

## MALL Instructional Course Design: Constructing Out-of-Class Experience

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### Abstract

Mobile-assisted language learning (MALL) is a new channel of learning languages. The usage of MALL instructional design integrates mobile devices with educational scenarios of teaching foreign languages. The study explores the central issue of how MALL instructional course design could help students to construct an out-of-class MALL experience. The research investigates the practical characteristics of MALL instructional design, which lead to foreign language acquisition. The study had three objectives: to explore the perceptions of students and needs in MALL; to create a conceptual framework of MALL instructional course design; to summarize the results in pedagogical implications to the course. The data came from an exploratory study of employing MALL in instructional course design at the tertiary level within the first semester of 2021. This study analyses the feedback of 32 students about the effectiveness of the MALL activities and students' satisfaction. The research shows how student feedback stimulates investigation into MALL instruction and evaluation of its design. The researchers used qualitative and quantitative analyses. The results of the study, conducted in three stages, helped to develop a design framework. The research proved that designing the MALL activities supported interaction, communication, access to resources, and people within the network community practice. MALL course design promoted active collaborative learning that helped students to construct the MALL experience in the real-world environment. The researchers provide recommendations on combining various MALL facilities and channels of communication that mobiles afford.

**Keywords:** computer-assisted language learning (CALL), instructional design, mobile-assisted language learning (MALL), mobile devices, mobile learning

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## Introduction

The number of teachers using mobile-assisted language learning (MALL) has increased markedly. A lot of researches, devoted to this technology in education, appeared during the COVID time. A trend and a new approach elaborate on the use of mobile devices for language learning.

Researchers and practitioners suggest that MALL supports breaking down barriers, unfettered flow of information, frequent interaction, reflection, enjoyment, and personal gains. Students can use the possibilities offered by mobile technologies for easy access to information, promote the development of digital literacy and open the way to independent learning. Mobile devices allow the implementation of innovative teaching practices that we cannot usually experience with other learning tools (Arvanitis & Krystalli, 2021). Students are accustomed to multitasking, active, connected, and comfortable learning environment (Isamiddinova, 2019).

MALL involves multiple technologies, modalities, and methods (Kukulka-Hulme, 2021b). The use of mobile technologies can offer interesting, engaging, and motivating language learning activities (Kukulka-Hulme, Lee & Norris, 2017).

MALL has moved teachers and students out of the classroom setting into the real world. Using of mobile phones can provide a rich learning environment for learners (Azar & Nasiri, 2014). Teachers should reach this aim by using MALL instructional design. They can integrate mobile devices with educational scenarios of teaching foreign languages.

The research shows how MALL instructional design can enhance out-of-class foreign language learning. This study aims to investigate the effectiveness of MALL instructional design. The research had the following target questions: What are the elements of successful creation of MALL interactive activities? Does instructional MALL design improve language skills? How to construct an out-of-class MALL experience for students? How can MALL design support the motivation and collaboration of students? What are the benefits of this technology for learners?

The objectives of this study are to explore the perceptions of students and their needs in MALL; to create a conceptual framework of course design; to summarize the results in pedagogical implications to the course.

## Literature Review

### *Defining mobile-learning*

MALL is a subfield of mobile learning. Kukulka-Hulme (2021a) thinks that MALL is not a universal concept and has a relationship with the fields of e-learning as well as computer assisted language learning (CALL).

Mobile learning involves different concepts and terms. Arvanitis and Krystalli (2021) investigated trends of mobile assisted language learning from 2010 to 2020. They think Chinnery (2006) first mentioned this term, talking about using of mobile devices as a pedagogical tool for foreign language learning. Researchers give different definitions of mobile learning: any type of learning that takes place in learning environments and space that takes account of the mobility of technology, mobility of learners, and mobility of learning (El-Hussein & Cronje, 2010); any sort of learning that occurs when a learner is not at a fixed, predetermined location, or knowing that

happens when the learner takes advantage of learning opportunities offered by mobile technologies; a technology between e-learning and ubiquitous learning (u-learning) which support learning process (O'Malley, Vavoula, Glew, Taylor, Sharples, Lefrere, Lonsdale, Naismith, & Waycott, 2005; Arvanitis & Krystalli, 2021). MALL has three aspects: learning through mobile terminals, learning with students on the move, and learning through mobile content (Taylor, 2006; Arvanitis & Krystalli, 2021).

