The Effect of Using Edmodo in Teaching English Courses on Developing the Trend Towards 21st Century Skills Among English Courses' Learners

Rami Aljamaeen[a], Radwan Abusaif[b], Mohammed Mahmoud Humiedan[c], Mozaffar Mansoor[d], Ahmed B. Metwally[e], and Hayah M. Abouelnaga[f], [a]Computer Department, Deanship of Preparatory Year and Supporting Studies, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia, [b,c,d,e,f]College of Applied Studies and Community Service, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia

This study examined the Effect of Using Edmodo in Teaching English Courses on Developing the Trend Towards 21st Century Skills among English courses' learners. The perceptions of students towards using Edmodo in teaching was examined using an experimental design of online tests and a scale following the interventions. The study sample comprised 60 randomly selected Jordanian students who study English courses in the English language centre. The results show noteworthy academic performance and 21st century skills of students after the interventions. This study proposes the examination of the impact of other learning platforms on teaching other courses in future studies.

Key words: *Edmodo; 21st Century Skills; Teaching English Courses and E-learning platforms*

1. Introduction

Communication technologies and social networks have revolutionised opening fresh prospects in education system development (Berraies, 2019; Kalolo, 2019; Kumari, 2018; Latchem, 2018; Zhao et al., 2018). Notably, it was mentioned in Clark and Berge (2005) that the extensive access to knowledge today calls for fresh teaching ways that enable self-learning among students via online resources. With the application of technology in education, both students and teachers can address the challenges associated with learning especially in terms of times and locations, in much easier manner. Terry and Doolittle (2006) indicated the ability of students in accessing their class from various locations and times through technology. In any education system, Tarun (2019) mentioned information technology as an integrated component. Relevantly, among the popularly adopted in the process of education is the Edmodo platform, which, as described in Cheong (2010), comprises an academic communication platform which enables teachers to present their courses online. The platform also provides linkage between teachers and students and their parents.
E-learning entails the usage of communication and information technologies in gaining access to online teaching and learning resources (Al-araibi et al., 2019). Equally, it encompasses usage of communication technologies and information in numerous processes of education to improve and support learning in higher education institutions and as an accompaniment to traditional learning or as a blend of the two methods (Arkorful & Abaidoo, 2015).

In the process of e-learning, the main features are the internet, learning resources and global sharing, knowledge flow and information broadcasts via the use of online courses (Alqahtani, 2016). Another main feature of e-learning is learning flexibility through a computer-generated atmosphere that addresses the issues of time and distance (Arkorful & Abaidoo, 2015).

To face difficult higher education coursework successfully and a globally competitive labour force, classroom environments must be aligned with real-world environments (Learning, 2015). It will take leadership skills, creativity, social responsibility, innovation, and other 21st century skills to be able to learn and improve work skills effectively. (Humburg & Van der Velden, 2017; Reimers & Chung, 2019).

The P21 Framework for 21st century learning was established by education experts, business leaders and educators to define and illustrate the skills, knowledge, expertise and support systems, that are necessary for students to be successful in citizenship, work, and life (Kids, 2019). All the elements of the Framework are vital for ensuring 21st century readiness for students (Kids, 2019). Figure 1 shows the Framework for 21st century learning.

Figure 1: The 21st century Learning Framework (Kids, 2019).

Furthermore, in educational institutions, the application of information systems allows organisations to increase their efficiency through process improvement. Among students, the wealth of knowledge leads to the need for consistent upgrade and training of skills. Through e-learning, lifelong learning becomes a part of life of the student, and it also eradicates the need for the student to study overseas, while providing the student with a more flexible class schedule (Koç et al., 2016; Viberg & Grönlund, 2017).

As an interactive learning environment, the e-learning platform comprises the application of internet technology, in addition to the application of electronic content management systems and social networks. Such an environment allows teachers to issue lessons, dispense roles, allocate duties, and split students into working groups. E-learning also allows exchange of opinions and ideas between teachers and students, sharing of content, use of educational activities, and communication between teachers and students via numerous technologies. Through e-learning, teachers could administer electronic exams, while parents could communicate with teachers and see their children's results, facilitating the attainment of educational outputs of high-quality (Arkorful & Abaidoo, 2015; El-Bahsh & Daoud, 2016; Kumar Basak et al., 2018).

