Proceedings

IEEE 20th International Conference on Advanced Learning Technologies

ICALT 2020

Proceedings

IEEE 20th International Conference on Advanced Learning Technologies

6–9 July 2020
Online

Organized by
The Institute of Education at the University of Tartu, Estonia

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IEEE computer society

BMS Part Number CFP20261-ART
ISBN 978-1-7281-6090-0
ISSN: 2161-377X

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Preface

The International Conference on Advanced Learning Technologies (ICALT) is an annual conference organized by IEEE Computer Society and IEEE Technical Committee on Learning Technology. It aims to bring together people who are working on the design, development, use and evaluation of technologies that will be the foundation of the next generation of e-learning systems and technology-enhanced learning environments. After its kick-off as IWALT in Palmerston North, New Zealand (2000), ICALT has been held in Madison, USA (2001), Kazan, Russia (2002), Athens, Greece (2003), Joensuu, Finland (2004), Kaohsiung, Taiwan (2005), Kerkade, The Netherlands (2006), Niigata, Japan (2007), Santander, Spain (2008), Riga, Latvia (2009), Sousse, Tunisia (2010), Athens, Georgia, USA (2011), Rome, Italy (2012), Beijing, China (2013), Athens, Greece (2014), Hualien, Taiwan (2015), Austin, USA (2016), Timisoara, Romania (2017), Mumbai, India (2018), and Maceió, Brazil (2019). The 20th IEEE International Conference on Advanced Learning Technologies (ICALT 2020) is held online due to COVID-19 pandemic, organized by the Institute of Education at the University of Tartu, Estonia.

This year, the ICALT conference was structured around 15 tracks on various thematic topics, including: Technologies for Open Learning and Education; Adaptive and Personalised Technology-Enhanced Learning; Wireless, Mobile, Pervasive and Ubiquitous Technologies for Learning; Digital Game and Intelligent Toy Enhanced Learning; Computer Supported Collaborative Learning; Big Data in Education and Learning Analytics; Technology-Enhanced Science, Technology, Engineering and Math Education; Technology Enhanced Language Learning; Technology Enabled Learning of Thinking Skills; Technology Supported Education for People with Disabilities; Artificial Intelligence and Smart Learning Environments; Augmented Reality and Virtual Worlds in Education and Training; Motivational and Affective Aspects in Technology-enhanced Learning; Technology-enhanced Assessment in Formal and Informal Education and a Doctoral Consortium.

This year ICALT 2020 received 171 papers from 40 countries. All submissions were peer-reviewed through a double-blind review process by an international panel of at least three international expert referees and decisions were taken based on assessing research quality. We are very pleased to report that the quality of the submissions this year turned out to be very high. A total of 33 papers were accepted as full papers which is around 19.3% acceptance rate. Furthermore, 54 papers were accepted for presentation as short papers, 26 as discussion papers and 6 papers were selected for the Doctoral Consortium.

We acknowledge the invaluable assistance of the track chairs, the track program committee members and the additional reviewers, who are named on another page. Most reviewers opted to provide detailed and constructive comments which are valuable for the authors to continue improving their papers, even if their submissions were not selected for the conference.

With all the effort that has gone into the process, by authors, reviewers and track chairs, we are confident that the ICALT 2020 proceedings this year will immediately earn a place as an indispensable overview of the state of the art and will have significant benefits to the research community in the longer term.

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Editors

July 2020

2020 IEEE 20th International Conference on Advanced Learning Technologies (ICALT)

ICALT 2020

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Students' perceptions towards mobile learning in an English as a foreign language class

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Abstract–Emerging mobile pedagogy for English as a foreign language teaching makes portable devices a potentially beneficial tool for learning a foreign language. However, to date, there has been relatively little research on learning the relationships between Mobile-Assisted Language Learning and university students' perceptions of this innovative teaching approach. In this paper, some of the existing research on the topic of mobile learning is reviewed to connect language learning, educational technology, and perceptions of learners towards the use of mobile technology to support language learning. The 1st-year students in the Germanic Philology Department at Sumy State University, Ukraine, were first exposed to a MALL experience, and then asked to express their thoughts on the incorporation of mobile devices into the language classroom. Research findings revealed overall positive attitudes and perceptions amongst the students surveyed. However, some technical and digital literacy challenges emerged during the intervention. Despite some constraints, the university students majoring in English indicated their readiness for mobile assisted learning. The learning/teaching materials elaborated for the study might be useful for practitioners and researchers in the field of mobile pedagogy for EFL teaching.

Keywords: students' perceptions, m-learning, mobile assisted language learning, mobile pedagogy, higher education.

I. INTRODUCTION

Mobile devices are transforming the way we live, work, and learn. They are becoming a useful tool for English language teaching and learning anywhere anytime. As a result, there is a rapidly growing body of theoretical research on Mobile-Assisted Language Learning (MALL) attempting to prove its educational value [1, 2, 3, 4, 5, 6, 7].

