12	3.49
Individuation	2.96	.097	2.76	3.15
Goal	2.95	.097	2.76	3.14
challenge	3.21	.091	3.03	3.39
Awareness	3.37	.094	3.18	3.55
search	3.31	.094	3.12	3.49
Belonging	3.55	.091	3.37	3.73

As it displayed in Table 9 above, in students' opinions, the mean score (M=3.55) takes the first place of the twelve mediation tools, that is, "mediation of feeling of belonging", and then followed by "intentionality and reciprocity (M=3.49)", and "mediation of meaning and awareness of the human being as a changing entity (M=3.37)". These three mediation tool items occupy the highest mean scores. On the contrary, "mediation of individuation/psychological differentiation (M=2.96)" and "mediation of goal seeking, goal setting and goal achieving behaviour (M=2.95)" become the lowest two mediation tools. Additionally, the other six left mediation tools are inlaid in the range of the mean score of 3.12 to 3.35, which is the medium used. The questionnaire item, students' perception on teachers' application of the mediation tools frequency, was highly reliable (α = .88).

Table 10: Mean Test for Students' Perceptions on Teachers' Application of the Mediation Tools Frequency in Reading Sessions (One-Sample t-test for MLE Tools-Frequency)

Variable	Obs Mean	Std. err. Std. dev.	[95% conf. interval]
MLE tools-frequency	156 3.27	.054 .676	3.16 3.37
mean = mean (**MLE tools**)			t = 4.93
H0: mean = 3		Degrees of freedom = 155	
Ha: mean < 3		Ha: mean! = 3	Ha: mean > 3
Pr(T < t) = 1.0000		Pr(T > t) = 0.0000	Pr(T > t) = 0.0000

For students' perceptions on teachers' application of the mediation tools frequency in reading tasks, The results (see Table 10) revealed that there lies statistical significance with teachers' mean score ((M = 3.27, s = .676) and 3, t(155) = 4.93, p < 0.05, α = 0.05).

Table 11: Summary Statistics: N, Mean, SD by Categories of Teachers' and Students' Application of the Mediation Tools Frequency in Reading Skills: Respondent (1= Student, 2= Teacher)

Respondent	Intension_Reciprocity	Transcendence	Meaning	Competency	Regulation	Sharing	Individuation	Goal	challenge	Awareness	search	Belonging
1	156	156	156	156	156	156	156	156	156	156	156	156
	3.49	3.20	3.37	3.13	3.36	3.31	2.96	2.96	3.21	3.37	3.31	3.55
	0.68	0.76	0.69	0.79	0.72	1.18	1.22	1.22	1.15	1.18	1.17	1.14
2	32	32	32	32	32	32	32	32	32	32	32	32
	3.71	3.50	3.52	3.54	3.23	3.28	3.31	3.34	3.41	3.56	3.16	3.28
	0.62	0.62	0.68	0.64	0.71	0.81	0.78	0.94	0.91	0.98	0.81	0.85
Total	188	188	188	188	188	188	188	188	188	188	188	188

	3.52	3.25	**3.39**	3.20	3.33	3.30	3.02	3.02	3.25	**3.40**	3.29	**3.51**
	0.68	0.75	0.69	0.78	0.72	1.12	1.16	1.18	1.11	1.15	1.12	1.10

Table 11 depicts those teachers and students who obtained almost similar mean scores on all MLE parameters. Both students and teachers have their own ideas on the application of mediation tools. The combined means (with standard deviations in parentheses) for intentionality and reciprocity, mediation of feeling of belonging, awareness of the human being as a changing entity, and mediation of meaning were 3.52 (0.68), 3.51 (1.10), 3.40 (1.15), and 3.39 (0.68), respectively.