As an academic communication application, Edmodo provides effective content-management systems and integrated learning (Cheong, 2010). This secure application is free, providing services for teachers, students, and parents. With Edmodo, the user can securely and easily connect, cooperate, discuss, and share educational content. Meanwhile, lessons are provided to learners through teachers' online accounts. In the Edmodo platform, accounts for teachers, for learners, and

for parents are the three types of accounts provided, and each group of users utilises the platform to cater to its needs within its interest domain (Evans, 2008; Fryer, 2016).
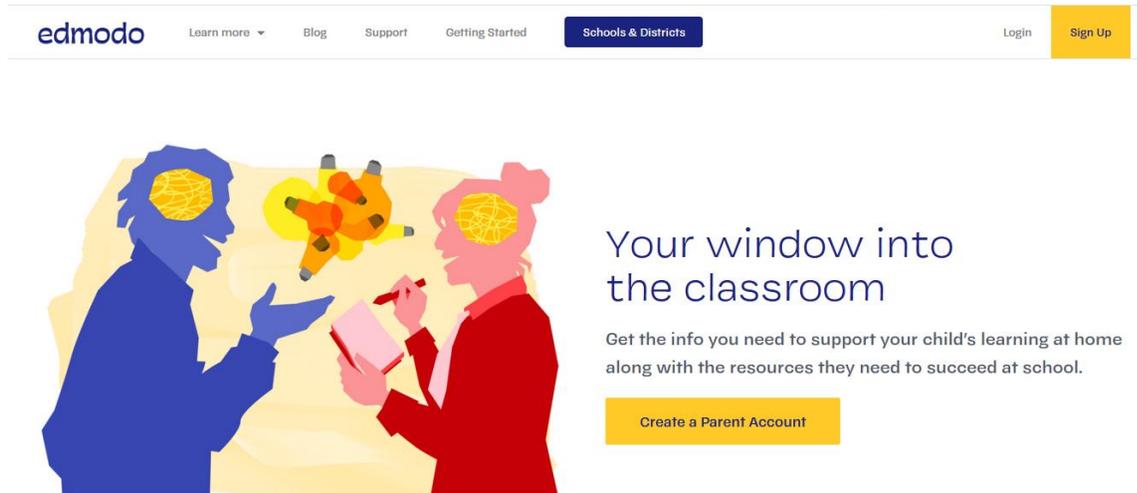

Figure 2: Screen shot from Edmodo website.

Accordingly, Flipped class-room is an instructional model used in Edmodo, and it allows optimal application of advanced technology like the Internet. It allows lesson planning for students involving the use of resources such as video and audio files. It was mentioned in Simo and Sallan (2009) that flipped learning allows home learning through the use of computer, smartphone, or tablet. At the same time, students could engage in discussions, projects, and training, instead of lectures. The Edmodo website is illustrated in Figure 2.

The next section provides a presentation of the aim and research questions of the study. The following section presents the methodologies used in this study. This is followed by a section that presents the study results and their comprehensive deliberations. The ending section presents the study conclusion and future research directions.

2. RESEARCH AIM AND QUESTIONS

The use of Edmodo in the education system in Jordan has not been sufficiently explored. As such, Edmodo, in addition to other blended learning networks need to be examined to allow the understanding of their impacts. Al-Kathiri (2015) indicated that a combining between traditional teaching and Edmodo online classroom is a significantly effective factor toward English learning. Also, there has been accrued interest towards the 21st century skills among students such as learning and innovation skills, information, media, and technology skills, and life and career skills. Hence, the present knowledge gap concerning the impacts of these technological advancements has to be addressed. In addition, a scale is yet to be established in measuring the attitudes of

students toward 21st century skills using such tools. This study therefore explores how Edmodo affects skill development and educational attainment among students at Alyarmouk language center in Jordan. In this regard, two main research questions are addressed and they are as follows:

1. What impact does the Edmodo educational platform have on English language students in Teaching English Courses on Developing the Trend Towards 21st Century Skills among English courses learners?
2. What attitudes do students have toward Edmodo?

The research methods and the data-collection process are explained in the following section.

