Probing the Flipped Learning Literature in Social Sciences and Humanities Education

Malek Jdaitawi
Dr., Imam Abdulrahman bin Faisal University, Saudi Arabia, *mtmustafa@iau.edu.sa*

Elham Taha Hussein
Al Ain University, United Arab Emirates, *elham.hussein@aau.ac.ae*

Fatima Muhaidat
The Hashemite University, Jordan, *fmuhaidat@hu.edu.jo*

Maisoun Abu Joudeh
The Hashemite University, Jordan, *maisoun@hu.edu.jo*

In the last decade, major progresses have been made and the flipped learning has been increasingly implemented in diverse educational settings to enhance the physical, cognitive, personal and social abilities of students as well as to improve their learning outcomes. The advantages and challenges of flipped learning have been explored and quantified in terms of students learning. Despite the popularity of the flipped learning research, there is a lack of empirical evidence to review the knowledge of the concept more systematically, and flipped learning is not well known in a social sciences and humanities at the university setting. The study purpose is to investigate the positive effectiveness of implementing the flipped learning in social science and humanities settings. The analysis included filtering from a large number of publications to 21 primary studies published between 2015-2021. The result indicates a positive impact on students learning outcomes such as academic, personal, social and cognitive skills. The result also revealed that English language was the main focused filed in the employment of flipped learning compared to others. In addition, it was seen that the majority of the flipped learning studies included first year's students as the study level. Meanwhile, the most significant challenges encountered by students and instructors is the activities design depending on the technology being used and limited resources and time. The results revealed that the flipped learning is an effective approach in promoting positive outcomes and the needed century skills. Collaborative research amongst countries on the effect of flipped learning in the future studies to produce more complete findings.

Keywords: flipped learning, systematic review, social sciences, humanities, learning

INTRODUCTION

Increasing concerns have been focused on the educational model's capability of providing university members with the required skills for embarking on their careers (Jdaitawi, 2020; Jdaitawi et al., 2013; Jdaitawi et al., 2014). Recently, there are some technological changes in the educational paradigm and students are required to meet the rapid technology innovation (Chung & Lee, 2018; Jdaitawi et al., 2020). However, several learning techniques have been introduced to match with the technological changes and developments (Sojayapan & Khlaisang, 2018), and one of these learning methods is flipped learning (Mc Laughlin et al., 2016). The nature of flipped teaching mode has been widely referred to as the medium that blends "the strengths of internet-driven instruction outside the classroom (e.g., digital videos, self-regulated learning, online discussions) and face-to-face interaction inside the classroom (e.g., collaborative study, applied problem-solving, instructor and peer engagement" in an attempt to effectively enhance student engagement, improve student performance and strengthen the development of creative thinking skills (He et al., 2019).

Flipped learning significantly contributes to the learning world, in terms of teaching and learning, promote higher order thinking skills, as well as improving students' learning outcomes in all fields (Khasanah & Anggoro, 2022; Zian, Sailin, & Mahmor, 2022; Kozikoglu, 2019; Akcayir & Akcayir, 2018; Jdaitawi, 2020; Kernagaran & Abdullah, 2022; Rathner & Schier, 2020; O'Flaherty & Phillips, 2015). In the flipped learning context, students can watch online content at their own optimum pace. Furthermore, they can replay core and difficult content. Both teacher and students can enjoy a high level of group communication through face-to-face discussions to improve knowledge and fully capture course content (Jdaitawi, 2020; He et al., 2019; Vliet et al., 2015).

In the field of social science and humanities, the flipped classroom technique has been evidenced to enhance the performance of students (Maheshwari & Seth, 2018), to improve their learning perceptions and experiences (Jenkins, 2015) as well as to assist them in identifying class concepts and develop a dynamic learning environment both in and out of the class (Bowers, 2018). Several reviews have been conducted in recent years in an attempt to explore and provide insights into the growing body of knowledge in flipped learning (Fung et al., 2021). One of the first reviews was conducted in nursing by Ward et al. (2018). Ward et al. (2018) found that students have positive believed towards enhancing their learning and understanding. Another study done by Lin and Hwang (2018) reviewed 60 medical studies and found that the use of in-class activities was inconsistent in most studies. Reviews have also been conducted by Kostaras (2017) on flipped learning on English learning. The result revealed that flipped learning enhanced active learning and interactions between students and instructors. Although, studies dedicated to flipped learning in general and in social science in particular are still lacking and of those conducted some reported mixed findings as to the intervention's effectiveness (Brewer & Movahedazarhouligh, 2018; Jdaitawi, 2019; Vliet et al., 2015; Debele & Plevyak, 2012). Recent flipped learning reviews are still insufficient compare with in-class activities (Fung, et al., 2021). Additionally, reviews according to individual discipline are needed, as the positive result may be due to

