

Mobile Assisted Language Learning Communication: Improving Reading Comprehension and Goal Orientation in Iraqi EFL Students

Sima Ziaei^{1*}, Raghad Abbas Alsaedi²

¹Bahar Institute of Higher Education, Iran, ²Imam Reza International University, Iran

Abstract Due to its easy access and ubiquity, Mobile Assisted Language Learning (MALL) can benefit language learners with no restriction of time and place. The present study, with pre-experimental design, which was carried out on 145 Iraqi EFL learners, first studied the effect of MALL on the learners' English reading comprehension ability. Throughout the study, the EFL students were required to have reading courses via a mobile application. Applying a paired samples t-test, the study revealed a significant effect of MALL on participants' reading comprehension ability. Secondly, to assess the degree of students' goal orientation, the goal orientation questionnaire was given to fill out once at the beginning of the course and once at the end of the process. The results indicated that MALL can significantly affect learners' goal orientation. Finally, the correlation between reading comprehension and goal orientation in Iraqi EFL students was significant, which indicated that students' reading ability was also related to their level of goal orientation.

Keywords: *Alternative language education tools, Goal orientation, Interactive technology, Mobile assisted language learning communication, Reading comprehension*

1. Introduction

Over recent years, the use of digital technology, such as the Internet and various applications, has become an integral part of everyday life. The growth in the usage and reliance of emerging technology has, to some degree, changed the studying and teaching of languages (Gholami & Al Abdwani, 2024; Mazer et al., 2007). Mobile-assisted language learning (MALL) is an emerging development combining interactive technologies with language learning and communication. MALL applies to linguistic education anytime, via mobile devices, with no restriction of time and place (Kukulka-Hulme, 2009; Kukulka-Hulme & Shiled, 2008). This trend also included several MALL apps (e.g., Duolingo, Babbel, Busuu, & Wlingua), which gradually emerged as alternative language education tools for self-directed and informal ways of learning a language. For instance, research established

*Corresponding Author:

Sima Ziaei

s_ziaei@baharihe.ac.ir

Received: August 2024

Revised: October 2024

Accepted: October 2024

Published: November 2024

© 2024 Ziaei and Alsaedi.

This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY).

evidence that applications such as Facebook (e.g., Alm, 2015; Kabilan et al., 2010; Mitchell, 2012) and Twitter (e.g., Lomicka & Lord, 2012; Solmaz, 2017; Taskiran et al., 2018) have provided the appropriate framework for language learning through online communication.

Language learners have been aware of the constraints of language education alone in recent years (e.g., Little, 2007; Tedick & Walker, 1995). Critics of language acquisition in schools may be concerned with the decontextualization of instructional content and methods and the absence of individual study and meaningful social experiences. Such problems usually disrupt the integrated production of learners' vocabulary, especially for real-life interactions. There is a growing understanding that language acquisition should be expanded outside the classroom so that students can use the target language in a meaningful and comprehensive communicative context (Benson, 2013; Canagarajah & Wurr, 2011). Mobile devices provide educational tools that educators can use to facilitate effective learning both inside and outside the classroom by students. The most outstanding educative aspect of mobile communication devices is to provide learners with the opportunity to learn in the real world, which helps render authentic and suited learning (Pachler, 2010). Through their mobile devices, students will actively create digital objects wherever they wish to know. They will then upload the structures to exchange, criticize, and co-construct, thus improving the collaboration of learning. Researchers identified this type of learning (Chan et al., 2006) when access to at least one moving device is available. Since 2006, new learning designs have been reported that aim to create comprehensive day-and-night learning experiences.

In addition, few researchers specifically explored the role of learning techniques in Second Language Learning (SLL), given the advent of seamless language learning studies. It is a significant problem as student engagement and school policy have a direct impact on the probability of progress of any instructional endeavor (Weinstein et al., 2000). A definition of the incentive for achievement that determines the form of goals that drive activities associated with achievement (Maehr & Zusho, 2009) is used as the foundation for this principle of goal orientation. Goal orientation analysis originates in a dichotomous context that differentiates dominance and performance targets. The empirical orientation experiments rely on behavior choice in achievement circumstances. Performance's emphasis includes an external willingness to show and/or exercise abilities, whereas mastery motivation is an internal urge to develop skills (Senko et al., 2011). Throughout previous studies, the fundamental motivation for success was not strictly exclusive, owing to expectations to show competence or to outperform others. In fact, students sometimes want to pass their exams rather than outperform others in order to show their skills. It is necessary to remember that mastery-avoidance-oriented learners are encouraged by an intrapersonal urge to master a task but fear of failure, too. Because it is understood that the option of conduct (i.e., goal orientation) is linked to circumstances of success, it is helpful to learn how aim parameters shift in the course of doing a function. Ideally, instructors would like to collaborate with students to acquire master's experience and expertise from a professional point of view. But not always pupils and teachers share this ideal, as they often aim at gaining.