3. RESEARCH METHODOLOGY

The participating students were divided into an experimental group and a control group, whereby students in the control group were taught using traditional teaching methods, and while those in the experimental group were taught using Edmodo.

The experimental approach that was used in this study allows cause and effect to be concluded, and according to Bell (2014), Queirós et al., (2017) and Spector (2019), the experimental approach can be used for measuring the impact of some phenomena. Equally, Kothari (2004) and Arifiyanto and Ali (2019) stated that the approach is usable in investigating specific phenomenon across a number of disciplines. In this study, the employed approach measures the impact of using the Edmodo platform for Teaching English Courses on Developing the Trend Towards 21st Century Skills among English courses' learners.

4. EXPERIMENT DESIGN

A total of 60 students took part in the study. These students, which comprised males and females, were from Alyarmouk language centre in Jordan, aged between 18 and 23. Female students made up 45% of the sample, while the remainder were males. Students were then randomly split into a control group and an experimental group with an equal amount (30) of students in each group. Students in the control group were taught using traditional approach, which is face-to-face lectures, while those in the experimental group were taught using a blended learning approach through the use of Edmodo platform (as an e-learning tool) as supplementary to traditional learning during the course.

All students participating in this study were English language courses' students with sound computer skills. All of them had enrolled in English language courses class as well. Accordingly, students in the experimental group were trained in Edmodo software so that they acquired the skills

needed for this study. The experiment took approximately four months; this course was a two hours per week course.

- **THE IMPACT OF USING EDMODO IN TEACHING ENGLISH COURSES ON DEVELOPING THE TREND TOWARDS 21st CENTURY SKILLS**

Research question (1) is addressed in this section through the research processes which are illustrated in Figure 3. As shown, the study participants were randomly split into two groups of an experimental group (a) and a control group (c). Prior to commencing the course, all participants sat for a pretest exam (b). This was followed by course completion of both groups using the assigned learning approach whereby the experimental group was assigned with the Edmodo method while the control group was assigned with the traditional learning method (d, e). As the last step, both groups took a posttest exam (f) and the results of both groups were examined and compared (h).
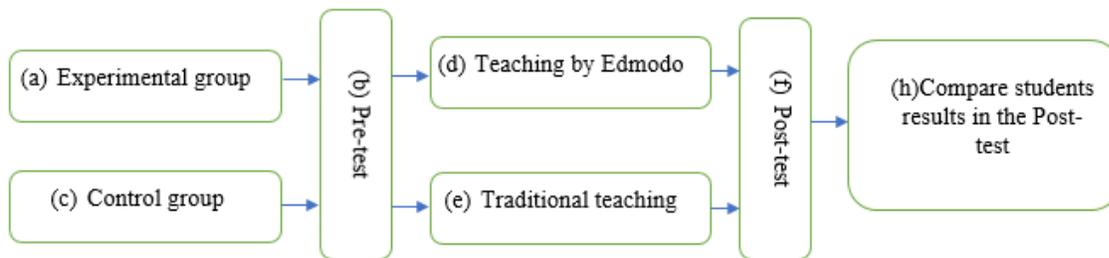

Figure 3: The process of recognising the impact of Edmodo on teaching.

The online pretest and posttest used in this study evaluated the acquired 21st century skills through teaching English using Edmodo respectively prior to and following the experiment. The tests were validated by English language teaching experts. Furthermore, a t-test was carried out to ascertain the mean differences in the scores of the pretest of both groups. This was to assure that both groups show now initial differences. Table 1 presents the details.

Table 1: Results of T-test for the mean difference between experimental group and control group in the pretest.

Scale	No.	Mean	SD	T Value	Significance (P)
Experimental	30	16.09	0.9		0.5860 Not Significant
Control	30	15.94	1.2	0.5477	

As shown in Table 1, both groups show no significant initial differences. In other words, both groups have normal distribution of students. Hence, the obtained results are valid. Meanwhile, Table 2 presents the t-test results between the experimental and control groups for the posttest.

To provide more information on the effectiveness of Edmodo, Blake (1966) modified gain ratio was applied. Specifically, Blake (1966) modified gain ratio comprises a statistical formula for measuring the effectiveness of a program or educational course through differences comparison between pre-tests and post-tests. The effectiveness of the impact is affirmed by Blake's modified gain ratio of higher than 1.2 (Bell, 2014; Blake, 1966).