subject nature and its activities (Fung, et al., 2021; Giannakos et al., 2014). According to Erdogan and Akbaba (2018), social sciences courses are difficult in the teaching process due to several issues such as inability to act according to the students' speed, inadequate use of student-centered method and techniques and insufficient class time. In light of these, recent studies which review the impact of flipped learning in social and humanities sciences are limited. A systematic literature review studies in education fields and social sciences are lacking (Karabulut et al., 2018; Pervalla & Uzunboylu, 2019; Hwang et al., 2019; Jia & Wu, 2020), thus, this study extends the flipped literature on flipped learning using different databases.

Aim of the Study

This study aimed at analysing the literature related to flipped learning in social science and humanities education. However, flipped learning in social science and humanities education is examined on the basis of the following research questions.

1. What are the skills that can be achieved by university students through flipped learning use in social science and humanities education?

2. What are the most education levels used in flipped learning social science and humanities studies?

3. At which major in social science and humanities education is flipped learning most frequently used?

4. What are the advantages and challenges related to flipped learning in social science and humanities studies?

METHOD

Study Design

This study used content analysis and employs meta-analysis by analysed 21 refereed published journal articles on flipped learning recently published in 2015-2021. The content analysis was used in this study as the design was usually in social science and humanities filed (McMillan, 2012). Generally, Arksey and O'Malley (2005) and Kitchenham's (2004) summarize the steps of meta-analysis, beginning with the establishment of inclusion criteria for the research under consideration. Second identifying relevant studies. Third, study selection. This study followed these steps:

Inclusion criteria

The eligibility criteria used the trends in educational flipped learning studies conducted from 2015 to 2021, it must report a statistical result, not a review, available in English, must be related to flipped learning and social sciences and humanities, university settings, and examining articles from ScienceDirect, Scopus, Elsevier and ISI databases. From the search results 21 research publications that met the above criteria were selected in the current study and were deemed appropriate for the objectives of the study on the basis of the assessments of clear outcomes, technology descriptions, presentation

of variables and outcomes, name of the author, grade level, variables, results and study findings.

FINDINGS AND DISCUSSION

The present study attempts to address the following question: "what are the skills achieved by the integration of flipped learning in social science and humanities education?". The results from social science and humanities education studies were reported in Table 1. The table showed that flipped learning enhanced social science and humanities students' skills such as social, cognitive and personal skills (Gopalan, 2019; Harun et al., 2017; He et al., 2019; Huang et al., 2020; Nahar & Chowdhury, 2019; O'Connor et al., 2016).

Table 1 revealed that 14 studies (66.65%) support the effectiveness of flipped learning in enhancing social science and humanities learning skills among students; 4 studies (19.5%) contributes to cognitive skills; 2 studies (9.50%) enhanced social skills; and 1 study (4.80%) contribute to personal skills of the students. The results supported the previous studies (He et al. 2019; Jong, 2019; Maheshwari & Seth, 2018; Molnar, 2017; Pandow et al., 2020; Shih & Tsia, 2017; Talan & Gulsecen, 2019) who reported the effectiveness of flipped learning. These results can be linked to the importance of technology in higher education and in social science and humanities education, as well as consider as a preferred methods in the teaching and learning process. Furthermore, flipped learning mode may be attractive to students as it piques their interests, motivates them and encourages their interaction with learning materials, and achieve successful outcomes (Fung, 2020; Gren, 2020; Hussain et al., 2020; Jo et al., 2018; Yoon, 2020).

Moreover, results reported by some studies (Andujar, 2020; Jenkins, 2015; Otero-Soborido et al., 2018) revealed that flipped learning enhanced social science and humanities students' learning outcomes, and their perception and satisfaction. The result also supported the claim that implementing flipped learning in the learning process could improve the learners' information and knowledge (Jong, 2019). These results may also be attributed to the learning procedures used in flipped learning that facilitate learning practices and understanding course materials (Nanclares & Rodríguez, 2016; Pandow et al., 2020), which helps them to gain various skills. Pandow et al., (2020) reported that flipped learning impacts students' knowledge, collaboration and problem-solving skills, helping them to take the responsibility of their learning and become self-learners. Nanclares and Rodríguez (2019) also reported that flipped learning encourages student motivation to learn new topics and promotes positive attitudes and interactive engagement.