Reading comprehension, as one of the important skills of communication in L2 learning, is influenced by several factors, which are either reader-oriented, such as aptitude and goal orientation, or text-related, such as complexity (Yılmaz, 2016). As in countries like Iraq, in which English is a foreign language, reading is the most useful skill of communication, and studying the influencing factors to improve this communicative skill sounds significant. In such countries, people usually use English to read instructions, manuals, and social media messages, and they hardly ever need to use English in oral communication or writing tasks. As many products' instructions and manuals are in English, the urge for reading communication skill is strongly felt. However, students may use their language knowledge to read academic texts and gain information as well. And all these reading-related skills are usually required when an individual is out of class with no aid from teachers. In this regard, one of the modern approaches to English language education is the concept of autonomous learning, which has become the concern of many teachers who try to develop this quality in their learners (Solmaz, 2017). One of the advantages of learner autonomy is that it gives students more responsibility, which can aid them in their future communication. MALL is one of the teaching methods that can bring autonomy to students. Furthermore, it is assumed that learners' amount of goal orientation as a reader-oriented variable is an effective element in enhancing their learning skills and communication ability (Kiragu et al., 2022;

Yılmaz, 2016). Hence, exploring new communicative learning methods that enhance learners' goal orientation, leading to the improvement of second language communication, seems to be necessary.

Given the importance of reading communication in EFL countries and the importance of readers' orientation in language communicative skills, the present study is an attempt to find out the effectiveness of technological tools- MALL- in reading communication ability and to discover whether MALL impacts Iraqi students' goal orientation. Finally, this study seeks to examine the possible relationship between EFL reading communication skill and goal orientation.

2. Theoretical Background

2.1. MALL and Reading Communication Skill

The core of MALL's linguistics can be an intersection between language teaching and research, language learning, and mobile learning (Liu et al., 2016). Therefore, the analysis will accept the three areas of the sample and resist 'technocentricity' to the detriment of the contents. As highlighted by Duman et al. (2015), one of the first mobile phone language learning projects was carried out in 2000. In the case of Ciampa (2012), students can become successful readers by developing a strong range of comprehension skills during elementary school. Reading is the basis of a person's early education. When we grow older, it is an entry-level job. Ciampa added that to help learners succeed in their education and future careers, teachers need to work on their reading communication skill. He recommended that motivated readers are more likely to develop their reading skills to illustrate their advanced reading abilities. According to Ciampa (2012), the use of eBooks has increased the motivation of the students, particularly the difficult ones, to read. As a matter of fact, the challenging readers showed more progress in reading communication when they were exposed to eBooks than when they had to read traditional textbooks. eBooks have been a positive idea not only because they boosted students' reading abilities but also because they motivated them to read more digital texts in their real-world life. In line with Ciampa (2012), who suggested that digital texts give all readers special motivation, Grimshaw et al. (2007) and Ertems (2010) also suggested that the understanding of literacy in the twenty-first century will be affected positively by digital texts. Ertem (2010) also accentuated that readers need to be stress-free in order to have decoding ability and fluency, which leads to removing barriers to building a strong basis for understanding skills. Ertem used three separate technologies, namely, digital text with animations, non-animation digital text, and conventional texts. Every participant only read the book in one way and was taught how to interpret the text by means of an online method. Students were required to explain what they were reading to gather data on student comprehension. Then, the student's understanding was measured by both the researcher and a specialist using Morrow's 10-point scale to ensure the data were accurate. As a result, the reading comprehension of multimedia texts demonstrated a significant increase in the participants' reading comprehension skill. Chen and Hsu (2008) also attempted to provide such a customized, insightful, mobile teaching system known as the PIM (Personal Information System) through which England news articles were presented based on their readings and the principle of fuzzy item responses to provide an interactive and scalable learning experience for English teaching. The PIM system automatically uncovers the unknown vocabulary of each student through reading English news articles in order to encourage English news reading. The study's test results showed that English news reading, together with a new unknown vocabulary and self-assessing feedback, was genuinely fruitful in encouraging learners to understand and read. In addition, practices help students develop pronunciation, which in turn helps them encourage comprehension of the vocabulary (Boustani & Al Abdwani, 2023; Chen & Hsu, 2008). Reading activities can be offered to students either through a training course on mobile devices or via SMS. In both cases, the students receive a reading text function to assess their reading skills upon completion of the reading activity, like what Motallebzadeh et al. (2011) did to examine the impact of SMS on Iranian EFL learners' memorization of collocations through texts, which produced a better learning of collocations.