Kukulka-Hulme (2021b) uses the term *mobile pedagogy* for MALL to make explicit the role of teachers in the design and promotion of mobile activities that encourage students to engage in learning as a form of mobile inquiry. Mobile pedagogy includes informal learning without teacher involvement.

### ***The context of MALL***

The context of MALL is a significant construct that embraces the environment where students operate. Researchers defined two context-related perspectives on mobile learning: context-independent learning and context-aware (contextual) mobile learning (David, Yin, & Chalon, 2009; Palalas, 2011). Contextual mobile learning (CML) is a critical element of engaging learners in MALL activities. CML integrates the notion of situated learning with its emphasis on the authentic context and social interaction based on “activity in and with the world” (Lave & Wenger, 1991). According to the contextual approach, MALL is language learning enabled by the mobility of the learner and the location, and portability of handheld devices. MALL is human interaction across multiple situations mediated by mobile technology within a networked community of practice, embedded in the contexts, which are relevant, pedagogically sound and informed by real-life contexts (Palalas, 2011). The teachers can initiate the learners into a learning environment where they provide initial scaffolding and then gradually withdraw the support to allow learners to take charge of their learning (Park, 2011; Taj, Sulan, Sipra & Ahmad, 2016).

The context of MALL gives learners a first-hand experience. Students perceive mobile learning as a helpful learning system. They can use mobiles in three different modalities (Sam & Shalini, 2021): 1) asynchronous phone-assisted language learning (AMPALL); 2) synchronous mobile phone-assisted language learning (SMPALL); 3) teacher moderated synchronous mobile phone-assisted language learning (TMSPLL).

Palalas (2011) summarized that the main aims of creating a mobile-learning context are as follows:

- Enhance the motivation for learning through technology familiar to students, such as smartphones and tablets.
- Give more opportunities to students to develop all six communication skills.
- Encourage the use of the target language as a unique means of communication.
- Facilitate the teaching process through exploring, analyzing, discovering, and choosing activities that make sense in the real world.
- Enhance any type of interaction between real and virtual environments, between students in the same classroom but also with students in another classroom inside and outside boundaries.
- Promote pleasantly promote learning.

### ***Researches in MALL***

Buabeng-Andoh (2021) and Kukulska-Hulme (2021b) think that research into the determinants of mobile learning acceptance is in its infancy phase, even though the issue of technology acceptance in education has a long history.

Researches in MALL are mainly applied. Studies identify several significant themes in mobile learning studies: enhancing the learning experience; exploring affective factors in learning with mobile devices; investigating appropriate methods for evaluating learning in mobile environments; designing supportive, innovative educational practices; integrating mobile technologies with broader educational scenarios (Kukulska-Hulme, 2021b).

Isbell, Rawal, Oh and Loewen, (2017) investigated the experiences of learning a language on Duolingo. They also researched how certain MALL practices would foster an advanced form of self-study and self-regulated learning (SRL). Researchers used Nintendo DS as a neutral mobile platform for developing MALL activities. Isbell et al. (2017) adapted and transferred them for use on private mobile phones. Participants improved on L2 measures at the end of the study, and results indicate a positive correlation between the amount of time spent on Duolingo and learning gains.

Researchers developed a mobile concept mapping system that should facilitate knowledge construction (Hwang & Chang, 2021). Taj et al. (2016) conducted a meta-analysis of 13 studies of MALL between 2008-2015. Arvanitis and Krystalli (2021) made the analysis of MALL trends in academic studies from 2010 to 2020. Their findings confirm that teachers can use mobile phones, with their increasing capabilities to provide connectivity in a ubiquitous environment, as practical tools for delivering language content (Taj et al., 2016).

