



RESEARCH ARTICLE

EFL TEACHER'S ATTITUDES TOWARDS BLENDED LEARNING IN TABUK, SAUDI ARABIA

*Reema Sultan Shaher Al-Saleh

Department of Curricula and Teaching Methods, Faculty of Arts and Education, Tabuk University, Saudi Arabia

ARTICLE INFO

Article History:

Received 19th October, 2017
Received in revised form
20th November, 2017
Accepted 15th December, 2017
Published online 30th January, 2018

Keywords:

EFL, Teacher's Attitudes,
Blended Learning.

Copyright©2018, Reema Sultan Shaher Al-Saleh. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

ABSTRACT

This study investigated secondary stage EFL teachers' attitudes towards Blended Learning (BL) in Tabuk city. The research instrument, was used by the researcher to collect quantitative data from a random sample of 50 EFL teachers, was a questionnaire to measure EFL teachers' attitudes towards it. The findings of the attitude questionnaire indicated teachers' satisfaction and positive attitudes towards BL and highlighted the need to provide them with training sessions, resources, capabilities and support for effective implementation.

INTRODUCTION

The technological advancements have made the students self-reliant and they take great responsibility for their own life-long learning. The traditional learning system and e-learning both possess some strengths and weaknesses. Therefore, blended learning has combined characteristics of the learning environments for an efficient learning system. The introduction of blended learning has increased the performance of students and decreased their failure rates (Dzuiban *et al.*, 2004). Moreover, blended learning manages cost efficiency and provides efficient social interaction, richness of knowledge, and personal agency (Dewar and Whittington, 2004). Sajid, *et al.* (2016) has evaluated the student academic performance along with the perceptions towards blended learning in comparison to traditional teaching. The study has mentioned that Education systems have developed their processes through advanced and modern technology across the globe. The findings of the study have revealed that approximately 22.8% students felt that the lectures must be delivered through the traditional approaches; however, around 35% of the students have felt that the lectures should be given online. The students have also shown that the online lectures are helpful to improve their overall performance in an effective way. Students also expressed satisfactory remarks in regards to blended learning, and identified as a new and effective learning approach. Majority of the students have further reported that blended learning was extremely helpful for the preparation of examinations to develop better conceptual understanding.

*Corresponding author: Reema Sultan Shaher Al-Saleh

Department of Curricula and Teaching Methods, Faculty of Arts and Education, Tabuk University, Saudi Arabia

However, the study has identified that the comparison of grades did not show any statistically significant enhancement in the academic performance of students, taught via the blended learning methods. The study has concluded that learning experiences can be easily improved and enriched by adopting a blended method within the educational settings at differential stages of undergraduate and postgraduate education. Blended learning provides an active and flexible learning environment that offer the students more opportunities for learning and improving their performance. Although, blended learning positively affects the learning performance of students, but there is a lack of teachers' willingness to involve this technology in their teaching practices. Adaptation of the blended learning system within the educational institutions is considered as the most common barrier for the teachers. It is also a fact that most of the teachers are unable to adopt the features of blended learning system, which usually result in the poor performance of entire system. Therefore, this study has described the attitudes of EFL teachers regarding the implementation of blended learning in Tabuk city, Saudi Arabia. The results have provided basic knowledge about the practicing and potential of blended learning that would positively influence the teaching practices. It would also highlight the importance and effectiveness of blended learning by encouraging teachers to get associated with the training programs that will improve their technical skills in blended learning. At the same time, the teachers would get benefits from the findings to improve their perceptions and attitudes towards blended learning process.

Literature Review

The blended learning offer efficient educational provisions that provide various e-learning opportunities that are reflected

through the enhanced performance of the students (Jefferies *et al.*, 2006). Blended learning provides a learning environment that has combined the advantages of the e-learning methods and face to face learning methods. Therefore, such learning environment has shifted to a student-centered class, rather than a teacher-centered class (Keshta and Harb, 2013). Maarop and Embi (2016) have mentioned that the system or process associated with blended learning is gradually gaining its significance in academic domain. The study has further stated that differential challenges, faced by the teachers, were mainly associated with increased workload along with the time devotion. At the same time, lack of pedagogical and technical skills for conducting the educational programs and difficulty in finding the right blend between face-to-face and online learning.