The aim of the research was to investigate the perceptions of tertiary students on effectiveness of integrating mobile phones with teaching-learning activities in the EFL classroom in the Ukrainian context after a 10-month intervention period. The hypothesis of the research was the following: *University undergraduates have positive perceptions using relevant mobile and software applications to support their learning activities in the EFL classroom.*

The research objectives were to understand students':

- ✓ perceived value of mobile technology in assisting EFL learning activities;
- ✓ view of MALL tasks appropriateness to develop four foundational language skills: reading, listening, writing, and speaking; as well as some key soft skills;
- ✓ perceived contribution to their own learning when using mobile devices in the EFL classroom;
- ✓ overall satisfaction associated with mobile learning.

Therefore, the focus of this project was to explore university students' perceptions, to describe their experiences, and to recommend appropriate ways as to how mobile learning can be used to improve the EFL instruction.

II. ADVANTAGES AND CHALLENGES OF MALL

MALL has been topical since the 2000s [1, 8]. The term is used to refer to language learning that is enhanced through the use of a handheld mobile device [2]. A further definition of MALL is given by A. Kukulska-Hulme who considers that "MALL differs from Computer-Assisted Language Learning (CALL) in 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" [6 p. 3701]. According to Chaka [7], the future of language learning lies more with MALL than CALL. This conclusion is based on the main features he presents as the distinctive characteristics and, therefore, advantages of MALL, such as: *connectivity, ubiquity, portability, access, handheldibility, convergence, multifunctionality, cross-platform blending, optionality, convenience; accessibility, availability, affordability, context-awareness, personalization, and flexibility.*

A significant aspect of MALL is mobile pedagogy [3]. Its basic principle is the crucial role of a teacher in the process of self-directed learning and language learner autonomy. Mobile pedagogy for ELT aims to enhance the mobile experience for learners, to share knowledge with educators and elaborate some appropriate pedagogical strategies to make m-learning more efficient in teaching EFL.

It is also important to point out that to be successful in language learning and life, in general, adult learners need to be proficient not only in hard (technical) skills but also in soft (transversal) skills. The techniques used in the English classroom often involve the activities that develop soft skills. They include collaboration, active listening techniques (i.e. emotional intelligence), time management, creative writing, critical thinking, problem solving skills, etc. Thus far, MALL tasks should not only be aimed at the EFL proficiency but

2161-377X/20/$31.00 ©2020 IEEE
DOI 10.1109/ICALT49669.2020.00078

also provide opportunities for the acquisition of soft skills in an integrated way at the level of higher education.

III. Students' perceptions towards the usage of mobile devices for learning in the EFL classroom

To date, sophisticated technology has the continual impact on learning EFL. However, as discussed above "technology can only be as good as the pedagogy behind it" [1 p. 4]. According to Yelland [8] cited in [9] "learning with technology needs more than making learning activities digital", it is also about creating "contexts for authentic learning that use new technologies in meaningful ways to enhance communication and dissemination of ideas". In this light, the didactical use of mobile devices is crucial for the EFL learning process to enhance positive experiences and perceptions of learners. Consequently, arguments in favour of as well as against the incorporation of mobile technology in the language classroom were studied and analyzed during the intervention in order to answer the research question and address its subthemes.

IV. Methods

A. Sample

The study participants were 3 groups of 1st-year undergraduate students enrolled in Translation Studies over a period of 3 academic years, i.e. 13 students (12 women, 1 man) in 2017, 14 students (13 women, 1 man) in 2018, 16 students (14 women, 2 men) in 2019. So, 43 subjects in total. At this point, it is important to highlight that all undergraduates (N=75-80 yearly) learn English according to the Department Unified EFL Curriculum. Every year one academic group was chosen as a sample in order to ensure reliability and validity of the research data.

B. Research Design

In order to avoid collecting undergraduate students' abstract subjective opinions about the use of mobile technology, they were provided with the first-hand experience with mobile-assisted tasks before gathering their perceptions. To achieve this objective, there were designed teaching materials and MALL tasks in line with the topics of the Translation Studies Department Unified EFL Curriculum. It aimed at honing four foundational language skills (reading, writing, listening, and speaking), as well as some key soft skills. Secondly, a number of mobile and software applications, as well as a social media platform Graasp were used to support EFL learning activities along the way. The applications used during the intervention were: Google Docs, LearnEnglish Podcasts, iMovie, VoiceThread, Camtasia, Speak English Pro: American Pronunciation APK, English Pronunciation Practice for Beginner APK. Thirdly, in terms of four academic modules during two semesters the 1st-year students were required to present 4 thematic projects, created with the help of the applications mentioned above. The project topics were: *My Family Tree, My Dream House, My Alma Mater. My Typical Working Day and Day off, My Study Habits and Strategies, My Most Memorable Trip.*

C. Data Collection

To obtain informed testimonials and test the hypothesis, data were collected with two self-report questionnaires, which were originally devised for this study and were based on a thorough theoretical review. These questionnaires were designed to collect both qualitative and quantitative data. The aim of combining quantitative and qualitative approaches was to maximize both reliability and validity.