Studies investigating non-learning outcomes indicated that flipped learning improve personal, effective and cognitive skills among university students in the field of social science and humanities education (Shih & Tsia 2017; Ha et al., 2019; e.g., Burke & Fedorek, 2017; Nanclares & Rodríguez; 2019; Talan & Gulsecen, 2019).

Table 1
A summary of flipped learning studies in social science and humanities education

Skills	Education level	Authors	Major	Findings
Academic	Undergraduate degree	Pandow et al. 2020 (Oman)	Several Majors	Flipped learning has been found to exert positive impact on the academic performance of the students.
	Undergraduate degree	Jdaitawi, 2020 (Saudi Arabia)	Several Major	Flipped learning has been found to promote positive emotions towards learning
	Undergraduate degree	Maheshwari & Sith, 2019 (India)	Management	Flipped learning positively affected students' in-class involvement, comprehensive content understanding, students' academic performance, students' cognitive capabilities, collaborative learning environment and students' inclination toward the teaching and learning process.
	Undergraduate degree	Nanclares & Rodríguez, 2016 (Spain)	English	Flipped learning positively affected students' attitudes towards technology-enhanced learning. It also helped to enhance their learning through participation, critical thinking and active learning.
	Undergraduate degree	Chung & Lee, 2018 (Korea)	Physical Therapy	Flipped learning significantly improved learning motivation (attention, relevance, confidence, satisfaction) and attitudes (attitude about physical therapy).
	Undergraduate degree	Talan & Gulsecen 2019 (Turkey)	Several Programs	Students in the experimental groups performed better with regard to academic achievement and engagement than those in the control group. The differences between the two groups were also found to be statistically significant.
	Undergraduate degree	Otero-Soborido et al., 2018 (Spain)	Physical Activity and Sports Sciences	Students expressed great satisfaction with their learning in the active model of flipped learning.
	Undergraduate degree	Jian, 2019 (China)	Several Programs	The Flipped classroom teaching model has a significant impact on learning motivation and learning outcomes. It also helped students become self-motivating and take charge of their learning experience.
	Undergraduate degree	Blázquez et al., 2019 (Spain)	Social Work Education	Flipped learning improved academic achievement
	Undergraduate degree	Aghaei et al., 2019 (Iran)	English	Flipped learning improved academic learning
	Undergraduate degree	Bowers, 2019 (USA)	Political Science	It helped students critically analyze and evaluate academic theory, encouraged students to identify class concepts in their

				daily lives, and developed a dynamic learning environment that encourages active participation both in and outside of the class.
	Undergraduate degree	Jenkins, 2015 (USA)	Political Science	Student Perceptions were positively affected.
	Undergraduate degree	Andujar, 2020 (Spain)	English as a Foreign Language	Flipped learning provided a beneficial Learning experience
	Undergraduate degree	Hinojo Lucena et al., 2019 (Spain)	Physical Education	Flipped learning improved students' Academic Performance
	Undergraduate degree	Huang & Lin (2017) (Taiwanese)	Human Resource Management	The results revealed that students' perceived team members' positively related to motivation, and learning outcomes.
Social	Undergraduate degree	Molnar, 2017 (USA)	Business	It has been found that students who worked in groups on a weekly basis had more positive responses toward the flipped classroom claiming that it improved their soft skills.
	Undergraduate degree	Burke & Fedorek, 2017 (USA)	Criminology and Criminal Justice	Flipped learning improved students' interactive engagement
Personal	Undergraduate degree	Shih & Tsia,2017 (Taiwan)	Multimedia Design	Flipped learning improved personal, effective and cognitive skills
Cognitive	Undergraduate degree	He et al. 2019 (China)	Education	The findings of this study show that the flipped classroom teaching model has the potential to substantially fulfill the three basic cognitive needs (competence, autonomy and relatedness) among university students in the field of education. Furthermore, students expressed positive attitudes towards the flipped classroom claiming that it had enhanced their perceived competence.
	Undergraduate degree	Santilarn & Wichadee, 2017 (Thailand)	English	Students' scores were more satisfactory. Students claimed to have developed their sense of responsibility and learning performance. Students' perceptions of autonomy were higher than those before they were tutored through the flipped classroom teaching model
	Undergraduate degree	Jong, 2019 (Hong Kong)	English	The study reveals that social science faculty members have strong categorical concerns of information and management which discourages them from integrating FC into their teaching practices.