2.2. Goal Theory in Education

The theory of goals founded by Dweck (1986) is a theory of targets for academic achievement. Dweck (1986, p. 1040) defines goal theory by saying, "It has been widely known that factors other than

capability affect whether children are seeking or avoiding challenges, whether they continue or withdraw in the face of obstacles and whether they are effectively using and developing their skills”.

In goal theory, individual behavior is called rational and economic in order to accomplish such goals (Miyamoto & Nasu, 1995). Depending on what expectations a student has, goal theory may be used to forecast the learning activity and the learning performance of that student (Dweck, 1986). In fact, the purpose hypothesis seeks to describe the nature of the behaviors of young people through school study; however, philosophy suggests that in its maturity, the basis of their interests, called intelligence theory, has been grasped, much like the personality characteristic that is fairly constant over time (Pintrich, 2000; Smiley & Dweck, 1994).

The concept thus allows one to use the theory to address the actions of adolescents and adults. There are two types of objectives in goal theory: Learning Goal (LG) and Performance Goal (PG, Dweck, 1986). The first applies to the inclination of growing competence and learning things differently, and the second to the inclination of a positive (PG-positive) evaluation or a poor judgment of the competence (PG-bad). For instance, LG learners are expected to see barriers to good learning and use these barriers to multiply their efforts to learn, while PG students tend to look at the same barriers more negatively (Ames, 1984). This is largely attributed to the apprehension of challenges and mistakes in general and the reality that those getting a PG orientation attribute error to their lack of ability. In addition, unlike LG-oriented students, students with PG-oriented roles probably withdraw from the challenge of a difficult task if they believe they will fail. Therefore, it depends on the appraisal of students' present abilities to perform this task if they feel more or less comfortable about other activities. The option of role as a learning activity depends on the degree of confidence in current skills.

In brief, even if their ability is low, LG-oriented students can decide on challenging tasks that encourage learning. In order to gain experience and abilities, they are able to face signs of weakness and negligence. Education is more important to them than achievement or acknowledgment. On the other hand, PG-oriented students tend to believe that they are strong and have a significant probability of achievement before attempting a difficult task. In order to gain a good appraisal of their talents, they are likely to make a favorable decision, even though they do not benefit much from the challenge. Hence, while mastery goals, which are value-intrinsic, are related to enhancing competence by hard work, the performance goals, which are value-extrinsic, are related to using competence to perform well (Elliot & Church, 1997; Kaplan & Maehr, 2007). In the performance goal orientation, the focus was on attempts to gain appreciation from others that he/she is competent and often tries to prevent unfavorable judgments by others. Student orientation of results is directed at orienting the candidates to their inner ability and how other learners determine such qualities (Midgley et al., 2001). For instance, Botsas and Padeliadu (2003), in their study on students with reading difficulty, figured that they are less mastery-oriented than students without such difficulty. In other words, they work harder to learn and boost their competence. Initially, the principle of goal orientation relies mainly on the explanation of why the students can pursue achievement, so the aim orientation should be restricted not just to the students but also to the instructor as the period progresses. In another study, to investigate the higher education learners' orientation to mobile devices for language learning and communication, Hoi (2020) highlighted the significant roles of attitude and performance goal orientation in speculating learners' usage of MALL and their behavior intention. It is also valuable to mention that not only learners' attitude to MALL influences their learning, but also their parents' perception of MALL affects the process of their learning. Accordingly, Chen et al. (2019) investigated the relationship between parents' perception of MALL and English learners' achievement via MALL and reported that the parents were inspired enough to support mobile technology use by their children to learn a language. Therefore, this autonomous method of learning can be easily followed by learners at home.

3. Methodology

3.1. Participants

Initially, 200 male and female students at Maisan University of Iraq participated in this study, among whom 145 participants who had completed all of the questionnaires were selected for the aim of the study. They were all in the age range of 19 to 23 years old. All the participants were Iraqi native

speakers. The whole study took about four weeks. The university principals were informed that their students' identity was kept confidential, and students were also indirectly given partial course credit for their participation. Fifty-five participants who had earlier background knowledge about the chosen texts were excluded at the onset of the study. The researchers benefited from the assistance of three teachers in applying the required procedure in their classrooms.

3.2. Instruments

The data collection instruments employed in the present study were as follows.

3.2.1. Reading MALL App

For this study, the researchers used the ReadEra app, which is a book reader that allows reading books in offline settings in PDF, EPUB, Microsoft Word, and CHM format. This app seemed to be effective in terms of its convenience to use and economized memory usage.

3.2.2. Goal Orientation Questionnaire

The 20-item Goal Orientation Questionnaire (Nesbit et al., 2009) was used to examine five sub-constructs of goal orientation, namely, mastery-approach goals, performance-avoidance goals, mastery-avoidance goals, performance-approach goals, and work-avoidance goals. Participants responded on a 5-point Likert scale from 1 (not at all true of me) to 5 (very true of me) (See Appendix).