Table 12: Mean Test for Teachers' Application of the Tools of MLE and Students' Perceptions on Teachers' Application of the Mediation Tools Frequency in Reading Tasks (Two-sample t test with equal variances: (1= Students' Perception, 2= Teachers' Practice))

Variable	Obs	Mean	Std. err.	Std. dev.	[95% conf. interval]	
2	32	3.29	.105	.60	3.08	3.51
1	156	3.09	.049	.62	2.99	3.19
Combined	188	3.13	.05	.62	3.04	3.23
diff		.20	.12		-.035	.44
diff = mean(1) - mean(2)					t = 1.6807	
H0: diff = 0				Degrees of freedom =	186	
Ha: diff < 0		Ha: diff!= 0			Ha: diff > 0	
Pr(T < t) = 0.9527		Pr(|T| > |t|) = 0.0945			Pr(T > t) = 0.0473	

The t-test result (see Table 12) reveals that there are no significant differences between teachers' application of the tools of MLE and students' perceptions on teachers' application of the mediation tools frequency in reading tasks ((M = 3.13, sd = .62), t (186) = 1.6807, p >0.05, α = 0.05, 95% CI [0.35, 0.44]).

Table 13: Summary Statistics: Mean Score of Teachers' Response on Technology as Mediation Tool

Item	Questionnaire Item	Responses in	Extremely poor	Below Average	Average	Above Average	Excellent	Mean score	SD
1	I know about technologies that I can teach reading in EFL instructions.	Freq	7	10	12	3		2.34	0.94
		%	21.88	31.25	37.50	9.38			
2	I know about technologies that I can use to teach vocabulary in EFL instructions.	Freq	9	6	12	5		2.41	1.07
		%	28.13	18.75	37.50	15.63			
3	I especially use the mediational tools to find resources to teach reading.	Freq	12	8	9	3		2.09	1.03
		%	37.5	25.00	28.13	9.38			
4	I especially use the mediational tools to find resources to teach vocabulary.	Freq	9	11	9	3		2.19	0.97
		%	28.13	34.38	28.13	9.38			
5	Students prefer electronic reading materials to print materials/modules for reading comprehension passages during Communicative English Skills courses.	Freq	2	6	10	5	9	3.41	1.27
		%	6.25	18.75	31.25	15.63	28.13		
6	I make use of electronic resources for reading skills sessions.	Freq	7	16	7	2		2.13	0.83
		%	21.88	50.00	21.88	6.25			
7	I am competent in using mediational tools in the reading lesson.	Freq	7	10	12	3		2.34	0.94
		%	21.88	31.25	37.50	9.38			
8	I know what can and cannot technology do in terms of reading comprehension lessons.	Freq	3	11	10	7	1	2.75	1.02
		%	9.38	34.38	31.25	21.88	3.13		
9	I know how using Moodle tools can help improve students' reading skills.	Freq	8	12	7	5		2.28	1.02
		%	25.00	37.50	21.88	15.63			
10	I know how to integrate the reading tasks of my lessons with appropriate technology.	Freq	11	9	8	4		2.16	1.05
		%	34.38	28.13	25.00	12.50			

11	I utilize innovative ways to incorporate technology into students' vocabulary learning experiences.	Freq	9	16	4	3		2.03	0.90
		%	28.13	50.00	12.50	9.38			
12	I still deliver the reading lesson tasks in conventional instruction.	Freq	2	3	6	15	6	3.63	1.10
		%	6.25	9.38	18.75	46.88	18.75		
	Grand mean							**2.48**	0.64

Turning now to teachers' responses on technology as mediation tool for teaching their reading and vocabulary tasks, EFL teachers' questionnaire items are given in Table 13, which includes a Likert-type scale with five options from "extremely poor" (1) to "excellent" (5). Regarding technologies in finding resources and teaching reading and vocabulary instructions, response patterns were quite similar for item 1-item 4. The BDU EFL teachers who responded to these items expressed below the average or extremely poor degree of agreement in using technologies for EFL reading instructions (53.13%), for EFL vocabulary instructions (46.88%), mediational tools to find resources to teach reading comprehension (62.5%) and to find resources to teach vocabularies (62.51%).

According to Table 13, BDU EFL teachers found that students' preference for using electronic reading materials to print materials for reading comprehension passages during Communicative English Skills courses is above the average degree of agreement as respondents' mean score was 3.41.

Moreover, from the above results (items 6 and 7) in Table 13 above, respondents were asked about the extent of using electronic resources and mediational tools for reading sessions. As to these items, 71.88 % and 53.13 % of the respondents thought their usage of mediational tools /skills were below the average or extremely poor, respectively.