The second research question examines the educational level at which flipped learning is most frequently used in social science and humanities education. Based on the results,

all the studies related to social science and humanities education were carried out at the undergraduate level. The results may be due to the fact that teaching-learning sessions were based on practical instruction which enhances students' motivation, learning experiences and their engagement in their learning activities, enabling the more effective use of in class time for teachers and students and their interaction, deepen students' knowledge gained out of the class time, as well as positively effects on conceptual understanding and problem solving (Maheshwari & Seth, 2018; Bowers, 2018; He et al., 2019; Jong, Chen, Tam & Chai, 2019; Lo, Lie, & Hew, 2018; Sun, Wu, & Lee., 2017; Sanagustin, et al., 2021; Bergmann & Sams, 2012). Maheshwari and Seth (2018) supported that flipped learning enhanced the learning of students and their experiences. Bowers (2018) also evidenced that flipped learning technique positively improve students' perceptions and their learning experiences. He et al. (2019) indicated that flipped classroom enhanced students' engagement and their thinking skills. Another possible reason is the availability of time and activities in-class that help students increase their opportunity of implementing flipped learning in undergraduate programs.

Regarding to questions three, the results in Table 2 showed that English courses were frequently use flipped learning, 5 studies (23.80%) and this is followed by several majors, 3 studies (14.35%) and physical education, 3 studies (14.35%), 2 (9.50%) studies in political science, 2 (9.50) studies in business, 2 studies (9.50) in human resource and management, 1 study (4.75) in education, 1 study (4.75) in multimedia, 1 study (4.75) in criminology and criminal justice and 1 study in (4.75) in social work education. Form the review results, English course was the most major in social science and humanities that frequently used flipped learning. This justify by the fact that technology-based techniques (such as flipped learning) have been described to be an effective tool in language learning, and that encouraged researchers to use flipped learning in language studies more frequently. Qassem (2020) mentioned that as learning writing in English language learning, technology devices play a crucial role in enhancing English writing training. Another reason may relate to that English language is based on numerus skills (reading, speaking, writing etc..) and that evidenced flipped learning as effective tool in enhancing English language skills (Vitta & Al-Hoorie, 2020). Furthermore, flipped learning technique provide students with suitable space for the exchanging the ideas more than another course (Hamdani, 2019).

Table 2
A summary of the major used in flipped learning for social science and humanities education

Sample	Number of the Studies	Percentage
English	5	23.80%
Several majors	3	14.35%
Physical education	3	14.35%
Political science	2	9.50%
Business	2	9.50%
Human Resource and Management	2	9.50%
Education	1	4.75
Multimedia design	1	4.75%
criminology and criminal justice	1	4.75%
Social work education1	1	4.75%

Regarding to question four, the results of the study indicated that students favored the flipped learning approach more than the traditional mode of instruction in the field of social science and humanities education as various learning skills were enhanced among students (Andujar, 2020; Ha et al. 2019; Molnar, 2017; Santikarn & Wichadee, 2018; Shih & Tsia, 2017). Advantages of flipped learning include unrestricted access to course materials which enables students to learn in any setting at their own optimum pace (Hew & Lo, 2018). Furthermore, flipped learning helps students to review the topics prior to the class and that influences their learning and knowledge (Hunag et al., 2020; Nahar et al., 2019), to make better sense of new information with the prior knowledge they already have. Advantages of flipped learning were also reported by Andujar (2020) and Shih and Tsai (2017), who stated that flipped learning enhances learning effectiveness, learning motivation and learning interest. Flipped learning has also been evidenced by Molnar (2016) to improve students' learning perceptions and grades, while Chung and Lee (2018) supported its role in supporting positive attitudes and enhancing learning motivation. Shih and Tsai (2017) and Andujar (2020) also maintained that flipped learning leads to enhanced effectiveness of learning, learning motivation and learning interest. Finally, it is among the strategies utilized to develop various skills including personal skills, problem-solving, critical thinking, knowledge integration, communication skills, teamwork skills, leisure attitudes and the skills of autonomous learning (Molnar, 2017; Shih & Tsai, 2017; Jdaitawi, 2020; Nielsen, 2020; He et al., 2019; Gopalan, 2019;). This finding may be linked to the general premise that technology, with the use of flipped learning model, responds effectively to the needs of social science and humanities students.

