

Exploring the potential of MALL in teaching ELLs academic writing

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Abstract

As a consequence of the growing interest in digital technologies, a recent field of research has emerged, which investigates the use of recent technologies in language learning: Mobile Assisted Language Learning (MALL). Although research studies have demonstrated that mobile technology is an effective tool for improving different English language skills, the majority of MALL studies focus on vocabulary acquisition and speaking skills, whereas grammar learning and writing skills are underrepresented. As an English for Academic Purposes (EAP) instructor who seeks to engage her learners with the aid of MALL activities, especially given the current pandemic context, I was driven by the question: *What is the potential of MALL in teaching English Language Learners (ELLs) academic writing?* In light of the theoretical foundations of MALL (e.g., Ecological Constructivism) and the key issues with academic writing for ELLs, this paper reviews selected contemporary and empirical literature to explore the pedagogical issues and prospects of using MALL in teaching EAP writing to post-secondary level L2 learners.

Introduction

In today's highly digital world, technologies have become firmly embedded in our life to the point of normalization. Hence, 21st Century learners who have been called *digital natives* by Prensky (2001) are "technically proficient at using computers and mobile devices for many functions, including internet searches" (Gilbert, 2013, p. 129). With the widespread ownership of mobile devices, there is "an increasing interest for these devices to be used in an educational context" (Puga et al., 2015). The growing interest in



digital technologies led to the emergence of a recent field, which investigates the use of recent technologies in language learning: Mobile Assisted Language Learning (MALL). Although research studies have demonstrated that mobile technology is an effective tool for improving different English language skills, the majority of MALL studies focus on vocabulary acquisition and speaking skills, whereas grammar learning and writing skills are underrepresented (Viberg & Grönlund, 2012). In fact, in Burston's (2013) bibliography of MALL studies (1994–2012), only a small number of studies investigated the use of MALL to enhance writing.

Personally, I have had a positive experience with MALL for teaching academic vocabulary using a flipped approach and gamification via *Kahoot* or *Quizlet*. I used such MALL activities almost always in formal/informal settings to prep students for the unpacking of an academic reading that was subsequently used as a writing prompt. Hence, I wondered what research says about the potential of using MALL for academic writing. From that fundamental question, other related questions stemmed, including: How can MALL be incorporated in the EAP writing Classroom? What impact would MALL have on students' academic writing quality? How can MALL be used to facilitate students' learning rather than be implemented for its novel aspect? Can MALL help ELLs be more resilient when learning EAP writing?

Hence, this paper attempts to review selected contemporary, relevant, and empirical literature to explore the pedagogical issues and prospects of using MALL in teaching (EAP) writing to post-secondary level L2 learners and recognize the MALL technologies that are used to help ELLs with academic writing. The paper is divided into two parts: part one gives an overview of MALL and its theoretical foundations, while part two highlights key issues in teaching academic writing to ELLs and through a mini literature review of contemporary studies and peer-reviewed articles, it sheds light on the pedagogical issues and prospects related to teaching ELLs academic writing with MALL. Final remarks are made to conclude the paper.

Mobile Assisted Language Learning (MALL): A brief overview

MALL is a new learning approach using handheld and portable devices (e.g., smartphones, tablets, MP3/MP4 players, and personal digital assistants) to improve language learning (Kukulska-Hulme & Shield, 2008). The combination of Mobile learning (or M-learning) and Computer Assisted Language Learning (CALL) resulted in the emergence of MALL (Niño, 2015). According to Kukulska-Hulme and Shield (2008), M-learning is mediated via handheld devices; it is learning that is potentially available anytime, anywhere. The authors clarified that MALL is different from CALL due to “its use of personal, portable devices that enable new ways of learning, emphasizing continuity or spontaneity of access and interaction across different contexts of use” (p. 273). Mobile hand-held devices make language learning personal and



more convenient for language learners as digital technology is integrated in the language learning process, which according to Miangah and Nezart (2012) is possible due to the connectivity function of mobile devices. With MALL, language learners access learning material using wireless networks to connect and communicate with learning websites via short message service (SMS), mobile email, and learning apps.

According to Stockwell and Hubbard (2013), “MALL has so much in common with CALL and ML that it is best understood as mostly belonging to both disciplines rather than being set apart from them” (p. 5). However, the authors note that MALL incorporates a “MALL-specific” region as well (p. 5). In an effort to characterize MALL coherently, Stockwell and Hubbard (2013) viewed MALL based on a framework which divides the relevant issues across three domains: physical, pedagogical, and psycho-social (p. 3). These three categories are overlapping and interrelated (p. 3). More importantly, the authors recommend 10 principles as advice for implementing MALL technology applications, which are helpful when designing curriculum with MALL or reviewing studies on language learning that implement MALL.