Table 13 suggests a certain confidence among BDU EFL teachers regarding their understanding of what can and cannot technology do in terms of reading comprehension lessons. 53.13% and 43.76 % of the respondents are in the average and below-average categories, respectively. On the other hand, the respondents asked (under item 12) if they still deliver the reading lesson tasks in conventional instruction. Hence, to this item, 46.88% and 18.75% of the respondents showed their confidence in 'above average' and 'excellent' categories, respectively.

When the mean score (M=3.63) compares this item with the middle mean, it can be seen that the mean of this item is greater than the middle mean (3). Therefore, the respondents tend to have a stronger belief in the practice of conventional instruction than in integrating reading skills instruction with appropriate technology (M=2.16).

The Cronbach's alpha for the 12 items (see Table 13) was 0.89. To check whether the result is statistically significant, one sample t-test was computed. Following is Table 14, which shows the result.

Table 14: Mean Test for Teachers' Response on Technology as Mediation Tool

One-sample t test						
Variable	Obs	Mean	Std. err.	Std. dev.	[95% conf. interval]	
ToolRV	32	2.48	.11	.64	2.25	2.71
mean = mean(ToolRV)					t = -4.5991	
H0: mean = 3				Degrees of freedom = 31		
Ha: mean < 3			Ha: mean != 3		Ha: mean > 3	
Pr(T < t) = 0.0000			Pr(T > t) = 0.0001		Pr(T > t) = 1.0000	

The results showed that a one-sample t-test that confirmed a statistically reliable difference that the observed mean score (2.48) is significantly lower than the expected mean (3) at the specified $p < .05$ level, $t(31) = 4.5991$, $p < .005$, $d = 0.64$, 95% CI [3.16, 3.37].

Table 15: Summary Statistics: Mean Score of Teachers' Response to their Perceptions about Tool Mediation

Item	Questionnaire Item	Responses in	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree	Mean score	SD
1	The use of computer technology can make reading tasks easy and interesting.	Freq	1	3	3	11	14	4.06	1.10
		%	3.13	9.38	9.38	34.38	43.75		
2	The use of computer technology, with the internet, provides students with many opportunities to practice reading tasks.	Freq		3		11	18	4.45	.91
		%		9.38		34.38	56.25		
3	The use of computer technology in tertiary-level EFL reading instruction can help students learn at their own pace.	Freq	1	2	1	14	14	4.19	.99
		%	3.13	6.25	3.13	43.75	43.75		
4*	There are not enough appropriate mediational tools to use in reading sessions.	Freq	3	4	9	10	6	3.38	1.21
		%	9.38	12.50	28.13	31.25	18.75		
5	Digital devices (computers, smartphones, tablets, etc.) should be used as a part of the print-rich classroom environment for reading comprehension sessions.	Freq	3	1	8	16	4	3.53	1.07
		%	9.38	3.13	25.00	50.00	12.50		
6	Internet tools can be used for teaching reading skills.	Freq		3	2	15	12	4.13	.91
		%		9.38	6.25	46.88	37.50		
7*	Internet resources cannot replace textbooks /modules/ for reading comprehension purposes.	Freq	3	10	3	8	8	3.25	1.39
		%	9.38	31.25	9.38	25.00	25.00		
8*	The Internet platform is less helpful for reading tasks.	Freq		3	2	12	15	4.22	.94
		%		9.38	6.25	37.50	46.88		
9*	Teachers cannot improve students' reading comprehension skills using different internet platforms.	Freq	1	2	5	13	11	3.97	1.03
		%	3.13	6.25	15.63	40.63	34.38		
10	Mediational tools could influence the teaching reading tasks I use in my classroom.	Freq		1	5	17	9	4.06	.76
		%		3.13	15.63	53.13	28.13		
	Grand mean							**3.92**	.60

*Reverse coded

In relation to the topic raised under Table 15, the teachers were asked ten questions using a Likert scale with five options ranging from "strongly agree" (1) to "strongly agree" (5). BDU instructors were asked to respond to their level of agreement/ disagreement pertaining to their perceptions about tool mediation in teaching EFL reading sessions. The first item under this point asked the teachers whether computer technology can make reading tasks easy and interesting. As to this item, the degree is above the level of the agreement since the total mean is 4.06.