Sam and Shalini (2021) offered Technology Acceptance Model (TAM). TAM has three phases: system features capabilities, the motivation of learners to use the system, and actual system use. The system responds to how an external stimulus consisting of that existing features of system and its capabilities influence user motivation.

The research of Kartchava and Nassai (2021) analyses the role of corrective feedback in mobile technology-mediated contexts.

Erlam, Phip and Feick (2021) investigate the digital competencies for MALL and their connection to the everyday digital communication practices of language learners. Researchers illuminated the benefits of digital media for individualizing language learning and providing opportunities for social learning. Their research shows how digital media, especially mobile devices, can bridge learning inside and outside the classroom and provide opportunities for authentic interaction, creativity, and game-based learning (Erlam et al., 2021).

The researchers discuss the perspectives of employing MALL in the language classes at the tertiary level. The use of mobile devices for learning was minimal before the pandemic COVID 19 (Dashtestani, 2016; Nino, 2015). The scenario completely changed during the pandemic. Teachers started to practice this technology and design flexible programs for students (Nuraeni, 2021; Sam & Shalini. 2021).

The most recent studies are devoted to the adaptation of mobile learning (Moya & Camacho, 2021); challenges concerning specific subjects or groups of learners (Lee, 2021); mobile-assisted language learning in blended learning settings (Sato, Murase & Burden, 2020); research model approaches (Buabeng-Andoh, 2021; Burston, 2021); digital mobile skills (Lee, 2021), and attempts to develop an understanding of the process and products of mobile learning (Bernacki et al., 2020).

### ***Benefits and barriers to the use of mobile-assisted language learning (MALL)***

Recently, teachers and learners are experiencing a positive shift from CALL to another more efficient platform called MALL. MALL brings a tectonic shift from routine learning strategies to a technology-oriented approach to reconceptualizing the needs of students. This power explores the fundamentals of MALL and its application in foreign language teaching. The research of Sam and Shalini (2021) sheds light on the various advantages and limitations of implementing MALL devices like mobile phones, smartphones, and kindles in a virtual classroom context.

Different scholars considered several merits and barriers to applying MALL. Warschauer and Healy (1998) mentioned some beneficial aspects of MALL:

- 1) multimodal practice with feedback;
- 2) individualization in a large class;
- 3) pair or small group work on projects;
- 4) the fun factor;
- 5) variety of available resources and learning styles;
- 6) exploratory learning with a large amount of language data;
- 7) real-life skill building in computer use.

Lee (2000) suggested that this technology can contribute significantly to the learning process. Advantages include the following factors:

*Experiential learning* makes it possible for students to tackle a considerable amount of experience. Students become the creators of knowledge.

*The motivation* of students is increasing. The variety of activities makes them feel more independent and leads to self-directed learning. Learners can generate the activities by themselves.

A network-based instruction can help students strengthen their linguistic skills by positively affecting their learning attitude and by assisting them in building self-instruction strategies and *enhance student achievement*.

Students can use various *original study materials* 24 hours a day.

*Greater interaction*. Activities give students positive and negative feedback by automatically correcting their online exercises.

*Individualization*. Students can benefit from individualized, student-centered collaborative learning or from working at their own pace.

*Independent from a single source of information.* Learners have the chance to discover thousands of information sources. As a result, their education fulfills the need for interdisciplinary learning in a multilingual world.

*Global understanding.* Students study the language in a cultural context. An English Language teachers have to facilitate access to the web and make students feel like citizens of a global classroom, practicing communication on a worldwide level.

Researchers mentioned the primary beneficiary points for MALL: creating a better English communicative environment for students and improving the efficient teaching mode; creating a context for language teaching and providing flexibility to course content (Shyamlee & Phil, 2012).

Corgi (2021), examining the effect of mobile-assisted language learning on ability of students to master the English language structure, defined the following benefits of MALL:

1) MALL offers learners a perfect platform to improve their understanding of various language concepts. Learners can use their devices to investigate the concepts taught in class. They can access materials that further explain the concepts.