- **Attitudes OF Students Toward Edmodo**

In addressing research question (2), a scale was established for investigating the attitudes of students towards Edmodo. In this regard, a number of attitude scales were adapted from past studies including Al-Hathifi (2003) and Abdumahdy (2011) and Alqahtani (2019). The scale comprises 10 statements, and this study employs a Likert scale owing to its ease and popularity in attitudes measurement. The designed scale was verified in terms of validity. Then, it was finalised before being presented to specialists in curricula and psychology for review. The items were examined by these specialists to assure their fittingness in target themes measurement. In addition, Cronbach's alpha (α) was used in computing the reliability of the scale and the attained reliability coefficient in this study was 0.82, which is of a good level. This scale can therefore be applied in scientific measurement of attitudes and the results will be reliable. Figure 4 illustrates the process adopting the aforementioned scale in addressing research question (2).
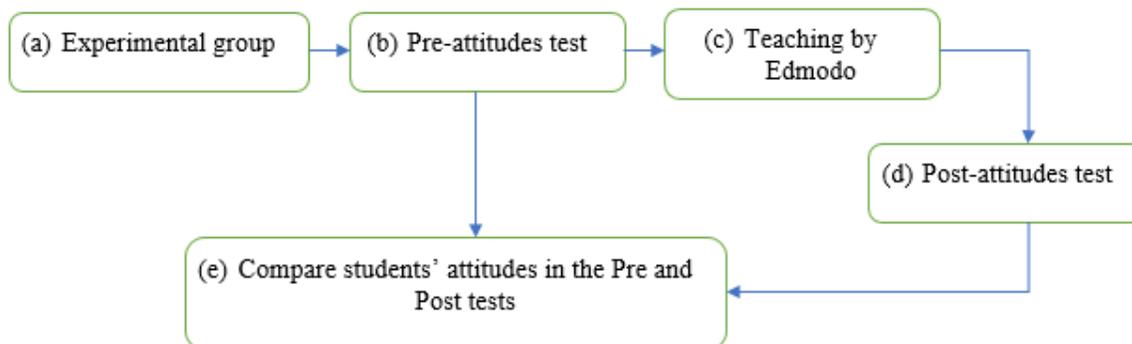

Figure 4: The process of recognising attitudes of students towards Edmodo.

This attitude scale was used on the experimental group (a) before (b) and after (d) the Edmodo application (c). The information on how the attitudes of students toward Edmodo changed after its usage is presented by this procedure. The mean differences in these attitudes (e) was examined using the t-test. Table 3 accordingly present the results of the procedures.

5. RESULTS AND DISCUSSION

The obtained results and how they compare to those of past studies are discussed in this section.

- **THE IMPACT OF USING EDMODO IN TEACHING ENGLISH COURSES ON DEVELOPING THE TREND TOWARDS 21st CENTURY SKILLS**

In addressing research question 1, a t-test was applied in the examination of the mean differences in the posttest between the experimental and control groups. See Table 2.

Table 2. Results of T -test for the mean differences between the control group and experimental group in the posttest.

Scale	No.	Mean	SD	T Value	Significance (P)
Experimental	30	40.22	2.01		
Control	30	19.78	4.27	23.7220	0.00 Significant

The results of the t-test are displayed in Table 2. As shown, the scores of posttest are considerably greater for experimental group (M = 40.22, SD = 2.01) than those attained for control group (M = 19.78, SD = 4.27), t = 23.7220, p < .001. Significant differences thus exist in the means of the posttest results for both groups. As can be concluded, Edmodo can impact the students' attitude towards the 21st century skills positively.

The effectiveness of Edmodo was computed using modified gain ratio on the means of both groups (Blake, 1966), and the achieved value is 2.58, which is higher than the proposed value of 1.2. As such, Edmodo can be concluded to be effective in increasing the learning skills and knowledge of students.

Such result is attributable to the significant use of collaborative learning among students in the experimental group through Edmodo which is a very important base for the 21st century skills. From the test outcomes, it was clear that Edmodo collaboratively distributes information. This assures involvement of learners during interactions associated with the content. Also, Edmodo facilitates the accomplishment, learning, and revision of students.