Teachers' responses to item 2 showed positive overall perceptions of the use of computer technology that provides students with many opportunities to practice reading tasks since the result indicates that 90.63% of respondents agreed or strongly agreed with item 2. Similarly, when we look into the calculated mean of item 3, which is 4.19, it is greater than the mean of the middle score, which is 3.00. This result further indicates that the respondents have a positive attitude about using computer technology in tertiary-level EFL reading instruction that can help students learn at their own pace.

Results on teachers' perceptions on the availability of appropriate mediational tools to use in reading sessions addressed under item 4 displayed that of the 32 teachers, 16 (50%) agreed on the availability of enough

mediation tools to teach reading tasks. Likewise, 62.5% of teachers agreed that digital devices should be used as a part of the print-rich classroom environment for reading comprehension sessions, which means BDU EFL teachers consider digital tools as sufficiently organized teaching reading tools as a part of the course modules. There is also a strong consensus observed on Internet tools use for teaching reading skills (84.38%), the usefulness of internet platforms for reading tasks (84.38%), teachers' usability of different internet platforms to improve students' reading comprehension (75.01%), and the mediation tools influence for teaching reading tasks in the classroom (81.26%).

Table 16: Mean Test for Teachers' Response on to their Perceptions about Tool Mediation (One-Sample t-test)

One-sample t test						
Variable	Obs	Mean	Std. err.	Std. dev.	[95% conf.	interval]
ToolPe~n	32	3.92	.11	.60	3.7	4.13
mean = mean (ToolPerception)					t = 8.60	
H0: mean = 3					Degrees of freedom =	31
Ha: mean < 3			Ha: mean! = 3		Ha: mean > 3	
Pr(T < t) = 1.0000			Pr(T > t) = 0.0000		Pr(T > t) = 0.0000	

Table 16 above portrays the results of teachers' perceptions about tool mediation. The result shows that there is a statistically significant difference between the hypothesized mean (3) and teachers' response mean score (3.92) at the stated $p < .05$ level, $t (31) = 8.60$, $p < .005$, $d = 0.60$, 95% CI [3.7, 4.13].

DISCUSSIONS

Regarding the importance of mediation tools, the results of the findings indicated that the mean scores (M= 4.20) of teachers' perceptions seem to indicate that teachers prominently valued and reflected their positive attitude (see Table 1) towards the values of all MLE tools or parameters. As indicated in Table 2, the mean estimation of twelve MLE tools exceeds 4.1 with the sole exception of mediation of regulation and control of behavior (M=3.98), which is the least important mediation tool in teachers' perspective. It implies that it is obvious to see in this study's finding that the the mean scores of all items are over 4.0, however the degree of importance varies.

This result is also the same as the results of other researchers (Lei & Lin, 2018; Abiy, 2005; Yang, 2006; Lai, 2004) that affirmed the mediation tools' mean scores of the whole items are above 4.0. That is to say, the Mediation tools scores (t =.0.000, df =31) revealed that there was a significant difference. This significant difference exposes the truth that teachers at tertiary levels commonly pay prominent value to the importance of modification tools in order to achieve reading tasks' objectives.

However, distinctions of findings were found between the present study and the previous studies of teachers' perceived values of the mediation tools among EFL teachers offered to the parameters. In the present study, for instance, it has been found that teachers gave high value to awareness of the human being as changing entity, mediation of goal seeking, goal setting and goal achieving behaviour, and mediation of challenge: the search for novelty and complexity. Whereas, in Abiy's findings, teachers' high perceived values of the mediation tools were intentionality, meaning, control of their own behaviour, and a belief in a positive outcome.

According to Lei and Lin's (2018) findings, shared intention has the highest score, which is consistent with the findings of prior studies by Lai (2004), as well as Yang (2006), while a sense of competence and control of behavior come in second and third place, consecutively. Subsequently, awareness of change, which is consistent with Chi's (2009) study, a sense of belonging, and challenges have been the least important tools successively (Lei & Lin, 2018). Additionally, Deligianni's (2000) study's findings gave less value to the mediation of meaning and transcendence.