Significant Factors of Blended Learning

The various factors associated with effective blended learning include:

- The learning material: The methodologically sound learning materials are needed by the teachers to implement and use software programs carefully (Marsh, 2012)
- The complementary: Different characteristics of blended learning need to complement each other. In order to establish complementarity, it is necessary to identify the needs of students and various learning outcomes
- The academic support: The online medium of learning provides effective interaction between the students and motivate them to answer different questions asked by other students
- Technical support: In order to encounter difficulties faced by the teachers, schools must provide ICT experts for teachers' support
- Effective support: Blended learning environment provide support to the students who lack behind in the learning processes. The teachers are aware about the academic progress of every student through the progress reports available on the learning management systems (Marsh, 2012).

Teachers' Attitudes towards Blended Learning

The attitude of teachers towards blended learning is defined on the basis of evaluative judgments that result in affective and cognitive reactions from the students (Crano and Prislin, 2006). The attitudes of teachers towards the implementation of blended learning are regarded as a significant contributor for successful achievement of educational goals (Larsen, 2012). Khalid (2009) observes that a negative attitude is a critical obstacle in integrating technology into education. Aldraheim and Watson (2012) postulate that teachers' positive attitudes is essential for the effective integration of new technologies. Their experiences therefore determine their application of technology in the classrooms. Karmakar and Behera (2016) have carried out a study, which has indicated that developments within the information technology processes have placed a major impact on educational settings as well. The findings have revealed that the attitudes of teachers, selected as the sample for study, were neither favorable nor

unfavorable towards e-learning system. However, the attitudes were rated as average towards the learning processes. Alebaikan (2010) investigated Saudi female lecturers' and undergraduate students' perceptions of BL that most of them had positive attitudes. Another study in Saudi Arabia by Al-Otaibi (2010) investigated the degree of secondary school teachers' awareness of and attitudes towards BL in *Tatweer* schools in Makkah district. The findings demonstrated teachers' high degree of awareness of and positive attitudes towards the BL concept.

Challenges Associated with Implementation of Blended Learning

There are various internal and external factors that challenge the implementation of blended learning: Hughes (2005) states that the challenge to the application of technology in the classroom is linked to teachers' beliefs about the value of ICT for instruction. Tella, Tella, Toyobo, Adika, and Adeyinka (2007) find that if teachers are convinced of the benefits of technology, they easily integrate it into educational processes. An important factor that hinders teachers from implementing BL is lack of training, and is primarily responsible for teachers' unpreparedness to blend technology into classroom teaching (Jacobsen and Lock, 2005). According to Kaleta, Skibba, and Joosten (2007) the main challenge is preparing teachers for implementation. Larsen (2012) and Young (2008) point out that teachers' training in both teaching and technology, pedagogical knowledge, and frequent technical and school support are very important for effective BL. Hew and Brush (2007) purport that teachers should be provided with the knowledge and skills they need to integrate technology into educational practices, as one of the barriers to applying technology is teachers' lack of specific technological knowledge and skills. School administration plays an important role in integrating technology in classroom. Stuart, Mills, and Remus (2009) point out that administration policies contribute to the success or failure of implementation. Administrative support is necessary to create a supportive environment, including encouragement, necessary training, and technical support (Cartwright and Hammond, 2007). Baily *et al.* (2013) stress the need for infrastructure such as high-speed Internet for networking. According to them, infrastructure is 'the critical starting point that enables digital learning' (p. 26). Korte and Husing (2007) mention that it is often the lack of technological infrastructure in schools that prevents BL. Balanskat *et al.* (2006) also confirm that the lack of high-quality hardware and software are barriers to successful implementation of BL. In Saudi Arabian schools, the most common challenge is the lack of classroom resources and Internet access (Al-Alwani, 2005). Alghazo (2006) asserts that it is important to improve the quality of Internet access and provide faculty members with appropriate technical support. Almalki and Williams' (2012) study revealed that the KSA does not have proper technological infrastructure; they recommended that a suitable technological environment be created in Saudi classrooms.