2) MALL makes it possible for learners to understand their knowledge gap. Students can handle the knowledge gap using devices. This gap they can identify when they are engaged in online discussions with peers.

3) Learners have to take control of their learning process and appreciate their ability to do their research using devices to master the language. Teachers have to ensure that information is available to learners and the MALL system is in line with the syllabus.

MALL fits nicely into the presentation, practice, and production paradigms. Language learning can present learning material in multimodal ways and create an environment that is conducive to a variety of learning scenarios as formal and informal learning (Jarvis & Achilleos, 2013). MALL affords give the option to engage students in group work and to present instructional material in an exciting way (Tai, 2012; Oz, 2015). Burston (2021) thinks that MALL allows students to create their learning framework in terms of time and place. Online learning makes language learning independent, self-directed, and autonomous (Arvanitis and Krystalli, 2021).

Dina and Cironei (2013) mentioned the following disadvantages of CALL:

- 1) deterioration of the teacher's role in the learning process;
- 2) division into small sections and well-delimited content leads to shortening the matter, favoring those students with analytic thinking, but not those with synthetic thinking;
- 3) controlling step-by-step student mental activity by the teacher stops them from developing creative abilities, entrepreneur spirit and initiative;
- 4) excessive individualization of learning can lead to denial of the teacher-student dialogue and the isolation of the learning process from its psycho-social context.

Yükselir (2017), in his meta-analysis, concludes that without longitudinal and cross-sectional studies about MALL, it is nearly impossible to say that MALL is more effective than other language teaching techniques.

Educators should consider the following limitations of MALL:

*1. Technical factors.* Internet data is critical in deciding the quality of learning using mobile devices. Mobile devices have a number of technical issues and difficulties: the lack of a single platform for application development, relatively small screen, uncomfortable keyboard with small letters, limited memory and data storage space, dependence on battery capacity, the need for adaptation of conventional electronic content to screens of mobile devices (Stockwell & Hubbard, 2013; Sam & Shalini, 2021), and the slow speed of Internet (Cicik, Irmawati, Adi, Wina & Syamsul, 2020).

*2. Pedagogical factors.* Types of learning activities that have proven their effectiveness in CALL are ubiquitous in mobile learning. As a result, in some cases, there may be a decrease in the effectiveness of mobile learning (Stockwell, 2013). Learners experience a lack of support and guidance in the process of learning. The deficiency of an explicit pedagogical framework might lead to a shortage of interest and reluctance in learners (Sam and Shalini, 2021; Cicik et al., 2020).

*3. Psychological factors.* The interface of a mobile device has significant differences from the interface of a computer. Students use mobiles primarily to achieve personal and social goals. They don't have a habit of using mobile phones much for studying (Sam and Shalini, 2021).

The reviewed literature provides the conceptual framework for task-based learning, the potential practice, and encouraging classroom interaction using MALL.

## Methodology

The researchers conducted this exploratory study at V. O. Sukhomlinskyi National University of Mykolaiv in the first semester of 2021. This study offered designed MALL activities that would promote out-of-class language practice. The planned course "Communicative Strategies of English" aimed to optimize the academic success of L2 master students. Teachers encouraged learners to use their mobiles to communicate by blogging and to write their reflections using Notes features. Students explored ESL pod, Business English Pod, TED videos, and audio recordings.

The data came from the feedback of 32 students and four teachers about the effectiveness of the MALL activities and students' satisfaction. Researchers used qualitative and quantitative analyses.

The researchers combined two goals in this study: the design of MALL and the development of an instructional design framework. There were three stages in the research: preliminary, enactment, and evaluation. Students participated in an online survey created by the researchers.