3.3. Procedure

3.3.1. Data Collection

In order to assess MALL's effect on the reading comprehension of Iraqi EFL students, reading comprehension tests (EnglishForEveryone.org) in multiple choice and open-ended questions were used to determine the reader's understanding in the group once at the beginning and once at the end of the course. The reading texts were graded low to high intermediate. In order to assess the reliability, the split-half method was employed. The comprehension test was conducted, the total score was calculated for each set, and the split-half reliability was achieved by determining the correlation between the two total scores. It was concluded that the test was reliable (0.89).

The researchers first checked whether all the participants had mobile phones, and afterward, nine reading comprehension texts were practiced through MALL. The reading activities required the students to read, reflect, and answer on their mobile phones. The activities had several parts to do and were sent to teachers every day. Students were supposed to do the exercises based on the time schedule that had already been set. After doing the related activities in and out of the classroom, the participants' reading comprehension was tested.

In order to assess the degree of students' goal orientation and to see whether it might change during this kind of instruction (application of the MALL method), the goal orientation questionnaire was given to them to fill out once at the beginning of the course of instruction and finally at the end of the process, in the final session.

3.3.2. Data Analysis

The statistical analysis of data was conducted via Statistical Package for Social Sciences (SPSS 23) for Windows. To meet the objectives of the study, paired samples t-tests were run. Furthermore, a correlation coefficient test was calculated between EFL reading comprehension ability and goal orientation.

4. Results

As is evident in Table 1, the result of the normality test shows that the p values of the two tests are more than the significance level ($p > 0.05$). Therefore, we can accept the assumption of normality. So, a paired samples t-test could be used for further analysis.

Table 1
One-Sample Kolmogorov-Smirnov Test for Reading Comprehension Test and Goal Orientation

	Reading Test	Goal Orientation
N	145	145
Kolmogorov-Smirnov Z	.859	.665
Asymp. Sig. (2-tailed)	.452	.387
Skewness	-.627	-.513
Kurtosis	-.458	-.327

The results of the descriptive statistics show students' performance on the pre-test and post-test (Table 2).

Table 2
Descriptive Statistics of Reading Comprehension Tests

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-reading	145	14.00	18.00	16.32	1.171
Post-reading	145	15.00	20.00	17.81	1.303

4.2. T-Test Analysis for Reading Communication Ability

Paired samples t-test analysis was used to determine whether employing the MALL method had any significant impact on the reading ability of Iraqi EFL learners. Table 3 depicts the results of this analysis.

Table 3
Paired Samples T-Test for the Reading Test

	Paired Differences					Df	Sig.
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower	Upper		
Pre-reading Post-reading	-1.49	1.32	.241	-1.98	-.995	144	.001

A paired samples t-test was conducted to compare the scores of pre-test and post-test regarding the students' reading communication ability. There was a significant difference in scores for the pre-test ($M=16.32, SD=1.17$) and post-test [$M=17.81, SD=1.30; t(144) = -.6.158, p < .001$]; that is, MALL has a significant effect on EFL reading comprehension ability of Iraqi students.

4.3. T-Test Analysis for Goal Orientation

A paired samples t-test was run on the data gathered from 145 pre-tests and post-tests of the participants in the group under study to determine whether there was a statistically significant mean difference between their pre-test scores and post-test scores. Table 4 shows the results of descriptive statistics of the group in pre-test and post-test phases.

Table 4
Descriptive Statistics for Goal Orientation

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test	145	1	4	2.616	0.867
Post-test	145	2	5	3.633	0.909

The results of the goal orientation questionnaire in the pre-test ($M=2.16, SD=.86$) and post-test ($M=3.63, SD=.90$) are presented in Table 4. To find whether this difference is significant or not, a paired samples t-test was run. The results are presented in Table 5.

Table 5
Paired Samples Test in Goal-orientation Questionnaire

	Paired Differences					df	Sig.
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower	Upper		
Pre-test							
Post-test	-1.016	.85	.156	-1.33	-.697	144	.001

Based on Table 5, there was a significant difference in scores for the pre-test ($M=2.16$, $SD=86$) and post-test [$M=3.63$, $SD=90$; $t(144)=-.6.506$, $p\leq.001$]. Accordingly, there is enough variance in the sample to account for the possible mean differences. This indicates that MALL significantly affected the Iraqi students' goal orientation

4.4. Correlational Analysis

First, descriptive statistics, including means and standard deviations for the group under study, were calculated. Table 6 shows the descriptive statistics of the students' reading comprehension test and their goal orientation ability.