MATERIALS AND METHODS

The study has opted quantitative research design to investigate EFL teachers' attitudes towards blended learning. The study has recruited 50 secondary school teachers randomly from

public secondary schools from four regions of Tabuk city by considering quantitative research design approach. In terms of the qualifications, 98% of teachers had Bachelor's degree; however, 2% had Master's degree. Similarly in terms of experience; 22% of the teachers had 5–9 years of experience in teaching; 50% had 10–14 years of experience; 8% of teachers had 15–20 years of experience; and 10% of teachers had more than 20 years of work experience. In the current study, a questionnaire has been developed after reviewing the relevant literature for the purpose of data collection. It attempts to measure secondary school EFL teachers' attitudes towards BL in Tabuk. The questionnaire was comprised of three major sections. The first section aimed to collect background information, which mainly include academic qualifications, teaching experience, computer qualifications, and ratings of computer literacy skills. The second section was consisted of 30 statements, which aimed to measure teachers' attitudes towards BL. Responses were scored on a 5-point Likert scale; strongly agree, agree, neutral, disagree and strongly disagree. The third section of the questionnaire included open-ended questions about obstacles for implementing BL. Written permission was obtained from the Department of Curriculum and Teaching Methods in Tabuk University after developing the questionnaire in its final form. The rationale behind obtaining permission was to administer the questionnaire among EFL teachers in Tabuk secondary schools with complete authority. In this study, content validity has been observed by seeking specialists' opinions in the field of EFL teaching. On the basis of their feedback and suggestions, the questionnaire was modified accordingly. The final questionnaire was comprised of 30 items (rated on the scale) and one open-ended question. A pilot study was conducted to check the clarity and readability of the questionnaire items, calculate internal consistency and measure reliability. The questionnaire was distributed to a sample of 30 EFL secondary stage teachers. The number of collected completed responses was 0.834, The researcher calculated Pearson's correlation coefficient between each item and the total score in order to measure the questionnaire's internal consistency (see Table 1). Cronbach's alpha coefficient was also measured to calculate reliability (Table 2).

Table 1. Pearson Correlation Coefficients between Item and Total Scores

Item number	R	p	Item number	r	p
1	.675**	0.005	16	.378**	0.007
2	.748**	0	17	.657**	0
3	.452**	0	18	.375**	0
4	.550**	0	19	.485**	0
5	.455**	0	20	.507**	0
6	.665**	0	21	.682**	0
7	.628**	0	22	.576**	0
8	.606**	0	23	.433**	0
9	.625**	0	24	.577**	0.002
10	.509**	0.006	25	.652**	0
11	.560**	0	26	.504**	0
12	.387**	0.009	27	.433**	0.003
13	.378**	0.008	28	.387**	0.003
14	.416**	0	29	.325**	0.001
15	.370**	0.001	30	.568**	0.004

Table 2. Reliability of Questionnaire

Tool	Cronbach's alpha coefficient	Split-Half Method
Questionnaire	0.8304	0.8284

RESULTS AND DISCUSSION

The data has been collected from the EFL teachers to evaluate EFL teacher's attitudes towards blended learning. Correlations have been performed in between the totals core on the attitude questionnaire and four variables, which included academic qualification, work experience, computer qualifications, and computer literacy skills. It was asked from the EFL teachers that what their attitudes towards BL are. In response to this question, 1–1.79 represented 'strongly disagree', 1.80–2.59 represented 'disagree', 2.60–3.39 represented 'neutral', 3.40–4.19 represented 'agree', and 4.20–5.0 reported as strongly agree (Table 3). In response to other questions, teachers have strongly agreed with the statements related to blending teaching advantages (Table 4). It explained why the highest mean score was obtained for the statement regarding the need for receive training on developing courses and designing activities. The teachers also disagreed with negative statements, which included that 'implementing BL is a waste of time.' Neutral responses have been obtained for controversial statements, which included that BL should be made compulsory. Detailed response have been presented in Table 5. The highest score was obtained for "*EFL teachers should receive training on designing BL courses and activities*", wherein 94% of teachers either strongly agreed or agreed that they should receive training on designing BL courses and activities. This implies that the majority regard it as important. Further, 98% of teachers either strongly disagreed or disagreed with the statement with the second rank, "*BL doesn't improve my technological skills*". With more frequent use of technology, teachers' technical skills are likely to improve because they gain practice and experience in the use of technology. The third ranked statement was "*integrating face-to-face and online teaching methods produce better learning outcomes*", to which 98% of EFL teachers gave either 'strongly agree' or 'agree' responses. EFL teachers are aware of the usefulness of implementing BL. It has been evaluated that most of the EFL teachers believed in the importance of BL for improving students' language skills.