MALL: Theoretical foundations

According to Palalas (2015), MALL draws on the theory and practice of CALL. Palalas noted that MALL refers to “studies that incorporate the use of handheld mobile devices for language learning (p. 30). In order to emphasize the role of mobile technology as an enabler, the term MALL has been modified to MELL–Mobile-Enabled Language Learning since it “brings into play the affordances and tools of mobile technologies thus enhancing the mobility and flexibility of teaching and learning” (p. 30).

The learning theory of MALL integrates the principles of Second Language Acquisition (SLA) and technology-assisted learning models as well as some aspects of the distance education theory (Palalas, 2015, p. 31). According to Palalas, MALL followed the same trajectory as CALL as the design of most of its learning applications adopted a behaviorist approach. However, MALL is constantly evolving; as “the MALL research and understanding of the affordances of mobile technologies progress, more communicative and integrative design can be observed that incorporate the practice of four language skills and the use of technology in real-world contexts” (Warschauer & Healey, 1998, as cited in Palalas, 2015, p. 31). When MALL adopted constructivist approaches, its technologies consisted of interactive student-centred, individualized, collaborative activities (Palalas, 2015).

An emerging theoretical framework, Ecological Constructivism, melds together the various principles of Social Constructivism, Sociocultural Theory, Ecological Linguistics, and Contextual and Situated Learning (Palalas, 2014). “This paradigm emphasizes active learning embedded in a real-life setting, the role of mobile devices in such context-embedded communicative practice, and the importance of contextual affordances”



(Palalas, 2015, p. 33). Palalas (2014) emphasized that when MALL practice is viewed through the Ecological Constructivism lens, it is based on:

- Learning mediated by communication and interactivity in social contexts
- Learning mediated by the tool
- Learning mediated by the context
- Learning mediated by the affordance in the context

Key issues with academic writing for ELLs

Due to the worldwide rapid advances in technology, the ability to write a second or foreign language has become an important skill more than ever. In fact, in many global contexts, in order for international applicants to be academically eligible for admission into college or university, they must prove that they have successfully achieved an English language proficiency requirement (e.g., TOFEL or IELTS); a major part of which is the academic writing skill assessment. EAP plays a significant role in advancing international students' academic success through English language and academic skills instruction. Many universities have established intensive EAP programs to support ELL international students.

In fact, Fox et al. (2014) stated that what typically characterizes EAP programs is that they include activities that simulate academic work to prepare students for disciplinary courses by means of a transfer of learning. In what relates to academic writing, such activities would include notetaking, research report writing or essay writing, and evaluating academic texts (p. 58). Hence, learning to write well is a need for all students in academic and second/foreign language programs, for through writing, learners not only generate new information but also transfer their knowledge (Weigle et al., 2003, p. 345).

Barkaoui (2007) noted that writing in a second language (L2) and foreign language (FL) appears to be the most challenging language skill for language learners to acquire (p. 35). Kruse (2003) researched the experience of writing a first-year university assignment and underscored that it is a complex process because student writers are expected to exhibit thorough understanding of the subject matter, to present their ideas logically, and to communicate efficiently using appropriate academic tone and language. In terms of teaching and learning writing, the construct can be considered from three main perspectives: the perspective of the text (surface features of writing), the writer (cognitive dimensions), or the reader (socio-cultural perspectives) (Cumming, 2001, p. 1).

The question is where does MALL fit into the demands of teaching and learning EAP writing? In fact, the portability and accessibility of mobile devices in this digital era have attracted many scholars to apply them in the educational settings. Applying portable technologies have been demanded by most of the modern learners who oftentimes are forced to study anywhere and anytime (e.g., at work, on the bus) (Evans, 2008,



p. 492). Students observed writing tasks in MALL as the most necessary.; “this emphasized their need to communicate with professors or friends through diverse media such as SMS, e-mail, learning management systems (LMS) such as their course website, social networking sites (SNS), and online chatting” (Park & Slater, 2014, p. 109).