Table 6
Descriptive Statistics for Reading Comprehension and Goal Orientation

	N	Minimum	Maximum	Mean	Std. Deviation
Reading Tests	145	14	20	17.07	1.43
Goal Orientations	145	1	5	3.12	.86

Table 6 presents the Pearson Correlation between reading comprehension and goal orientation in Iraqi EFL students, which was significant ($r[145]=.49$, $p\leq.001$), indicating that students' reading ability was related to their level of goal orientation.

Table 7
Correlations between EFL Reading and Goal Orientations

		Reading
Goal Orientations	Pearson Correlation	.686***
	Sig. (2-tailed)	.001
	N	145

***. Correlation is significant at the 0.001 level (2-tailed).

5. Discussion

Thanks to the presence of technology in the modern era, people have access to different types of applications and social media to interact worldwide. Using all these facilities can boost learning and communicating, especially in the written form, since in many applications, we have to read or write interactively. On the other hand, critics of language acquisition in schools may be concerned with the decontextualization of instructional content and methods and the absence of individual autonomous study and meaningful social experiences. Such problems usually disrupt the integrated production of learners' vocabulary, especially for real-life communications. There is a growing understanding that the language acquisition process should be expanded outside the classroom so that students can allow the use of the target language in a meaningful and comprehensive manner of communication (Benson, 2013; Canagarajah & Wurr, 2011). Hence, one of the good methods for learners to practice outside the classroom is via mobile applications, which are easily accessible. As a matter of fact, since this study took advantage of the autonomy of MALL, it worked on a one-group pretest-posttest design and only compared the results of pre-tests with those of post-tests. Therefore, this limitation can restrict our generalization power. Having said that, the results can be interpreted as follows.

As the first objective of the study, the researchers made use of the MALL methodology in the process of teaching EFL reading communication skill in order to find out whether MALL technology can improve the learners' reading communication. The findings manifested that the students outperformed their pre-tests after taking MALL-based reading courses, which was in line with some other findings (e.g., Li, 2022; Mays et al., 2020), indicating that MALL applications could positively affect EFL reading comprehension. However, some studies, such as Lin (2017), did not find a significant effect of MALL on reading comprehension. As MALL requires students to do some activities outside their classes in a more real-world context, it could also add some autonomy to their activities and could lessen artificial class-bound exercises, which do not revolve around communication (Fox, 2014). As these days, almost everyone uses mobile phones for activities such as web surfing, checking e-mails, sending messages, or even shopping; it seems reading digital books is more convenient than reading paper books. Therefore, students might not think they are doing their restricted homework but doing something they are used to doing as a hobby. Hence, according to Miangah and Nezarat (2012), learners spend a pretty long time on mobile-based communication, yet using technology leaves them with more freedom of time and place to do their homework whenever and wherever they feel comfortable. Accordingly, the more attractive and comprehensive the mobile-based applications are, the more motivated the students are to use the application, just as Chen and Hsu (2008) provided their learners with a system that not only provided texts but also realized the hard vocabulary and also allowed the students to evaluate their learning. Using such a system increased the students' motivation to read and boosted their comprehension ability. As Fox (2014) established evidence, in teaching communication skills, technology can be effective for struggling new-era readers who are called digital natives. Therefore, they can take good advantage of the presence of MALL in their classrooms.

To meet the second objective of the study and to discover whether MALL usage could improve the students' goal orientation, another t-test was run, which revealed that MALL-reading courses helped the students improve their goal orientation. This can imply that mobile-assisted learning could help students establish stronger beliefs in themselves to do the tasks. Using MALL, the students seemingly developed their learning goal orientation since the barriers of hard tasks did not demotivate them, and they expanded their efforts. Also, they felt comfortable enough with the MALL technology that they had a feeling of probability of achievement and accomplished all the tasks. It seems that learners do not usually oppose adding technology to current education since their lives are tangled with different sorts of technology, especially mobile phones. Hence, if sufficient chance is given to learners to provide them with technological resources in the process of language learning in general, they may become more goal-oriented, and this can be considered one of the most invaluable means of education for Iraqi EFL students.

Finally, to find out whether there is a relation between reading comprehension as a language communication skill and goal orientation as a reader-oriented variable, a Pearson correlation coefficient was run, which, in line with Kiragu et al. (2022), displayed a significant correlation between the two factors. Kiragu et al. (2022) also suggested that to improve reading comprehension, teachers need to help students develop mastery goal orientation. This is while Jalali et al. (2014) did not confirm the results of this study and evidenced that goal orientation reflects a small or no relationship with the performance and achievement of language learners in all four skills, including reading comprehension.