Therefore, it can be said that EFL teachers should be encouraged to implement blending learning methods accordingly. Collopy and Arnold(2009) supported the outcomes of current study, and indicated that blending online materials with face-to-face lessons can easily reduce dropout rates and improve students' grades. 96% of respondents either strongly agreed or agreed with the statement ranking fourth, "*using BL enhances student-teacher interactions*". Teachers can contact students via email and schedule online discussions through which students obtain immediate feedback for skill improvement. Similarly, Cowie, et al.(2008) have stated that blending technology can increase the interaction rates between teachers and students during and after class. Further, 94% of teachers either strongly agreed or agreed with the statement in fifth rank, "*BL creates a flexible learning environment*", suggesting that BL creates opportunities for EFL teachers to access to a wide range of face-to-face and online materials, thereby facilitating instructional flexibility. Such outcomes have been supported by Campbell, et al.(2016). The study has claimed that blending technology offers various opportunities to teachers for using several teaching methods. 88% of teachers either strongly agreed or agreed with the statement

Table 3. Attitudes of EFL teachers towards BL

Number of valid responses	Number of missing Responses	M	SD	Interpretation
50	0	3.8	0.374	Agree

Table 4. Teachers Mixed Responses about BL

Statement	Frequency (n) and percentage					M	SD	Rank	Interpretation
	SA	A	N	DA	SDA				
EFL teachers should receive training on designing BL courses and activities.	39 78%	3 6%	1 2%	2 4%	-	4.68	0.713	1	Strongly Agree
BL doesn't improve my technological skills.	1 2%	-	-	16 32%	33 66%	4.60	0.700	2	Strongly Disagree
Integrating face-to-face and online teaching methods produces better learning outcomes.	31 62%	18 36%	-	1 2%	-	4.58	0.609	3	Strongly Agree
Using BL enhances student-teacher interaction.	29 58%	19 38%	1 2%	1 2%	-	4.52	0.646	4	Strongly Agree
BL creates a flexible learning environment.	27 54%	20 40%	2 4%	1 2%	-	4.46	0.676	5	Strongly Agree
The Ministry of Education should provide guidebooks to design and implement BL.	31 62%	13 26%	2 4%	4 8%	-	4.42	0.906	6	Strongly Agree
Applying technology to teaching English is very important.	33 66%	10 20%	3 6%	2 4%	2 4%	4.40	1.050	7	Strongly Agree
BL enhances my pedagogical knowledge.	26 52%	19 38%	3 6%	2 4%	-	4.38	0.780	8	Strongly Agree
Integrating technology in my classes gives students satisfaction.	24 48%	23 46%	1 2%	2 4%	-	4.38	0.725	9	Strongly Agree
The Ministry of Education should raise awareness about BL among EFL teachers	26 52%	19 38%	2 4%	2 4%	1 2%	4.34	0.895	11	Strongly Agree
BL decreases students' motivation.	-	2 4%	1 2%	26 52%	21 42%	4.32	0.713	12	Strongly Disagree
BL activities increase students' satisfaction with their course.	21 42%	23 46%	3 6%	1 2%	2 4%	4.20	0.948	13	Strongly Agree
Applying BL in teaching English is inappropriate.	-	2 4%	7 14%	22 44%	19 38%	4.16	0.817	14	Disagree
Discussing the idea of applying BL with my colleagues encourages me to use BL.	18 36%	24 48%	4 8%	3 6%	1 2%	4.10	0.931	15	Agree
BL helps students to take responsibility for their learning.	16 32%	27 54%	2 4%	4 8%	1 2%	4.06	0.935	16	Agree
BL limits my skills in teaching English.	-	6 12%	5 10%	23 46%	16 32%	3.98	0.958	17	Disagree
The fear of losing control of the class prevents me from using technology in teaching English.	1 2%	7 14%	6 12%	14 28%	22 44%	3.98	1.152	18	Disagree
Using BL to teach English is frightening because I don't feel confident when I use it.	3 6%	6 12%	1 2%	22 44%	18 36%	3.92	1.192	19	Disagree
BL is a waste of time	2 4%	4 8%	6 12%	24 48%	14 28%	3.88	1.043	20	Disagree
The Ministry of Education should offer rewards for using BL.	25 50%	20 40%	3 6%	2 4%	-	4.36	0.776	10	Strongly Agree