The results of the second part of the teachers' questionnaire that asked respondents about the level of their usage frequency of the mediation tools proved that the mediation tools are sometimes (M=3.40) employed during reading sessions in the view of tertiary level EFL teachers (see Table 4). The results (see Table 5) indicated that tertiary-level EFL teachers give attention to universal tool mediators (the top three MLE tools) with 50-70% of the opportunities. Teachers also tried to foster the situational tool mediators (the rest of the nine criteria) since their responses or frequency rates to these MLE tools were around 40-60% of the opportunities.

Hence, most teachers agreed to apply the universal tools of mediation during reading tasks since the observed mean score is significantly higher (see Table 6) than the assumed mean (t =0.0014, df=31). On the contrary, the results of the mean estimation of MLE tools' importance (see Table 2) showed that teachers tended or perceived to employ situational tools of mediation to a great extent.

Compared with other studies of teachers' usage frequency of the mediation tools in language skills, the present findings indicated few inconsistencies. Seda (2017), for example, investigated English teachers' mediation

knowledge and classroom practices in terms of Feuerstein's 12 MLE tools. According to Seda's findings, even though the teachers had no concept of mediation, their practices indicated that they used universal rather than situational features of MLE tools.

In addition, on the basis of the frequency scale designed by Oxford (1990), seven mediation items in this study (see Table 5) are always employed with the mean scores surpassing 3.5; nevertheless, this frequency scale finding has a little bit of difference from the present study findings and other similar researches (Fan, 2016; Seda, 2017), in which eleven and eight mediation tools enjoyed the mean scores exceeding 3.5 sequentially.

From students' perspectives, it can be observed that English language teachers use the MLE tools during reading activities to a minimum degree (M=3.27, see Table 8). As a result, from the perspective of comparing the whole mean scores in Table 8(M=3.27) with that in Table 4(M=3.40), it is obvious that there has a subtle difference(diff=0.13) between students' perceptions of the frequency on teachers' application of the mediation tools and teachers' perceptions of the mediation tools frequency. It implies that when teachers in universities give a task to their learners, they make efforts somewhat to keep pupils' attention focused on the stated MLE tools (see Table 10). This finding is in resemblance with what Lei and Lin (2018) revealed that English teachers sometimes use the mediation tools during the teaching to a medium degree.

Based on the correlation analysis, it can be seen that the correlation between teachers' perceptions of the mediation tools' importance with the actual frequency on MLE is very low/zero correlation (see Table 7) among the MLE tools: importance and MLE tools: frequency scores ($r(32 = 0.004$, $p < .05$). From the statistical results of teachers' application of the tools of MLE and students' perceptions on teachers' application of the mediation tools, the mean score of each MLE tools or items, which ranges 3.02-3.52, indicates the slight agreement on the application of mediation tools in EFL reading sessions (see Table 11). Unfortunately, almost all students' agreements are lower than the teachers themselves expected.

Researchers also confirmed that students reflect that teachers' usage of mediation tools is not enough and should be consolidated (Li & Zhao, 2015). Likewise, the current result showed that there is no difference in the magnitude of teachers' practice of mediation tools by teachers and the students' value of perceptions about teacher application of the mediation tools (see Table 12). Just as teachers use the mediation tools, students also set the amount of mediation tools that their teachers use during reading comprehension sessions. However, the application or the frequency of mediation tools is too much to a weaker degree.

According to Wang's (2002) study, there was a difference between teachers' perceptions and practices of mediation functioning after conducting an investigation on 30 senior high school teachers for their perceptions and implementations of mediation functioning, with the former being generally more concerned than the latter. Other researchers (Cheng, 2015; Lai, 2004; Qu, 2004) pointed out a common finding with the present study: teachers' perceptions on the importance of mediation are not in accordance with their applications of mediation in their reading classes at university levels.

In other words, teachers' perceptions of the frequency are stronger than students' perceptions to some degree. (Lei & Lin, 2018). These results pinpointed those teachers had limited practice of the mediation tools in their reading classes. For instance, to control and regulate students' learning, thinking, and actions, teachers need to know students' needs and adjust the MLE tools for their reading tasks or for mediated reading to promote intellectual curiosity, originality, innovation, and divergent thought.