With regards to the flipped learning technology challenges, the majority of studies (e.g., Akcayir & Akcayir, 2018; Van-Alten et al., 2019; Lo et al., 2017; Gardner, 2015; Barral et al., 2018; Nielsen, 2020; Peterson, 2016; Jdaitawi, 2020; Yacout & Abou-Shosha, 2016; Wells & Holland, 2015; Koo et al., 2016; Velegol et al., 2015) indicated that individual, students attitudes, institutional, evaluation, activities design, sessions length and technological or nontechnological are the core challenges to flipped the classroom. Another possible limitation may be related to the availability of tools to measure flipped

learning. Finally, flipped learning is a favorable technique in practical knowledge-based courses as well as theoretical knowledge-based ones.

The resulting analysis found that flipped learning positively enhanced the learning outcomes and other skills among students in the fields of social sciences and humanities. Additionally, the results also revealed that the previous studies were focused on the bachelor's degree in the fields of social sciences and humanities. Another result indicated that English language course had more attention among social sciences and humanities fields. Finally, several advantages (enhances learning effectiveness, learning motivation and learning interest) and challenges (technology, logistics and users) were reported in the current study's results.

CONCLUSION

A systematic review has been carried out on these studies showing the effectiveness of flipped learning in fostering the learning outcomes of students in social science and humanities courses. The results reported that flipped learning was effective in enhancing social science and humanities students' skills (Nielsen, 2020; Jdaitawi, 2020; Turan & Goktas, 2016). The result also showed that the majority of flipped learning studies were conducted in undergraduate settings due to the time and students' availability. The result also clearly demonstrates the effectiveness of flipped learning technique in English course over other courses. Still, not many studies in social sciences and humanities studies were conducted regarding to flipped learning to validate ethe study results. Finally, the review study reveals some challenges about the implementation of flipped learning technique in the field of social science and humanities. One of the most issue is related to technology such as limited availability of internet connection and limited access. Another challenge related to personal issues such as students' attitudes towards preparation time and students' acceptance.

LIMITATIONS AND SUGGESTIONS

This study has some notable limitations. First, limited studies examined the influence of students' characteristics on the learning process, which needs to be explored in future studies. Data collection methods are limited and focused on quantitative, which other methods need to be investigated in future studies. This systematic review of research presented information concerning the best strategies and methods as to how academic achievement among students can be improved through the flipped learning mode. The results of this review supported the claim that though flipped learning can be very challenging and requires teachers to develop the best practices to cultivate learners' high- order thinking skills, it has the greatest potential to meet the needs of students in a fast-paced world. This study also provides useful recommendation to alleviate the key challenges in social sciences and humanities in order to educators make good use of flipped learning. This study also includes only quantitative studies; however, future studies should include those studies conducted using qualitative method. Lastly, training should be provided to instructors to provide them with the necessary skills for the curriculum development.

REFERENCES

Aghaei, K., Rajabi, M., & Lie, K. (2019). Flipped Learning as Situated Practice: A Contrastive Narrative   Inquiry in an EFL Classroom. *Education and Information Technologies, 25*, 1607–1623. https://doi.org/10.1007/s10639-019- 10039-9.

Akçayir, G., & Akçayir, M. (2018). The Flipped Classroom: A Review of its Advantages and Challenges. *Computers & Education, 126*(1), 334–345. https://doi.org/10.1016/j.compedu.2018.07.021.

Andujar, A., Salaberri-Ramiro, M., & Martinez, M. (2020). Integrating Flipped Foreign Language Learning Through Mobile Devices; Technology Acceptance and Flipped Learning Experiences. *Sustainability, 12*(3), 1110. https://doi.org/10.3390/su12031110

Arksey, H. & O'Malley, L. (2005). Scoping Studies: Towards a Methodological Framework. *International Journal of Social Research Methodology, 8*(1), 19–32. https://doi.org/10.1080/1364557032000119616.