Literature review

Kulkulka-Hulme (2020) mentioned that the technical limitation of mobile devices such as the small keypad and small screens can present a barrier to extensive writing, which seems to be a recurring finding/constraint with MALL (p. 3). Nevertheless, the more mobile technology advances, the more ESL/EFL researchers and practitioners explore new realms with MALL. Prompted by the question, *What is the potential of MALL in teaching ELLs academic writing?* this section reviews selected studies and research articles that investigated and experimented with the use of MALL to help ELLs improve their academic writing. Criteria for the selection method used includes the following:

- The reviewed articles are on research conducted in the area of MALL and teaching ESL/EFL academic writing skills in the post-secondary context. Other educational settings were excluded.
- All the articles reviewed are contemporary empirical studies (Nothing before 2010 was included.).
- They were electronically searched on the York University library database, Google Scholar, ResearchGate, or peer-reviewed online journals.
- The 7 chosen articles fall into 4 categories based on the four means of using MALL to teach or enhance ELLs’ academic writing skills.

Categorized by the type of MALL technology, the studies included here highlight the pedagogical issues and prospects of using MALL to teach ELLs academic writing. Based on this brief literature review, concluding remarks are made and certain takeaways are highlighted.

Mobile Web 2.0 technologies

Alsaleem (2013) investigated whether WhatsApp electronic journaling as a new application in smart phones has a significant effect on writing, vocabulary, word choice, and voice of undergraduate Saudi students. This quantitative quasi-experimental study used a sample of 30 EFL undergraduate female students enrolled in Languages and Translation at a Saudi university. Based on the results of the experiment that adopted a pretest and posttest design, it was found that students’ scores improved with the journaling as their choice of vocabulary and voice in writing improved. One important significance of this study is that it adopts connectivism theory for its theoretical base and recognizes the affordance of WhatsApp in connecting students via tasks like journaling. Hence, it sheds light on how this use impacts the writing skill development of ELLs in a tertiary-level educational context. According to the author, the unequal level of



difficulty in the writing prompt topics, the sample size, as well as the lack of a control group were the main limitations of the study. Still, an important missing piece of information is the English proficiency level of the students in the sample. Moreover, there is no mention of what type of English course the students in the sample were enrolled in.

Robles (2016) investigated the type of texts and text features produced by a freshman student after using mobile technology via podcasts to enhance the learner's development of second language writing skills. The Functional Systemic Linguistic (FSL), Genre Pedagogical Approach (GPA), and mobile learning concepts were employed as theoretical framework. The participant is a freshman student enrolled in an eight-week English narrative course in a private university of the Caribbean region. In order to extend learning outside the classroom, podcasts were designed by the teacher of the course, which were aimed at giving guidelines on the types of narrative texts supplemented by graphic organizers. The study implied that "the use of mobile technology could be incorporated into a traditional English class, specifically the use of genre approach to work with writing skills. The analysis of the texts produced by the student showed an improved use of the language as well as some progress in the organization of the stages of the genre structure" (p. 199). Hence, the construct of writing was evaluated from the perspective of surface features as well as the process of writing. According to Robles, the podcasts contributed to making the student a more independent learner as it motivated her to regulate her learning pace and identify her weaknesses. However, one significant limitation of this study is that it involved one participant, which makes its findings difficult to generalize.

Social networking services

In an empirical study by Lee and Kim (2016), the authors explored the positive learning effect of formulating English sentences via Social Network Service (SNS; *KaKaoTalk*) on less proficient L2 university students' (LPSs') writing. The application was utilized as a tool to create a less threatening environment for learners by linking in and out of class activities in a multimodal learning environment to teach writing to less proficient Korean university students. The authors concluded that "it is not surprising that a mobile-based social media platform can influence the way people communicate with each other and construct their learning process to meet their objectives" (p. 74). In this case of MALL application, learning was mediated by communication and interactivity in social contexts (Palalas, 2014). In fact, the researchers concluded that *KaKaoTalk*-based writing activities not only increased the learners' level of motivation and involvement, but they also fostered the learners' writing performance through collaborative writing, revising sentences, adding words, and monitoring their own or peers' writing.



Mobile apps

Engin and Donanci (2014) described how they leveraged students' interest and enthusiasm towards the use of mobile technology such as smart phones, iPads, and other tablets to create a flipped classroom in an academic writing course by using an iPad application called Educreations (www.educreations.com). The authors chose a flipped approach due to its several affordances, but they also mentioned that "flipping the classroom builds on the already existing mobile technological tools which students use outside the classroom" (p. 94). Using a flipped approach via mobile technologies makes it convenient for the students to watch and listen to the teacher as many times as they need, which helps to reinforce their learning and support those of them who are more challenged by the writing tasks (p. 95). The result showed positive feedback from the 40 students who participated in the survey. Most of the comments were related to the convenience of the flipped approach and how the iPad application catered for different learning styles. The flipped environment was a motivating factor for the students, yet the authors did not show how exactly Educreations helped improve the students' academic writing skill.