In the present study, the responses made by teachers to their perceptions about the tool mediation questionnaire showed that the teachers had quite a positive perception for tool mediation in reading tasks. In the present study, the overall mean score of teachers' perceptions was calculated as 3.92 (see Table 15), with a significant difference between the estimated mean and teachers' response mean score (see Table 16). This finding is very worth mentioning because of its accordance with the previous results in terms of showing a positive perception toward mediation tools (Ozel & Arikan, 2015; Celik, 2013; Shin & Son, 2007).

For example, Ozel and Arikan (2015) investigated 112 EFL instructors from various universities to determine the perceptions of EFL instructors towards using the Internet and Web 2.0 tools. The summated mean for the participants' perceptions was 3.82; hence Ozel and Arikan stated that EFL instructors had positive attitudes towards mediational tools in language teaching. On the other hand, the mean scores of teachers' practice on technology as a mediation tool are less than the mean of the middle score (see Table 13). This result indicates that the respondents have found technology as a mediation tool more difficult in terms of its practice in reading tasks at tertiary-level EFL classrooms.

Generally, as can be seen from Table 13, a large proportion of the teachers' grand mean score (2.48) of all items is less than the value of the middle score, which is below average. This finding is consistent with other researchers' findings (Ozel & Arikan, 2015; khany & Boghayeri, 2013; Lipsett, 2008) which concluded that EFL teachers are not using mediation tools adequately in their language teaching. In like manner, Boersma and Getu (2016) carried out a study focused on the Ethiopian EFL teachers' perceptions and utilization of mediational potentials of the Internet in English language teaching at BDU. The study's results showed a mismatch between BDU instructors' positive perceptions and current practices; teachers showed fairly limited utilization of the Internet for teaching purposes even though they had favourable perceptions of the mediational

role of the Internet. Finally, these findings are also supported in the literature. For example, despite the widespread use of computers by teachers inside and outside of the tertiary institutions, instructional practices and university culture have not incorporated computer-based technologies into regular instructional practices (Russell, et al., 2005). In the end, it should not be forgotten that technology must be effectively integrated into teaching and learning English language skills; otherwise, technology may have a detrimental impact on students' learning processes (Kumar, Shet, & Parwez, 2022).

CONCLUSIONS

The study's main purpose was to explore the perceptions of tertiary-level EFL teachers and students regarding the tool mediation learning experience in reading skills in a cloud computing environment. Thus, the responses made by the tertiary level EFL teachers to the questionnaire in general showed that teachers had a positive perception to the importance of mediation tools or parameters for reading tasks. In contrast, teachers' practice of MLE tools does not utterly reflect their perceptions of the application of all MLE tools. On the other sides, considering technology as a mediation tool in reading sessions at the university level, teachers had a positive perception for it. However, the current findings showed that teachers had below-average responses in implementing mediation tools which is aligned to reading comprehension and vocabulary learning.

RECOMMENDATIONS

Based on the conclusions in this study, future studies need to look deeper into designing learning trajectories, experimentations and developing tools that more directly describe the teacher perceptions leading to improved student language skills in a technology-enhanced learning environment. Although teachers today are faced with challenges and questions of how and when to incorporate new and emerging digital technologies for teaching and learning various language skills topics (Niess, 2012), language skills can be taught and learned with the help of MLE tools.

Therefore, it would be very helpful to engage language teachers with technologies in the search for preservice, in-service, and professional development experiences to reshape or to reflect teachers' perceptions and applications in ways that incorporate new and emerging digital technologies as learning and teaching tools. To do this, the experts should design a national technology-based learning policy and strategy or curriculum so that each university lecturer can prepare their own tool-mediated policy and guidelines.

Then, initiatives might be taken to equip university language teachers with MLE tools in English classrooms as a way to ensure effective integration of that mediation tool, framework, or model. In fact, teachers are still one most important parts of cloud classrooms in supporting this new teaching and learning environment by moving seamlessly from chalk and talk to networks to cloud computing tools.

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