Overall, this study suggests that teachers try new technology-based methods of teaching reading, especially when it comes to lengthy, tedious texts. However, as Fox (2014) mentioned, we cannot phase out traditional methods, and the use of both conventional and modern methods could be a successful method for developing reading skill. This study also recommends teachers familiarize students with different ways of setting learning goals and teach them how to implement technological tools in learning communicative skills. Students can easily engage in out-of-class learning through their mobile devices and communicate what they've learned every day.

Disclosure Statement

The authors claim no conflict of interest.

Funding

The research did not receive any specific grants from funding agencies.

References

- Ahmadpour, L., & Yousefi, M. H. (2016). The role of mobile-assisted language learning on EFL learners' development of writing accuracy, fluency, and complexity. *Journal of Modern Research in English Language Studies*, 3(4), 105-118. <https://doi.org/10.30479/elt.2016.1581>
- Alm, A. (2015). "Facebook" for informal language learning: Perspectives from tertiary language students. *The EuroCALL Review*, 23(2), 3-18. <https://doi.org/10.4995/eurocall.2015.4665>
- Ames, C. (1984). Achievement attributions and self-instructions under competitive and individualistic goal structures. *Journal of Educational Psychology*, 76(3), 478-487. <https://doi.org/10.1037/0022-0663.76.3.478>
- Benson, P. (2013). *Teaching and researching: Autonomy in language learning* (2nd ed.). Routledge. <https://doi.org/10.4324/9781315833767>
- Botsas, G., & Padeliadu, S. (2003). Goal orientation and reading comprehension strategy use among students with and without reading difficulties. *International Journal of Educational Research*, 39(4-5), 477-495. <https://doi.org/10.1016/j.ijer.2004.06.010>
- Boustani, N., & Al Abdwani, T. (2023). The effect of music on the communication ability: A case of vocabularies. *Journal of Business, Communication & Technology*, 2(1), 1-12. <https://doi.org/10.56632/bct.2023.2101>
- Canagarajah, A. S., & Wurr, A. J. (2011). Multilingual communication and language acquisition: New research directions. *The Reading Matrix*, 11(1), 1-15.
- Chan, T. W., Roschelle, J., Hsi, S., Kinshuk, Sharples, M., Brown, T., Patton, C., Cherniavsky, J., Pea, R., Norris, C., Soloway, E., Balacheff, N., Scardamalia, M., Dillenbourg, P., Looi, C. K., Milrad, M., & Hoppe, U. (2006). One-to-one technology-enhanced learning: An opportunity for global research collaboration. *Research and Practice in Technology-Enhanced Learning*, 1(1), 3-29. <https://doi.org/10.1142/S1793206806000032>
- Chen, C. M., & Hsu, S. H. (2008). Personalized intelligent m-learning system for supporting effective English learning. *Educational Technology & Society*, 11(3), 153-180.
- Ciampa, K. (2012). Electronic storybooks: A constructivist approach to improving reading motivation in grade 1 students. *Canadian Journal of Education*, 35(4), 92-136.
- Duman, G., Orhon, G., & Gedik, N. (2015). Research trends in mobile assisted language learning from 2000 to 2012. *ReCALL*, 27(2), 197-216. <https://doi.org/10.1017/S0958344014000287>
- Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, 41(10), 1040-1048. <https://doi.org/10.1037/0003-066X.41.10.1040>
- Elliot, A. J., & Church, M. A. (1997). A hierarchical model of approach and avoidance achievement motivation. *Journal of Personality and Social Psychology*, 72, 218-232. <https://doi.org/10.1037/0022-3514.72.1.218>
- Ertem, I. S. (2010). The effect of electronic storybooks on struggling fourth-'graders' reading comprehension. *Turkish Online Journal of Educational Technology-TOJET*, 9(4), 140-155.
- Fox, S. (2014). Third wave do-it-yourself (DIY): Potential for presumption, innovation, and entrepreneurship by local populations in regions without industrial manufacturing infrastructure. *Technology in Society*, 39, 18-30. <https://doi.org/10.1016/j.techsoc.2014.07.001>
- Frohberg, D., Goth, C., & Schwabe, G. (2009). Mobile learning projects – A critical analysis of the state of the art. *Journal of Computer Assisted Learning*, 25(4), 307-331. <https://doi.org/10.5167/uzh-25270>
- Gholami, M. J., & Al Abdwani, T. (2024). The rise of thinking machines: A review of artificial intelligence in contemporary communication. *Journal of Business, Communication & Technology*, 3(1), 29-43. <https://doi.org/10.56632/bct.2024.3103>