Table 1. *The on-line survey for students*

STAGE	QUESTIONS	CODE
Preliminary stage	Do you use your mobile phone for learning or leisure?	RQ 1
	Can mobile phones facilitate English language learning?	RQ 2
	Do you always have an Internet connection?	RQ 3
	Does mobile learning allow you to reach authentic English language material wherever you needed?	
Enactment stage	What language skills can you practice using a mobile phone?	RQ 4
	What activities should teachers adopt in the design of mobile learning activities??	RQ 5
	What applications and software are beneficial for learning English?	RQ 6
Evaluation stage	Is mobile learning time-efficient for you?	RQ 7
	What do you think of practical listening activities for a mobile phone?	RQ 8
	What is the effect of mobile learning on your communication with the teacher and other students?	RQ 9
	What kind of activities supports the mastering your language skills?	RQ 10
	Can it help you in real-life communication?	RQ 11
	What kind of practical activities do you prefer and why?	RQ 12
	Will mobile learning help you to get intercultural skills on the Global Net?	RQ 13
	How do you utilize mobile devices to co-construct a self-directed out-of-class mobile experience?	RQ 14

## Results

### *The preliminary stage*

In the preliminary stage, the researchers focused on understanding the needs of students in MALL. They also investigated the perception of MALL by practitioners who took part in the pilot-course. The researchers and practitioners discussed the structure of the course instructional design in two meetings. The results determined the socio-cultural and organizational the MALL intervention designed, which the researchers and the practitioners implemented in the next stage.

### *The enactment stage*

In the enactment stage, the researchers and practitioners designed and developed MALL learning objects. They created a conceptual framework as well as technology. The practitioners collaborated through online ZOOM meetings. They exchanged their expertise and feedback with researchers. The researchers worked in sharing the learning through collaborative practices including planning, researching, and problem-solving.

The students got their assignments and designed blogs. The researchers recorded students' feedback (online meetings and audio recordings), collected the data from practitioners, and analyzed it. The data determined the concept of the course design.

### *The evaluation stage*

Two previous stages produced contextually-grounded knowledge based on feedback from learners and practitioners. The investigation of students' mobile habits allowed us to reconceptualize the design approach of the course. The students defined the components and properties of MALL. The researchers summarized the results in pedagogical implications for the practice.

The findings presented below are selected verbatim quotes from students.

Table 2. *Selected verbatim quotes from students.*

STAGE	SELECTED VERBATIM QUOTES	CODE
Preliminary stage	I use my mobile to call my friends and check emails or Facebook. I communicate with my friends. I use my phone for leisure and work. It is your choice how to use your phone for fun or learning.	Q 1
	It would be helpful if it could help with my homework.	Q 2
	As usual, I have access to the Internet.	Q 3
	As usual, I make photos for my friends to send them. You can use pictures when you don't know an English word, and you want to explain something. I can listen to English radio channels or podcasts, and watch BBC videos.	
Enactment stage	I can practice pronunciation and vocabulary. Listening activities accounted for vocabulary.	Q 4
	The teachers should add exciting activities based on using famous social nets.	Q 5
	I can study a foreign language on YouTube and use particular websites to learn English You can find information online and use the audio Google app for learning English. I use online dictionary and translator for my iPhone. I can check the words when I do not know what people say. I use the site Lingualo Learn English and English Daily. I recommend using YouTube and iTunes for podcasts. We can use Memrise, TED, and Italki. To pass TOEFL I used Voxy and Lingvist. It is good to use applications: reDict, Google Translate, Merriam-Webster Dictionary, and WordBook – English Dictionary & Thesaurus. I use applications AnkiApp, Rosetta Stone, and Memrise to remember words. I use applications Flip and Learn, FluentU, and English Grammar in Use Activities to improve my grammar. I watch the applications BBC News and CNN News I communicate with native speakers in Italki.	Q 6
Evaluation stage	I can master the language any time when I am not busy. More expensive phones give more advantages for learning.	Q 7
	Explicit instruction of a teacher is the most important feature of mobile learning.	Q 8
	I think it is better to meet online with a teacher and other students. I can ask the meaning when I listen, and other students can help me with my task. They can help even over the phone. I like team assignments. It is better than I work isolated with my mobile phone. MALL determines the interference of teachers helping students. You can ask a teacher for lessons podcasts to help in learning.	Q 9
	I liked podcasts. I can listen to them anytime. I stop listening when I am unsure what it means and want to check the meaning of some words in an online dictionary. The most exciting task of MALL was when I made my project – a radio interview.	Q 10
	It helps to practice how to understand other people. We had to settle real-life problems connected to our program.	Q 11
	I am proud I created my project with other creative students. I enjoyed their partnership. I liked videos that showed cultural office behavior. Some tasks were easy. Assignments should be more complicated like real case studies. I like listening to podcasts that my teacher suggested, and friends found. When I did interviews for radio, different students used different recorders. I had all tools I needed for the assignment.	Q 12
	MALL gives the practice of intercultural communication.	Q 13
	MALL made me more responsible for my language learning. Now I understand how to organize my language learning using my mobile. It encouraged me to study more.	Q 14