Blázquez, B., Masluk, B., Gascón, S., Díaz, R., Aguilar-Latorre, A., Magallón, I., & Botaya, R. (2019). The Use of Flipped Classroom as an Active learning approach improves academic performance in social work: A randomized Trial in a University. *PLoS ONE*,14. https://doi.org/10.1371/journal.pone.0214623

Bansal, S., Bansal, M., Ahmad, K., & Pandey, J. (2020). Effects of a Flipped Classroom Approach on Learning Outcomes of Higher and Lower Performing Medical Students: A New Insight. *Advances in Educational Research and Evaluation, 1*(1). https://doi.org/10.25082/AERE.2020.01.005.

Barral, A., Pastores, V., & Simmons, R. (2018). Student Learning in an Accelerated Introductory Biology Course is Significantly Enhanced by a Flipped Learning Environment. *CBE-Life Science Education, 17*(3), 1-9. https://doi.org/10.1187/cbe.17-07-0129

Bergmann, J., & Sams, A. (2012). Flip your classroom: Reach every student in every class every day. *Internal Society for Technology in Education*. Washington, USA.

Bowers, M. (2019). Show me What You're Thinking: Using Student Generated Photography to Flip the Political Science Classroom. *Journal of Political Science Education, 15*(4), 498-506. https://doi.org/10.1080/15512169.2018.1509007

Burke, A. & Fedorek, B. (2017). Does 'Flipping' Promote Engagement? A Comparison of Traditional, Online, and Flipped Class. *Active Learning in Higher Education,18*(1),11-24. https://doi.org/10.1177/1469787417693487.

Brewer, R. & Movahedazarhouligh, S. (2019). Flipped Learning in Flipped Classrooms: A new Pathway to Prepare Future Special Educators. *Journal of Science Teacher Education, 35*(3), 128-143. https://doi.org/10.1080/21532974.2019.1619110

Connor, E., Fried, J., McNulty, N., & Shah, P. (2019). Flipping Radiology Education Right Side up. *Academic Radiology, 23*(7). https://doi.org/10.1016/j.acra.2016.02.011

Chung, E. & Lee, B. (2018). The Effects of Flipped Learning on Learning Motivation and Attitudes in a Class of College Physical Therapy Students. *Journal of Problem-Based Learning, 5*(1), 29-36. http://doi.org/10.24313/jpbl.2018.5.1.29

Debele, M., & Plevyak, L. (2012). Conditions for successful use of technology in social studies classrooms. *Computers in the Schools, 29*(3), 285-299. http://doi.org/10.1080/07380569.2012.703602.

Eddy, S., Converse, M., & Wenderoth, M. (2015). PORTAAL: A Classroom Observation Tool Assessing Evidence-Based Teaching Practices for Active Learning in Large Science, Technology, Engineering, and Mathematics Classes. *CBE—Life Sciences Education,14*(2), 1-16. https://doi.org/ 10.1187/cbe.14-06-0095.

Erdogan, E., & Akbaba, B. (2018). Should we flip the social studies classrooms? The opinions of social studies teacher candidates on flipped classroom. *Journal of Education and Learning,* 7(1), 116-126. http://doi.org/10.5539/jel.v7n1p116.

Fung, C. (2020). How Does Flipping Classroom Foster the STEM Education: A Case Study of the FPD Model. *Technology, Knowledge and Learning, 25*, 479-507. http://doi.org/10.1007/s10758-020-09443-9.

Fung, C., Besser, M., & Poon, K. (2021). Systematic literature review of flipped classroom in mathematics. *EURASIA Journal of Mathematics, Science and Technology Education, 17*(6), 1-17. http://doi.org/10.29333/ejmste/10900

Gardner, J. (2015). *Flipping the classroom: Challenge of implementation*. IGI Global Publisher of Timely Knowledge, USA.

Giannakos, M., Krogstie, J., & Chrisochoides, N. (2014). *Reviewing the flipped classroom research: Reflecting for computer science Education*. Research Conference (pp. 23-29). ACM. http://doi.org/10.1145/2691352.2691354

Gopalan, C. & Klann, M. (2017). The Effect of Flipped Teaching Combined with Modified Team-based Learning on Student Performance in Physiology. *Advances Physiology Education*,41, 363-367. https://doi.org/10.1152/advan.00179.2016.