The 1st questionnaire '*Students' Acceptance and Use of Mobile Technology before the MALL Course'* consisted of 20 questions. It provided demographic data, identified students' mobile phone usage habits, gave a deeper understanding of students' current acceptance of mobile devices in an academic setting, as well as addressed their readiness for m-learning. The theoretical background of this questionnaire is the Unified Theory of Acceptance and Use of Technology (UTAUT) formulated by V. Venkatesh [10].

The 2nd questionnaire *'Students' Perceptions of Integrating Mobile Technology to Support EFL Learning Experience Inside and Outside the Classroom'* was aimed at analyzing the educational value of integrating self-paced MALL into language instruction. Students' perceptions toward the effectiveness of using electronic gadgets (mobile phones/tablets) with teaching-learning activities helped us better understand this issue in the Ukrainian context. The questionnaire was grounded on Constructivist Theory and Vygotskian Sociocultural Theory. It consisted of four sections to respond to four subthemes:

Subtheme 1 Students' perceived value of mobile technology in assisting EFL learning activities.

Subtheme 2 Students' view of MALL tasks appropriateness to develop four foundational language skills and soft skills.

Subtheme 3 Students' perceived contribution to their own learning when using mobile devices in the EFL classroom.

Subtheme 4 Students' overall satisfaction associated with mobile learning.

The links to the Google Form were shared with the students via email upon completing the English course. The web surveys were accessible for a week. All research participants gave informed consent to be part of the study.

D. Data Analysis

The data were quantitatively analyzed using SPSS for descriptive statistics. This enabled to classify students' responses, and construct a holistic picture of what was observed. Whereas students' answers to the open-ended questions were analyzed by qualitative content analysis. It provided insights into the problems of mobile learning in higher education; helped to develop ideas for future mobile assisted tasks based on the students' attitudes, experiences and perceptions towards the integration of mobile devices in EFL classroom. Finally, it helped to uncover trends in students' perceptions about their MALL experience and dive deeper into the research problem.

V. RESULTS

According to the results of the 1st questionnaire the research subjects have an appropriate level of acceptance and use of mobile technology to do the EFL MALL course. The analysis of the 2nd questionnaire results is presented according to the Subthemes. The *Subtheme 1* students' answers indicate that 100% students are pro mobile learning.

Regarding the MALL tasks appropriateness to develop language skills and soft skills (*Subtheme 2*), almost half of the undergraduates indicated they improved their receptive skills (i.e. reading, listening) more than their productive language skills (i.e. writing, speaking). This case demonstrates the need for better mobile learning strategy for enchancing speaking ability, as well as higher quality of software and mobile applications.

Turning now to the experimental evidence on students' perceived contribution to their own learning when using mobile devices in the EFL classroom (*Subtheme 3)*. Almost 80% of those who responded agreed to have made progress in learning English using mobile gadgets.

Meanwhile, it is important to highlight that almost 70% of the respondents faced some challenges during the MALL course. These can be categorized as *(1) technical* and *(2) digital literacy constraints*. Describing the first ones, students reported on connectivity challenges and integration issues between the hardware and the software of the gadget, as well as small screen sizes with poor resolution, limited memory storage, and short battery life of a mobile device. The second category of challenges comprised the issues as lack of digital skills to use Trello, Graasp, VoiceThread, Google Docs, and an array of mobile applications while taking part in MALL tasks, making voice presentations and creating video projects.

Subtheme 4 used a self-report questionnaire to investigate about the learners' overall satisfaction with mobile learning. What stood out was the high rate of students (69.2%) who believed that using mobile devices in class made language learning feel more real and engaging. The students believe that m-learning increases their motivation to attain proficiency in a foreign language.

VI. DISCUSSION AND CONCLUSIONS

The present study sought to investigate the students' perceptions toward using mobile devices with teaching-learning activities in the EFL classroom. The mobile assisted tasks involved students doing classroom tasks and activities, homework, and self-paced study. The results of qualitative and quantitative analyses revealed that even though students' reported on several technical constraints and digital literacy challenges that influenced their use of mobile devices for educational purposes, their perceptions were overall positive. Most of the students indicated that they felt that they had contributed to their language learning during the study. Therefore, the hypothesis of the research is confirmed.

Secondly, most of the students recognized that having used mobile devices to perform MALL tasks inside and outside of the language classroom made the learning process more authentic, and as a result, more motivating. It is worth mentioning that the overwhelming majority of the students indicated that mobile-assisted tasks helped them develop not only their language skills but also some transversal skills (positive attitude, interpersonal skills, teamwork). Assumably, it became possible due to the design of enriching language learning experiences during the intervention. This is consistent with A. Kukulska-Hulme's [3] approach to mobile pedagogy for English language teaching.

Finally, it was observed that the incorporation of creative and challenging MALL tasks raised students' overall satisfaction associated with mobile learning. Currently, mobile applications are mostly used for reading, grammar, vocabulary, spelling, and pronunciation activities. The basic principles of their creation are in line with the behaviorist learning theory or transmission model, which supports memorization by repetition and drills. In contrast to behaviorism, mobile assisted activities elaborated during the intervention were aimed at fostering student social interaction in linguistic activities. Consequently, the teaching approach used in this study was based on the foundations of constructivism and Vygotskian sociocultural theory.

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