	Using a mobile made my learning English easier.	
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The main characteristic of the created MALL course is the integration of students in the design of any student-centered instruction. The MALL course provided flexible learning across space, time, and context. Students understood the critical aim of MALL was to communicate in any life situation beyond the classroom

Students liked out-of-class practice and the opportunity to learn English whenever they wanted. In their training, the learners wanted to focus on listening comprehension, advanced vocabulary, particular terminology, pronunciation, and intercultural communication.

A majority of students liked the activities which engaged them in the learning process. They noticed that this course motivated them to study the language even without the presence of a teacher. The participants indicated that online meetings gave them the feeling of belonging to the community of practice they didn't have in other university courses. They could overcome the barriers to communication and get adequate language skills. Some learners experienced uncomfortable feelings of being socially distant from the teachers. They needed significant learning support from the teacher to promote language acquisition. Teachers had to keep tracking group work on projects to maintain a high level of engagement and to provide on-demand help via a network. The course provided the learners with many web-based and phone-based digital resources. The participants benefited from collaborative activities organized around mutual goals, and integrated via mobile devices. These results revealed the main characteristics of the practical course design.

During the course, the teachers encouraged students to use additional means such as dictionaries, glossaries, and digital translators to support communication or overcome miscommunication. Students also could use visual resources. They collected these resources according to their needs and availability. Most students indicated a willingness to select necessary applications and resources on their mobile phones. They recommend using YouTube, TED, BBC News, and iTunes for podcasts. Learners also found helpful audio flashcards and audio podcasts related to their needs and interests in language practice. Students experienced a variety of mobile resources autonomously. They expressed the need for teachers' assistance through the vast amount of information and wanted the learners' activities and materials organized around the tasks. According to this demand, the teachers organized language task-specific help and a selection of web-based language resources for MALL. The teachers scaffolding aimed to make students more responsible for their learning.

One of the course design features was the appropriate choice of authentic materials and reference sources for students. It gave an excellent gaudiness by well-designed tasks relevant to students' engagement and interests. *Stay connected with others* was an indispensable property of MALL design. It promoted the flexibility of interaction and expression within the web. Students could experience different modalities. They made records texts and audio, took photos, uploaded their interviews, created, and published their presentations using mobiles. All mentioned above created an authentic environment integrating all language skills.

Students generated audio-visual descriptions, audio repositories of English idioms, audio dictionaries, phone blogging, and video interviews. The tasks entailed comprehension practice of student-generated content. Most assignments included listening comprehension practice, followed by audio and video recordings simulating real-life communication. Students completed these tasks individually or collaboratively. Teachers kept the balance between the flexibility of individual work and with benefits of collaborative activities. The feedback showed that student-generated materials are an advantage of course design. The teachers engaged learners in meaning-making activities. It created a supportive and constructive environment. Learners were proud of completing their projects and collaborating with others. MALL helped them to comprehend the content of learning better and simplified the learning process.