Gren, L. (2020). A Flipped Classroom Approach to Teaching Empirical Software Engineering. *IEEE Transactions on Education, 63*(3), 155-163. http://doi.org/10.1109/TE.2019.2960264

Hamdani, M. (2019). Effectiveness of flipped classroom (FC) method on the development of English language learning of the high school students in Ahwaz. *International Journal of Applied Linguistics & English Literature, 8*(2), 12-20. http://dx.doi.org/10.7575/aiac.ijalel.v.8n.2p.12

Harun, F. & Hussin, S. (2017). The Acceptance of Flipped Language Learning (EFL) A Study of Engineering Students at Technical Matriculation College. *International Journal of Applied Engineering Research, 12*(24), 14495-14504. Retrieved 1 February, 2021 from http://www.ripublication.com

Ha, A., O'Reilly, J., Ng, J., & Zhang, J. (2019). Evaluating The Flipped Classroom Approach in Asian Higher Education: Perspectives from Students and Teacher. *Cogent Education, 6*(1) ,1638147. https://doi.org/10.1080/2331186X.2019.1638147.

He, Y., Lu, J., Huang, H., He, S., Ma, N., & Sha, Z., et al. (2019). The Effects of Flipped Classrooms on Undergraduate Pharmaceutical Marketing Learning: A Clustered Randomized Controlled Study. *PLOS ONE, 14*(4), e0214624. https://doi.org/10.1371/journal.pone.0214624.

Helgevold, N. & Moen, V. (2015). The Use of Flipped Classrooms to Stimulate Students' Participations in an Academic Course in Initial Teacher Education. *Nordic Journal of Digital Literacy, 10(1*), 29-42. http://doi.org/10.18261/ISSN1891-943X-2015-01-03

Hew, K. & Lo, C. (2018). Flipped Classroom Improves Student Learning in Health Professions Education: A Meta-Analysis. *BMC Medical Education*, 18, ar38. Available online at: https://doi.org/10.1186/s12909-018-1144-z.

Hinojo, F., López, J., Fuentes, A., Trujillo, J., & PozoSánchez, S. (2019). Academic Effects of The Use of Flipped Learning in Physical Education. *International Journal of Environmental Research and Public Health, 17*(1), 276. https://doi.org/10.3390/ijerph1701027.

Huang, C., Lin, C. (2017). Flipping Business Education: Transformative Use of Team-Based Learning in Human Resource Management Classrooms. Educational Technology & Society, 20(1), 323–336. Retrieved 01 December, 2020 from http://www.ifets.info/

Huang, H. et al. (2020). Effects Of a Quasi-Experimental Study of Using Flipped Classroom Approach to Teach Evidence-Based Medicine to Medical Technology Students. *BMC Medical Education, 20*(31). https://doi.org/10.1186/s12909-020-1946-7.

Hussain, S., Jamwal, P., Munir, M., & Zuyeva, A. (2020). A Quasi-Qualitative Analysis of Flipped Classroom Implementation in an Engineering Course: From Theory to Practice. *International Journal of Educational Technology in Higher Education, 17*(43). https://doi.org/10.1186/s41239-020-00222-1.

Hwang, G., Yin, C., & Chu, H. (2019). The Era of Flipped Learning: Promoting Active Learning and Higher Order Thinking with Innovative Flipped Learning strategies and Supporting Systems. *Interactive Learning Environments, 27*(8), 991-994. https://doi.org/ 10.1080/10494820.2019.166150.

Jdaitawi, M. (2019). The Effects of Flipped Classroom Strategy on Students Learning Outcomes. *International Journal of Instruction, 12*(3), 665-680. https://doi.org/10.29333/iji.2019.12340a.

Jdaitawi, M. (2020). Does Flipped Learning Promote Positive Emotions in Science Education? A Comparison between Traditional and Flipped Classroom Approaches. *Electronic Journal of e-learning, 18*(6),516-524. https://doi.org/10.34190/JEL.18.6.004.

Jdaitawi, M. (2020). The Effect of Using Problem-Based Learning upon Students Emotions towards Learning and Levels of Communication Skills in Three Different Disciplines. *Croatian Journal of Education, 22*(1). https://doi.org/10.15516/cj e.v22i1.3215.

Jdaitawi, M., Al-Mutawa, A., Musallam, F., & Talafha, F. (2014). *Stress and psychological strain among university lecturers in Saudi Arabia.* Paper presented at the Global Conference on Business and Finance, 9(1), 365-368, Hawaii, 6-9 January 2014. https://www.theibfr.com

Jdaitawi, M. (2013). Students' perspectives on university experiences; The role of protective factors in students lives. *International Education Studies, 6*(7), 239-249. https://eric.ed.gov/fulltext/EJ1068466.pdf

Jdaitawi, M. et al. (2020). The Determinants of Leisure Attitudes: Mediating Effect of Self-Efficacy among Students from Science, Engineering and Medicine Colleges. *Journal of Turkish Science Education, 17*(2), 242-252. https://doi:10.36681/tused.2020.24.