Labib (2007) and Yagci (2015) are among those who reported comparable results by stressing the significance of collaborative e-learning in the development of 21st century skills and the general performance of learners; they all indicated that e-learning brings many benefits. Among the benefits of e-learning is that it enables students to collaboratively gain knowledge and learn in a freer and more flexible manner. Apart from that, students would be more motivated to exchange

experience and knowledge with their peers. Relevantly in their study, Ma'azi and Janfeshan (2018) found considerable progresses in students' skills and competencies from the use of Edmodo.

Trust (2017), Paliktzoglou and Suhonen (2014), Oyelere el al., (2016), Patmanthara and Hidayat (2018) and Alqahtani (2019) were among those who empirically examined the use of Edmodo in higher education and their results are comparable to the present study. They all reported that the use of Edmodo improves the 21st century skills of students as it bridges the gap between theory and practice.

- **ATTITUDES OF STUDENTS TOWARD EDMODO**

The attitudes of students towards Edmodo were addressed in research question 2 through the use of a scale. The attitude measure results denote the positive attitude of students towards the Edmodo platform, where, the mean of the attitude scale was 4.01, while the obtained standard division was 0.729. Both these values show agreement of high level. In other words, most of the items are rated with high agreement level.

This study also investigated the score differences between the pretest and posttest for students in the experimental group. The mean differences in attitudes toward Edmodo prior to and following the experiment was examined using a T-test. The following Table 3 can be referred.

Table 3: Results of T-test for the mean differences in the posttest and pretest.

Scale	No.	Mean	SD	T Value	Significance (P)
Experimental	30	14.03	0.92		0.00
Control	30	24.89	0.49	57.0658	significant

As can be observed in Table 3, the scores of the experimental group are considerably greater on the posttest (M = 24.89, SD = 0.49) as opposed to those on the pretest (M = 14.03, SD = 0.92), t = 3.45, p < .001. This shows significant attitude differences between the pretest and the posttest for the experimental group students. In other words, the use of Edmodo increases the positive attitudes of students towards Edmodo.

The improvement of attitudes of students following the use of Edmodo was computed using (Blake, 1966) modified gain ratio particularly on the means of both groups (experimental and control). The achieved value is 2.24, and this value is greater than the proposed value of 1.2, denoting high impact. Thus, the use of Edmodo in higher education could enhance the attitudes of learners towards the platform. As such, the positive aspects of learning through the use of Edmodo do indeed improve the performance of students.

Ursavaş and Reisoglu (2017), and Ma'azi and Janfeshan (2018), are among those who reported similar findings; they reported strong approval of learners towards the use of Edmodo. These students also expressed appreciation towards learning with the use of Edmodo. Furthermore, the attitudes of students towards the features of Edmodo were positive, particularly in terms of exams, work submission, modules review and receiving instructor feedback. Piriyasilpa (2011) further mentioned the positive attitudes of students toward social networks adoption within the classroom.

In Edmodo platform studies by Nasrullah et al., (2018) and Alqahtani (2019), a similar approach was used, involving an experimental group (with Edmodo) and a control group (without Edmodo). The researchers found that those that learned with Edmodo had better results. Furthermore, students that used Edmodo were more motivated and showed more positive attitudes. A number of benefits of using Edmodo were reported as well as follows: simplicity, learn through computer or phone, easier and less time consuming, possibility of information exchange and sharing, and better learning effectiveness.

Similar results were reported in (Yunkul & Cankaya, 2017); the researchers concluded positive attitudes of students toward Edmodo. In another related study by (Janpho et al., 2014), the use of social educational networking was found effective in the teaching of English.

6. CONCLUSIONS

The application of Edmodo in language courses among English courses' students was presented in this study. Specifically, this study measured the impact of Edmodo usage as a learning platform, on 21st century skills and knowledge of students. In addition, this study attempted to increase awareness towards Edmodo usage in the English language education in Jordan particularly. At the same time, this study will become a starting point for more studies on the blending of technology and education. Furthermore, this study will increase the understanding of the instructional technology community on the impact of using Edmodo. At the same time, through transformation of e-learning applications, this study will assist future decisions related to the implementing of technology in languages Education.