that ranks sixth "*the Ministry of Education should provide guidebooks to design and implement BL*". This suggests that EFL teachers lack the training to implement BL and lack the knowhow for designing BL lessons and activities. 86% of teachers either strongly agreed or agreed with the seventh ranking statement, "*applying technology in teaching English is very important*". Larsen (2012) observed that English teachers generally held positive attitudes towards BL, finding it useful and effective for students' learning. 90% of teachers either strongly agreed or agreed with the eighth ranked statement, "*BL enhances my pedagogical knowledge*", suggesting that the majority of teachers acknowledge that BL furthers their

pedagogical knowledge, confidence, and competence. 90% of teachers either strongly agreed or agreed with the statement that ranks tenth, "*the Ministry of Education should offer a reward for using BL*". Schoepp (2005) claims that some teachers do not use technology although they have the technical skills because there are additional incentives. The teachers also disagreed with negative statements such as 'implementing BL is a waste of time.' Additionally, they were not afraid of losing control over the class or did not feel less confident when they applied BL in their classes. High neutral scores were obtained for the statement, "*the Ministry of Education should make BL activities in teaching English*

compulsory". EFL teachers may not have approved of compulsory teaching methods or may have felt that they do not have the knowledge of how to design and implement BL activities.

completed. Finally, 94% of teachers either strongly agreed or agreed with the lowest ranked statement, "BL activities are very demanding". This highlights the lack of time and the difficulty managing the additional work.

Table 5. Neutralized responses of Teachers towards BL

Statement	SA	A	N	DA	SDA	M	SD	Rank	Interpretation
My colleagues' attitude towards using BL discourages me from applying BL in my classroom.	2 4%	6 12%	7 14%	21 42%	14 28%	3.78	1.112	21	Disagree
Administrators' attitudes towards using BL is encouraging.	18 36%	15 30%	1 2%	6 12%	10 20%	3.50	1.568	22	Agree
School administration provides the facilities for using technology in the classroom.	12 24%	18 36%	4 8%	7 14%	9 18%	3.34	1.451	23	Neutral
The Ministry of Education should make using BL activities in teaching English language compulsory.	8 16%	8 16%	7 14%	20 40%	7 14%	2.80	1.325	24	Neutral
Combining online and traditional classroom activities is difficult to some extent.	9 18%	16 32%	9 18%	11 22%	5 10%	2.74	1.275	25	Neutral
Communication with students outside the school using technology is difficult because of cultural considerations.	10 20%	19 38%	4 8%	9 18%	8 16%	2.72	1.400	26	Neutral
Not all types of online learning activities fit into Saudi culture, particularly for females.	13 26%	13 26%	6 12%	12 24%	6 12%	2.70	1.403	27	Neutral
Parents feel that online activities are inappropriate for female students.	12 24%	15 30%	8 16%	11 22%	4 8%	2.60	1.294	28	Neutral
Time management is difficult when conducting BL activities.	10 20%	18 36%	11 22%	7 14%	4 8%	2.54	1.199	29	Agree
BL activities are very demanding.	23 46%	24 48%	2 4%	1 2%	-	1.62	0.667	30	Agree