- Golonka, E. M., Bowles, A. R., Frank, V. M., Richardson, D. L., & Freynik, S. (2014). Technologies for foreign language learning: A review of technology types and their effectiveness. *Computer Assisted Language Learning*, 27(1), 70-105. <https://doi.org/10.1080/09588221.2012.700315>
- Grimshaw, S., Dungworth, N., McKnight, C., & Morris, A. (2007). Electronic books: Children's reading and comprehension. *British Journal of Educational Technology*, 38(4), 583-599. <https://doi.org/10.1111/j.1467-8535.2006.00640.x>
- Hoi, V. N. (2020). Understanding higher education learners' acceptance and use of mobile devices for language learning: A Rasch-based path modeling approach. *Computers & Education*, 146, Article 103761. <https://doi.org/10.1016/j.compedu.2019.103761>
- Jalali, S., Zeinali, M., & Nobakht, A. (2014). Effect of goal orientation on EFL learners' performances in CBT and PBT across gender. *Procedia-Social and Behavioral Sciences*, 98, 727-734. <https://doi.org/10.1016/j.sbspro.2014.03.474>
- Kabilan, M. K., Ahmad, N., & Abidin, M. J. Z. (2010). Facebook: An online environment for learning of English in institutions of higher education? *The Internet and Higher Education*, 13(4), 179-187. <https://doi.org/10.1016/j.iheduc.2010.07.003>
- Kaplan, A., & Maehr, M. L. (2007). The contributions and prospects of goal orientation theory. *Educational Psychology Review*, 19(2), 141-184.
- Kiragul, T., Mugambi, D. K., & Kinai, T. (2022). Learning goal orientations as correlates of reading comprehension performance among secondary school students in Kiambu County, Kenya. *International Journal of Research and Innovation in Social Science (IJRISS)*, 6(8), 532-546.
- Kukulka-Hulme, A. (2009). Will mobile learning change language learning? *ReCALL*, 21(2), 157-165. <https://doi.org/10.1017/S0958344009000202>
- Kukulka-Hulme, A., & Shield, L. (2008). An overview of mobile assisted language learning: From content delivery to supported collaboration and interaction. *ReCALL*, 20(3), 271-289. <https://doi.org/10.1017/S0958344008000335>
- Li, R. (2022). Effects of mobile-assisted language learning on EFL/ESL reading comprehension. *Educational Technology and Society*, 25(3), 15-29.
- Lin, C., (2017). Learning English with electronic textbooks on tablet Pcs. *Interactive Learning Environments*, 25(8), 1035-1047. <https://doi.org/10.1080/10494820.2016.1242505>
- Little, D. (2007). Language learner autonomy: Some fundamental considerations revisited. *Innovation in Language Learning and Teaching*, 1(1), 14-29. <https://doi.org/10.2167/illt040.0>
- Liu, G. Z., Lu, H. C., & Lai, C. T. (2016). Towards the construction of a field: The developments and implications of mobile assisted language learning (MALL). *Digital Scholarship Humanities*, 31(1), 164-180. <https://doi.org/10.1093/lc/fqu070>
- Liu, P. L., & Chen, C. J. (2015). Learning English through actions: A study of mobile-assisted language learning. *Interactive Learning Environments*, 23(2), 158-171. <https://doi.org/10.1080/10494820.2014.959976>
- Lomicka, L., & Lord, G. (2012). A tale of tweets: Analyzing microblogging among language learners. *System*, 40(1), 48-63. <https://doi.org/10.1016/j.system.2011.11.001>
- Maehr, M. L., & Zusho, A. (2009). Achievement goal theory: The past, present, and future. In K. R. Wentzel & A. Wigfield (Eds.), *Handbook of motivation in school* (pp. 77-104). Taylor Francis.
- Mays, B. R., Yeh, H., & Chen, N. (2020). The effects of using audience response systems incorporating student-generated questions on EFL students' reading comprehension. *The Asia-Pacific Education Researcher*, 29(6), 553-366. <https://doi.org/10.1007/s40299-20-00506-0>
- Mazer, J. P., Murphy, R. E., & Simonds, C. J. (2007). I'll see you on "Facebook": The effects of computer-mediated teacher self-disclosure on student motivation, affective learning, and classroom climate. *Communication Education*, 56(1), 1-17. <https://doi.org/10.1080/03634520601009710>
- Miangah, T. M., & Nezarat, A. (2012). Mobile-assisted language learning. *International Journal of Distributed and Parallel Systems*, 3(1), 309-319. <https://doi.org/10.5121/ijdps.2012.3126>
- Midgley, C., Kaplan, A., & Middleton, M. (2001). Performance-approach goals: Good for what, for whom, under what circumstances, and at what cost? *Journal of Educational Psychology*, 93(1), 77-86. <https://doi.org/10.1037/0022-0663.93.1.77>
- Mitchell, K. (2012). A social tool: Why and how ESOL students use Facebook. *Calico Journal*, 29(3), 471-493. <https://doi.org/10.11139/cj.29.3.471-493>