It can be deduced from the obtained results that the use of the Edmodo platform significantly improves the learning skills of English courses students. The use of Edmodo in teaching can increase the attention and positive attitudes of students towards online learning. From the results of this study, it can be concluded that the attitudes of English courses' students toward Edmodo are positive. Equally, this study was limited by a small number of samples and their backgrounds.

This study proposed using more participants with more varied backgrounds in future studies. Additionally, future studies should address the challenges of Edmodo usage. The impact of other platforms of e-learning should be investigated and compared with the findings of this study, in future studies.

REFERENCES

Abdumahdy, A. (2011). University students' attitudes in Jordan using Blackboard software in their learning. *College of Educational Sciences, University of Jordan*.

Al-araibi, A. A. M., Naz'ri bin Mahrin, M., Yusoff, R. C. M., & Chuprat, S. B. (2019). A model for technological aspect of e-learning readiness in higher education. *Education and Information Technologies, 24*(2), 1395-1431.

Al-Hathifi, K. (2003). The effectiveness of the problem-based education strategy in the development of aca-demic achievement and the attitudes toward science among middle school students. *Journal of Studies in Curricula and Teaching Methods*.

Al-Kathiri, F. (2015). Beyond the Classroom Walls: Edmodo in Saudi Secondary School EFL Instruction, Attitudes and Challenges. *English Language Teaching, 8*(1), 189-204.

Alqahtani, A. S. (2019). THE USE OF EDMODO: ITS IMPACT ON LEARNING AND STUDENTS'ATTITUDES TOWARD IT. *Journal of Information Technology Education, 18*.

Alqahtani, H. M. (2016). *Does E-Learning Help Users to Learn: A Comparative Study of E-learning in Saudi Arabia and New Zealand.* Auckland University of Technology.

Arifiyanto, S., & Ali, F. (2019). Mediating Student Teachers through Edmodo in an Extensive Listening Class. *Journal of English Teaching and Learning Issues, 2*(2), 143-158.

Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning, 12*(1), 29-42.

Bell, J. (2014). *Doing Your Research Project: A guide for first-time researchers*: McGraw-Hill Education (UK).

Berraies, S. (2019). The effect of enterprise social networks use on exploitative and exploratory innovations. *Journal of Intellectual Capital*.

Blake, C. (1966). 3. A PROCEDURE FOR THE INITIAL EVALUATION AND ANALYSIS OF LINEAR PROGRAMS. *Programmed Learning, 3*(2), 97-101.

Cheong, D. (2010). The effects of practice teaching sessions in second life on the change in pre-service teachers' teaching efficacy. *Computers & Education, 55*(2), 868-880.

Clark, T., & Berge, Z. (2005). *eLearning, Virtual Schools, and the National Educational Technology Plan.* Paper presented at the 21st Annual Conference on Distance Teaching and Learning. Retrieved from http://www. uwex. edu/disted/conference/Resource_library/proceedings/05_1880. pdf.

El-Bahsh, R., & Daoud, M. (2016). *Evaluating the use of Moodle to achieve effective and interactive learning: A case study at the German Jordanian University.* Paper presented at the Proceedings of the 35th annual IEEE international conference on computer communications.

Evans, C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. *Computers & Education, 50*(2), 491-498.

Fernandez, V., Simo, P., & Sallan, J. M. (2009). Podcasting: A new technological tool to facilitate good practice in higher education. *Computers & Education, 53*(2), 385-392.

Fryer, L. (2016). Collaborative learning through Edmodo. *Teaching Geography, 41*(3), 118-119.

Humburg, M., & Van der Velden, R. (2017). What is expected of higher education graduates in the twenty-first century? *The Oxford Handbook of Skills and Training*, 201.

Janpho, J., Chaeturat, C., Multa, D., Harnburut, K., & Kwangsawad, T. (2014). Enhancing English writing skill by using online social network Edmodo. *Journal of Education, Mahasarakham University*, 707-712.

Kalolo, J. F. (2019). Digital revolution and its impact on education systems in developing countries. *Education and Information Technologies, 24*(1), 345-358.