Abd Karim and Abu (2018) investigated whether the use of the Mobile-Assisted Mind Mapping Technique (MAMMAT) can be an indicator of pre-writing ability and writing proficiency level. A sample of 23 undergraduate students enrolled in a writing course at a selected university was given a pre-test primarily to determine their pre-writing ability and writing proficiency. The study was conducted using a quantitative research design to measure the effects of using MAMMAT on students' argumentative writing skills. Quantitative data were collected using the pre-test post-test with the experimental research design. Before the application, the purpose of the study and expectations from the students during the experiment process was explained to the students. The students were trained on the use of *MindMup*, online mind mapping by using their mobile phone to generate, develop, and organize essay outlines in the writing class. Hence, learning was mediated by the tool (Palalas, 2014). Findings of the study suggested that *MindMup* helped increase students' confidence and boosted their critical and reflective thinking as it assisted them in generating complex ideas for their essay. The construct of writing in this study was seen from the perspective of the text as well as the writer and reader (Cumming, 2011). The findings also indicated that the potential of mobile learning and mind mapping in teaching ESL writing is promising.

Combination of MALL technologies

Osman and Chung (2011) described a 38-day pilot test of a combination of mobile phones, SMS, and a wiki to support the collaborative learning of L2 English by 26 university students compared to a control group of 35. The study showed that the writing of the experimental group was better than that of the control, although



the study does not clearly specify how. The findings also suggested that students in the experimental group did not like to use a wiki for collaborative learning, and they much preferred working from home on desktop PCs to using mobile phones anywhere. The authors explained that Malaysians are not well acquainted with wiki technologies; hence, its use had a negative effect on the participants' learning experience. However, the authors did conclude that the use of mobile phones with suitable learning activities is recommended as it helps improve the participants' learning experience. This is in line with one of Stockwell and Hubbard's (2013) principles for implementing technology applications, namely, principle 6: "Be aware of language learners' existing uses and cultures of use" (p. 9).

Conclusion

The studies and articles reviewed suggest that regardless of the MALL technology, teaching with MALL has been more effective than teaching with traditional approaches alone. Many of MALL's affordances (Palalas, 2014) have materialized in the above small number of reviewed studies. When used to teach EAP to ELLs, MALL exhibited many of those features (e.g., personalized learning, multimedia, and engagement) that are useful in the classroom in addition to giving immediacy for learners to write anytime anywhere. Based on the reviewed studies and articles, MALL also offered learners the opportunity to be autonomous and engaged in collaborative environments to interact with peers and educators via written text messages on different social applications. Although the MALL technologies mentioned in the review were designed to impact the teaching and learning of the construct of writing, it was not always clear from which perspective (i.e., text, writer, reader) the construct was being evaluated to measure its impact, nor was there always clear criteria for measuring the writing improvement. More importantly, details on pedagogy are often missing in most of the studies reviewed, which limits the validity of their findings. The studies reviewed did not focus on the constraints involved in implementing MALL in an EAP course to teach ELLs academic writing. Stockwell and Hubbard's (2013) principles were not all adopted; also, it cannot be ascertained that they were implemented.

Despite their limitations, the reviewed studies and articles indicate that MALL technologies showed promising results when integrated in the process of teaching ELLs academic writing. Thus, there seems to be a good potential for using MALL to develop ELLs academic writing. The more mobile technology advances, the more ESL/EFL researchers and practitioners explore new realms within MALL.

Key takeaways and the way forward

- The use of MALL in the instruction of academic writing (EAP) is an underrepresented and under researched area.
- Empirical studies lack the use of mixed method research approaches.



- When designing student-centred MALL activities to develop ELLs' academic writing skills, approaches fostering active learning in student-centred environments, (e.g., Constructivism and Ecological Constructivism) as well as MALL design principles, should be taken into consideration especially with the current changes in today's classroom.
- This brief literature review could be extended to shape research proposals or a curriculum design study that adopts MALL for academic writing.
- Research into MALL in the Canadian post-secondary context have been limited by school policies, teachers' lack of training and time restraints, and class management challenges (See Grimshaw et al., 2017). Post-pandemic research should be able shed light on the potential of using MALL for EAP purposes in general and for academic writing more specifically.
- Further empirical studies need to be reviewed in terms of MALL's more current design principles and emerging theoretical framework since the medium and/or use of MALL has been changing rapidly.

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