- Miyamoto, M., & Nasu, M. (1995). *Tassei douki no riron to tenkai* [Achievement goal orientation theory and its applications]. Kanekoshobo.
- Motallebzadeh, K., Beh-Afarin, R., & Daliry Rad, S. (2011). The effect of short message service on the retention of collocations among Iranian lower intermediate EFL learners. *Theory & Practice in Language Studies*, 1(11), 1514-1520. <https://doi.org/10.4304/tpls.1.11.1514-1520>
- Nakayama, A., Heffernan, N., Matsumoto, H., & Hiromori, T. (2012). The influence of goal orientation, past language studies, overseas experiences, and gender differences on Japanese EFL learners' beliefs, anxiety, and behaviors. *Journal of Applied Language Studies*, 6(2), 19-39.
- Nesbit, J. C., Zhou, M., Mahasneh, R., & Yeung, P. (2009). *The goal orientation questionnaire (GOQ)*. Simon Fraser University.
- Ogata, H., Hui, G. L., Yin, C., Ueda, T., Oishi, Y., & Yano, Y. (2006). LOCH: Supporting mobile language learning outside classrooms. *Mobile Learning and Organization*, 2(3), 271-282. <https://doi.org/10.1109/ICALT.2006.1652595>
- Pachler, N. (2010). The socio-cultural ecological approach to mobile learning: An overview. In B. Bachmair (Ed.), *Media education in new cultural areas* (pp. 155-169). Springer.
- Pintrich, P. R. (2000). An achievement goal theory perspective on issues in motivation terminology, theory, and research. *Contemporary Educational Psychology*, 25, 92-104. <https://doi.org/10.1006/ceps.1999.1017>
- Purwaningrum, A. Y., & Yusuf, F., N. (2019). Students' voices towards the integration of MALL to promote autonomous language learning. In K. Liu & S. Liu (Ed.), *ICIET 2019: Proceedings of the 2019 7th International Conference on Information and Education Technology* (pp. 320–325). Fukuyama University Press. <https://doi.org/10.1145/3323771.3323823>
- Senko, C., Hulleman, C. S., & Harackiewicz, J. M. (2011). Achievement goal theory at the crossroads: Old controversies, current challenges, and new directions. *Educational Psychologist*, 46(1), 26-47. <https://doi.org/10.1080/00461520.2011.538646>
- Smiley, P. A., & C. S. Dweck (1994). Individual differences in achievement goals among young children. *Child Development*, 65(6), 1723-1743. <https://doi.org/10.1111/j.1467-8624.1994.tb00845.x>
- Solmaz, O. (2017). Autonomous language learning on Twitter: Performing affiliation with target language users through# hashtags. *Journal of Language and Linguistic Studies*, 13(2), 204-220.
- Taskiran, A. Gumusoglu, E. K., & Aydin, B. (2018). Fostering foreign language learning with Twitter: Reflections from English learners. *Turkish Online Journal of Distance Education*, 19(1), 100-116. <https://doi.org/10.17718/tojde.382734>
- Tedick, D. J., & Walker, C. L. (1995). From theory to practice: How do we prepare teachers for second language classrooms? *Foreign Language Annals*, 28(4), 499-517. <https://doi.org/10.1111/j.1944-9720.1995.tb00823.x>
- Tseng, W. T., Cheng, H. F., & Hsiao, T. Y. (2019). Validating a motivational process model for mobile-assisted language learning. *English Teaching & Learning*, 43(4), 369-388.
- Wei, L. (2012). Construction of seamless English language learning cyberspace via interactive text messaging tool. *Theory and Practice in Language Studies*, 2(8), 1590-1596. <https://doi.org/10.4304/tpls.2.8.1590-1596>
- Weinstein, C. E., Husman, J., & Dierking, D. R. (2000). Self-regulation interventions with a focus on learning strategies. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook on self-regulation* (pp. 727-747). Academic Press. <https://doi.org/10.1016/B978-012109890-2/50051-2>
- Yılmaz, F. (2016). Exploring the interaction of L2 reading comprehension with text- and learner-related factors. *Procedia- Social and Behavioral Sciences*, 232, 719-727. <https://doi.org/10.1016/j.sbspro.2016.10.098>

Appendix

Goal Orientation Questionnaire Sample (GOQ)

	1	2	3	4	5
	not at all true of me			very true of me	
Mastery-approach goals					
It is important for me to learn new things.	1	2	3	4	5

Performance-avoidance goals					
It is important that people do not see me fail.	1	2	3	4	5
Mastery-avoidance goals					
I must not disappoint myself.	1	2	3	4	5
Performance-approach goals					
It is important for me to do better than others.	1	2	3	4	5
Work-avoidance goals					
I avoid doing more work than is necessary.	1	2	3	4	5

IN PRESS