Kids, B. f. (2019). Framework for 21st century learning.

Koç, T., Turan, A. H., & Okursoy, A. (2016). Acceptance and usage of a mobile information system in higher education: An empirical study with structural equation modeling. *The International Journal of Management Education, 14*(3), 286-300.

Kothari, C. R. (2004). *Research methodology: Methods and techniques*: New Age International.

Kumar Basak, S., Wotto, M., & Belanger, P. (2018). E-learning, M-learning and D-learning: Conceptual definition and comparative analysis. *E-Learning and Digital Media, 15*(4), 191-216.

Kumari, S. (2018). Open and distance education system and learner support services: An introduction *Technology for efficient learner support services in distance education* (pp. 1-22): Springer.

Labib, D. (2007). An electronic strategy for participatory learning in the course of problems of computer operation on the achievement of knowledge and skills and attitudes towards general diploma students in education computer educational divi-sion. *Institute of Educational Studies, Cairo University*.

Latchem, C. (2018). *Open and distance non-formal education in developing countries*: Springer.

Learning, C. (2015). P21 framework definitions. *Washington, DC*.

Ma'azi, H., & Janfeshan, K. (2018). The effect of Edmodo social learning network on Iranian EFL learners writing skill. *Cogent Education, 5*(1), 1536312.

Nasrullah, A., Marlina, M., & Dwiyanti, W. (2018). Development of student worksheet-based college e-learning through Edmodo to maximize the results of learning and motivation in economic mathematics learning. *International Journal of Emerging Technologies in Learning (iJET), 13*(12), 211-229.

Oyelere, S. S., Paliktzoglou, V., & Suhonen, J. (2016). M-learning in Nigerian higher education: an experimental study with Edmodo. *International Journal of Social Media and Interactive Learning Environments, 4*(1), 43-62.

Paliktzoglou, V., & Suhonen, J. (2014). Microblogging in higher education: the Edmodo case study among computer science learners in Finland. *Journal of Cases on Information Technology (JCIT), 16*(2), 39-57.

Patmanthara, S., & Hidayat, W. N. (2018). *Improving vocational high school students digital literacy skill through blended learning model.* Paper presented at the Journal of Physics: Conference Series.

Piriyasilpa, Y. (2011). See you in Facebook: The effects of incorporating online social networking in the language classroom. *Journal of Global Management Research, 7*(1), 67-80.

Queirós, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*.

Reimers, F. M., & Chung, C. K. (2019). *Teaching and learning for the twenty-first century: Educational goals, policies, and curricula from six nations*: Harvard Education Press.

Spector, P. E. (2019). Do not cross me: Optimizing the use of cross-sectional designs. *Journal of Business and Psychology, 34*(2), 125-137.

Tarun, I. M. (2019). The Effectiveness of a Customized Online Collaboration Tool for Teaching and Learning. *Journal of Information Technology Education, 18*.

Terry, K. P., & Doolittle, P. (2006). Fostering Self-Regulation in Distributed Learning. *College Quarterly, 9*(1), n1.

Trust, T. (2017). Motivation, empowerment, and innovation: Teachers' beliefs about how participating in the Edmodo math subject community shapes teaching and learning. *Journal of Research on Technology in Education, 49*(1-2), 16-30.

Ursavaş, Ö. F., & Reisoglu, I. (2017). The effects of cognitive style on Edmodo users' behaviour. *The International Journal of Information and Learning Technology*.

Viberg, O., & Grönlund, Å. (2017). Understanding students' learning practices: challenges for design and integration of mobile technology into distance education. *Learning, Media and Technology, 42*(3), 357-377.

Yagci, T. (2015). Blended Learning via Mobile Social Media & Implementation of" EDMODO" in Reading Classes. *Advances in Language and Literary Studies, 6*(4), 41-47.

Yunkul, E., & Cankaya, S. (2017). Students' attitudes towards Edmodo, a social learning network: A scale development study. *Turkish Online Journal of Distance Education, 18*(2), 16-29.

Zhao, J., Zhu, C., Peng, Z., Xu, X., & Liu, Y. (2018). User willingness toward knowledge sharing in social networks. *Sustainability, 10*(12), 4680.