Table 6. Obstacles during Blending Learning

Obstacles	n	%	M	SD
Lack of Training	48	96	6.42	4.859
Lack of Internet Access	38	76		
Lack of Technical Support	38	76		
Lack of Time	28	56		
Lack of Technological Skills	28	56		
Lack of Equipment	26	52		
Students' Lack of Technological Skills	25	50		
Teacher's Workload	23	46		
Large Number of Students in the Classroom	12	24		
Lack of Digital Material	10	20		
Number of Week Classes	10	20		
Lack of Educational Software	9	18		
Overcrowded Curriculum	9	18		
Cultural Values	9	18		
Inadequate Internet Access	8	16		
Lack of Administration Support	7	14		
Teachers' Attitudes	6	12		
Lack of Adequate Electricity	5	10		
Network Overload	3	6		
Lack of Experience	2	4		
Lack of BL Model Lessons	1	2		

This was followed by neutral responses to "combining online and traditional classroom activities is difficult to some extent". This may be attributable to EFL teachers' insufficient knowledge of ways to implement and design BL activities. Following this were overall neutral responses to "communication with students outside the school using technology is difficult because of cultural considerations". EFL teachers may have been undecided about this because although Internet use has become more acceptable in Saudi homes, there may still be some resistance in a few families. Further, 56% of teachers either strongly agreed or agreed that "it is difficult to manage time when using BL activities". This result can be attributed to the short duration of classes, where each lesson lasts 45 min within which several activities need to be

The retrieved outcomes about the positive attitudes have been supported by various past studies (Bijeikienė *et al.*, 2011; Larsen, 2012; Mouzakis, 2008; Wang, *et al.* 2015). Shaqour (2014) have indicated that the positive attitudes of the teachers have a direct relevance with the implication of various approaches in the learning processes. Open ended question has been used to identify differential obstacles, which are faced by EFL teachers during BL. In accordance with collected data, it is evident that the most common obstacle was lack of training (96%), which was followed by lack of internet access (76%) and technical support (76%). Rest of the details have been presented in table 7. Hong and Samimy (2010) have supported the outcomes that there is a severe need of training and practices for the EFL teachers to implement BL with its

effectiveness. The second part of the questionnaire addressed the obstacles that EFL teachers face when using technology in their classroom. The results reveal that the most common problem is lack of training (96%) and could be attributed to the shortage of training programs. Hong and Samimy (2010) noted the need for training and practice in applying technology to teaching. Hence, successful implementation of BL demands well-prepared training programs. In addition, 76% of teachers report a lack of Internet access and technical support as obstacles. The researcher observed a lack of adequate technological infrastructure in the majority of the schools visited. The majority of classrooms did not have Internet access. Baily *et al.* (2015) assert the need for technical specialists as assistants for teachers when things go wrong in the BL environment. Another obstacle reported by more than half of the teachers is the lack of time. Each class lasts 45 min within which several objectives have to be achieved. The English curricula are generally overcrowded and cannot be achieved in addition to using time-consuming technology. Another obstacle is the 'lack of technical skills'. During the interview, the researcher noticed that over half of the teachers were not enthusiastic about the integration of some kinds of technology. This could be a lack of skills or a question of preference. Lack of equipment is an obstacle for 52% of the teachers, which may reflect the lack of infrastructure in some schools. Further, 46% of the teachers felt that the increased workload was an obstacle because of their busy schedules, students' extra-curricular activities, and the demands of the newly developed curriculum, requiring the application of many active learning strategies. In addition, a quarter of the teachers have very large classes, making it difficult to manage blended practices. Administration was perceived as an obstacle for only 14% of teachers; thus, 84% felt that their administrators supported and encouraged them to implement BL. Insufficient encouragement and lack of motivation from a few administrators may be linked to a lack in funding and awareness.

Conclusion

In general, the results have indicated mixed attitudes of the EFL teachers towards BL; specifically, majority of the teachers have shown positive attitudes. EFL teachers have identified various benefits of BL in teaching English. However, there was a room for training to provide them complete opportunity in regards of learning. Some of the common obstacles mainly included lack of training, internet access, technical support, time, teachers' technological skills and experience, and classrooms equipped with technology; increased workload; students' lack of technological skills; lack of support from the administration, and lack of modeling by other teachers.

Recommendations

In light of the study results, the researcher recommends the following:

- The ministry of education should provide schools with a clear policy on BL and create a suitable technologically equipped environment that facilitates new educational technologies in schools.