Another characteristic of course design is communication in a real-life context. Context mediated meaning-making. Students could find visual and audio clues surrounding them in an authentic communication situation. Context made the interaction meaningful through cultural artifacts. It created the environment of language in action.

## Discussion

The study aimed to investigate the functional characteristics of MALL instructional design.

The researchers defined the main characteristics of effective instructional MALL design. The course instructional design should incorporate the following features: 1) task-specific directions and resources (audio podcasts and related text-based materials; a selection of device-specific applications or web-based tools for the creation of multi-media artifacts; 2) information on to the use of build-in CMC tools (audio podcasts and scripts) (Palalas, 2011); 3) information regarding the pedagogical approach and proven language learning strategies, partially student-generated (audio podcasts and scrips) (Palalas, 2011); 4) help options including communication with the facilitator and a class blog (Palalas, 2011); 5) proven linguistic references and language resources, including software and applications; 6) uploading and publishing tools for student-generated artifacts; 7) viewing options for collaboratively created databases; 8) repository of students' questions and impromptu reflections (Palalas, 2011); 9) summative evaluation of all the constituent parts of the suite (text-based survey). These findings are in agreement with the research of Palalas (2011).

The preliminary stage, this research faced the same problem as Isbell et al. (2017) had. Students thought that the private nature of mobile phone communication created barriers when they used personal mobile phones for learning activities. Sam and Shalini (2021) mentioned the same difficulties coursed by psychological factors.

Some learners also experienced difficulties in self-study and self-regulated learning at the enactment stage of the pilot study. They felt the lack of teacher guidance in the process of out-of-class learning. These limitations of MALL, called by Sam and Shalini (2021) pedagogical factors, became the central issue of teacher scaffolding. The teachers initiate the learners into a learning environment where they provide an initial frame and then gradually eliminate the support to allow learners to take charge of their learning (Park, 2011). The language task-specific help made students more independent and responsible for their learning. This research is in a common course

with the scientists who develop self-directed mobile language learning (Kukulka-Hulme, 2021; Corgi, 2021).

Analyzing students' feedback showed that learners are the critical link on the web. The research proved the importance input of students in the instructional MALL design of the course, as Kartchava and Nassai (2021) suggested. Through the observation of their activity and the dynamic process of learning the language espoused by that MALL solution that the study will seek to determine the optional instructional design for acquiring language skills (Palalas, 2011). These thoughts are in agreement with the findings of Kukulka-Hulme (2021). A learning design has to include the use of a mobile application as a task. The practitioners can detect an interest in some interpersonal and thinking skills that might support language acquisition.

The study revealed some affective aspects of learning linked to motivation. The research showed that students enjoyed the MALL experience. Learning the language became self-motivated and self-organized. These statements are similar to the thoughts of Cronje (2020), who thinks that the learners' activities aim to *explain, describe, develop, explore*, and combine with discipline-specific areas of common interest and concern, language skills, personal experience, and learner engagement.

The findings proved that MALL provides excellent benefits for EFL students and has the following teaching implications:

- 1) Teachers should facilitate students when using MALL technology and have to meet contradictions and confusions the learners may face.
- 2) Teachers must find a way to monitor and control the process of MALL.
- 3) The MALL system aims to help learners master their fluency in written and spoken English.
- 4) Teachers must show students how to work with and without a teacher, conduct projects, and use devices in group work and discussions.

## Conclusion

The research investigated how MALL instructional design can enhance out-of-class foreign language learning. The study defined the main characteristics of effective instructional MALL design that the course should incorporate. The findings offer suggestions for understanding the benefits, disadvantages, and challenges of embracing MALL as a method of teaching a foreign language.

The results show how students can construct an out-of-class MALL experience. The effective MALL design of the course offers flexible language learning, which has a perspective of being interactive, engaging, authentic, contextualized, connected, and supported by appropriate scaffolding. It provides a natural environment for language users. Students collaboratively construct real-life interactions. It helps them to see the language as an open system expended by MALL. This research shows how student feedback stimulates investigation into MALL instruction and evaluation of its design.

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