- The ministry of education should provide access to technicians in all schools to help teachers when required.
- Supervisors should establish practical workshops which aim at familiarising EFL teachers with different BL strategies and techniques.
- Administrators should increase EFL teachers' awareness regarding the importance of using BL in teaching English.

Acknowledgement

The author is very thankful to all the associated personnel in any reference that contributed in/for the purpose of this research.

REFERENCES

- Al-Alwani, A. 2005. *Barriers to Integrating Information Technology in Saudi*
- Aldraehim, M. and Watson, J. 2012, April 16-18. *Cultural Impact on e-Service use in Saudi Arabia: Results from Focus Groups*. Paper presented at the Ninth International Conference on Information Technology. doi: 10.1109/ITNG.2012.146
- Alebaikan, R. (2010). *Perceptions of Blended Learning in Saudi Universities* (Un published Doctoral dissertation). Exeter University, England.
- Alghazo, I. 2006. Quality of internet use by teachers in the United Arab Emirates. *Education*, 126(3), 769-781.
- Almalki, G., and Williams, N. 2012. A strategy to improve the usage of ICT in the Kingdom of Saudi Arabia primary school. *International Journal of Advanced Computer Science and Applications*, 3(10), 46-52.
- Al-otaibi, H. 2012. *The Degree of Secondary Schools Teachers in Tatweer Schools in Mecca* (Unpublished Master's thesis). University of Jordan, Amman, Jordan.
- Arabia Science Education* Unpublished Doctoral dissertation). University of Kansas, Kansas.
- Bailey, D., Zhou, X., Zhang, Y., Cui, J., Fuchs, L., Jordan, N., and Siegler, R. 2015. Development of fraction concepts and procedures in U. S. and Chinese children. *Journal of Experimental Child Psychology*, 129, 68-83. Retrieved in 25 March 2016 from <http://www.psy.cmu.edu/~siegler/Bailey-et-al-15.pdf>
- Balanskat, A., Blamire, R., and Kefala, S. 2006. *The ICT impact report: A review of Studies of ICT Impact on Schools in Europe*. European School net: Brussels. Retrieved in 15 November 2015 from www.aef-europe.be/documents/RAPP_doc254_en.pdf
- Bijeikienė, V., Rašinskienė, S., and Zutkienė, L. D. 2011. Teachers' attitudes towards the use of blended learning in general English classroom. *Kalby Studijos*, (18), 122-127.
- Campbell, A. G., Santiago, K., Hoo, D., and Mangina, E. 2016, December). Future mixed reality educational spaces. In *Future Technologies Conference (FTC)* (pp. 1088-1093). IEEE. DOI: 10.1109/FTC.2016.7821738
- Cartwright, V., and Hammond, M. 2007. Fitting it in: A study exploring ICT use in a UK primary school. *Australasian Journal of Educational Technology*, 23(3), 390-407.
- Collopy, R. M., and Arnold, J. M. 2009. To blend or not to blend: Online and blended learning environments in

- undergraduate teacher education. *Issues in Teacher Education*, 18(2), 85.
- Cowie, B., Moreland, J., Jones, A., and Otrell-Cass, K. 2008. The classroom InSiTE project: Understanding classroom interactions to enhance teaching and learning in science and technology in Years 1–8. *Teaching and Learning Research Initiative. Wellington: New Zealand Council for Educational Research*.
- Crano, W. D., and Prislín, R. 2006. Attitudes and persuasion. *Annu. Rev. Psychol.*, 57, 345-374. Doi: 10.1146/annurev.psych.57.102904.190034
- Dewar, T., and Whittington, D. (2004). *Blended learning research report*. Calliope Learning. Doi: 10.1108/00197850410563885
- Dziuban, C. D., Hartman, J. L., and Moskal, P. D. 2004. Blended learning. *EDUCAUSE Center for Applied Research Bulletin*, 7(1), 12.
- Hew, K. F., and Brush, T. 2007. Integrating technology into K–12 teaching and learning: Current knowledge gaps and recommendations for future research. *Educational Technology, Research and Development* 55(3), 223-252.
- Hong, K. H., and Samimy, K. K. 2010. The influence of L2 teachers' use of CALL modes on language learners' reactions to blended learning. *CALICO Journal*, 27(2), 328-348.
- Hughes, J. (2005). The role of teacher knowledge and learning experience in forming technology integrated pedagogy. *Journal of Technology and Teacher Education*, 13(2), 277-289.
- Jacobsen, D., and Lock, J. 2005. Technology and teacher education for a knowledge era: Mentoring for student futures, not our past. *Journal of Technology and Teacher Education*, 12(1), 75-87.
- Jefferies, A., Bullen, P., and Alltree, J. 2006. Special Blended Learning Issue. *Journal for the Enhancement of Learning and Teaching*, 3(2), 3-53.
- Kaleta, R., Skibba, K., and Joosten, T. 2007. Discovering, designing, and delivering hybrid courses. In A. Picciano and C. Dziuban (Eds.), *Blended Learning: Research Perspectives* (pp. 111-144). Needham, MA: The Sloan Consortium.
- Karmakar, B., and Behera, S. K. 2016. The Attitude of Higher Secondary School Teachers towards E-Learning in Purulia District of West Bengal, India. *ATIKAN*, 5(1).
- Keshta, A. S., and Harb, I. I. 2013. The effectiveness of a blended learning program on developing Palestinian tenth graders' English writing skills. *Education Journal*, 2(6), 208-221. Doi: 10.11648/j.edu.20130206.12
- Khalid, A. 2009. Barriers to the successful integration of ICT in teaching and learning environments: A review of the literature. *Eurasia Journal of Mathematics, Science and Technology*, 5(3), 235-245.
- Korte, W., and Husing, T. 2007. Benchmarking access and use of ICT in European schools 2006: Results from head teacher and a classroom teacher surveys in 27 European countries. *eLearning Papers*, 2(10), 1-6.
- Larsen, L. J. E. 2012. Teacher and student perspectives on a blended learning intensive English program writing course.
- Maarop, A. H., and Embi, M. A. 2016. Implementation of blended learning in higher learning institutions: A review of literature. *International Education Studies*, 9(3), 41. DOI: <http://dx.doi.org/10.5539/ies.v9n3p41>
- Marsh, D. 2012. Blended learning: Creating learning opportunities for language learners. Retrieved April, 20, 2015.
- Mouzakis, C. 2008. Teachers' perceptions of the effectiveness of a blended learning approach for ICT teacher training. *Journal of Technology and Teacher Education*, 16(4), 461.
- Plano Clark, V. L., Anderson, N., Wertz, J. A., Zhou, Y., Schumacher, K., and Miaskowski, C. 2015. Conceptualizing longitudinal mixed methods designs: a methodological review of health sciences research. *Journal of Mixed Methods Research*, 9(4), 297-319.
- Sajid, M. R., Laheji, A. F., Abothenain, F., Salam, Y., AlJayar, D., and Obeidat, A. 2016. Can blended learning and the flipped classroom improve student learning and satisfaction in Saudi Arabia?. *International Journal of Medical Education*, 7, 281. DOI: 10.5116/ijme.57a7.83d4
- Schoepp, K. 2005. Barriers to technology integration in a technology-rich environment. *Learning and Teaching in Higher Education: Gulf Perspectives*, 2(1), 1-24.
- Shaqour, A. Z. 2014. Faculty Members' Views towards Blended Learning, the Case of a Najah National University Master Program Teachers in the College of Education and Teacher Preparation. *International Journal of Humanities and Social Science*, 4(7), 99-106.
- Stuart, H., Mills, M., and Remus, U. 2009. School leaders, ICT competence and championing innovations, *Computers and Education*, 53(3), 733-741.
- Tella, A., Tella, A., Toyobo, O., Adika, L., and Adeyinka, A. 2007. An assessment of secondary school teachers' uses of ICTs: Implications for further development of ICT's use in Nigerian secondary schools. *The Turkish Online Journal of Educational Technology*, 6(3), 5-17.
- Wang, Y., Han, X., and Yang, J. 2015. Revisiting the Blended Learning Literature: Using a Complex Adaptive Systems Framework. *Educational Technology and Society*, 18(2), 380-393.
- Young, D. J. 2008. An empirical investigation of the effects of blended learning on student outcomes in a redesigned intensive Spanish course. *CALICO Journal*, 26(1), 160-181.