Jenkins, S. (2015). Flipping The Introductory American Politics Class: Students Perceptions of the Flipped Classroom. *PS: Political Science and Politics, 48*(4), 607-611. https://doi.org/10.1017/S1049096515000840.

Jia, Y. & Wu, L. (2020). Review of Innovation in Flipping the Language Classroom: Theories and Practice. *Language Learning & Technology, 24*(1), 58-61. Retrieved 21 August, 2020 from https://scholarspace.manoa.hawaii.edu/bitstream/10125/44710/1/24_1_10125-44710.pdf

Jian, Q. (2019). Effects of Digital Flipped Classroom Teaching Method Integrated Cooperative Learning Model on Learning Motivation and Outcome. *The Electronic Library,37(*5), 842-859. https://doi.org/10.1108/EL-02-2019- 0024.

Jo, J., Jun, H., & Lim, H. (2018). A Comparative Study on Gamification of the Flipped Classroom in Engineering Education to Enhance the Effects of Learning. *Computer Application Engineering Education,* 26, 1626-1640. https://doi.org/10.1002/cae.21992.

Jong, M. (2019). To Flip or Not to Flip: Social Science Faculty Members Concerns about Flipping the Classroom. *Journal of Computing in Higher Education*, 31, 391-407. http://doi.org/10.1007/s12528-019-09217-y.

Jong, M., Chen, G., Tam, V., & Chai, C. (2019). Adoption of flipped learning in social humanities education: The FIBER experience in secondary schools. *Interactive Learning Environment, 27*(8), 1222-1238. https://doi.org.library.iau.edu.sa/10.1080/10494820.2018.1561473

Karabulut, A., Cherrez, N., & Jahren, C. (2017). A Systematic Review of Research on the Flipped Learning Method in Engineering Education: Flipped Learning in Engineering Education. *British Journal of Educational Technology, 49*(3). https://doi.org/10.1111/bjet.12548.

Kasabah, U. & Anggoro, K. (2022). Accessible flipped classroom model for pronunciation instruction: Its effectiveness and students' perception. *International Journal of Instruction, 15(*1), 185-196. Retrieved 29 November 2021 from https://www.e-iji.net/dosyalar/iji_2022_1_11.pdf

Kernagaran, V. 7 Abdullah, A. (2022). A systematic literature review of flipped learning in English as second language (ESL) context. *International Journal of Instruction, 15*(2), 793-814. https://doi.org/10.29333/iji.2022.15243a

Kitchenham, B. (2004). *Procedures for Performing Systematic Reviews.* Retrieved 12 October, 2020 from http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.122.3308.

Koo, C., Demps, E., Farris, C., Bowman, J., Panahi, L., & Boyle, P. (2016). Impact of Flipped Classroom Design on Student Performance and Perceptions in a Pharmacotherapy Course. *American journal of pharmaceutical education, 80*(2), ar33. http://doi.org/10.5688/ajpe80233

Kostaras, V. (2017). *Flipped classroom: A literature review on the benefits and drawbacks of the reversed classroom*. Unpublished Dissertation. Retrieved 3 November, 2020 from http://urn.kb.se/resolve?urn=urn:nbn:se:du-26281

Kozikoglu, I. (2019). Analysis of the studies concerning flipped learning model: A comparative meta-synthesis study. *International Journal of Instruction, 12*(1), 851-868. http://doi.org/10.29333/iji.2019.12155a

Lee, J., Lim, C., & Kim, H. (2017). Development of an Instructional Design Model for Flipped Learning in Higher Education. *Educational Technology Research and Development, 65*, 427-453. https://doi.org/10.1007/s11423-016-9502- 1

Lin, H., & Hwang, G. (2018). Research trends of flipped classroom studies for medical courses: A review of journal publications from 2008 to 2017 based on the technology-enhanced learning model. *Interactive Learning Environment,* 1-17. http://doi.org/10.1080/10494820.2018.1467462

Lo, C. & Hew, K. (2017). A Critical Review of Flipped Classroom Challenges in K-12 Education: Possible Solutions and Recommendations for Future Research. *Research and Practice in Technology Enhanced Learning, 12*(4), 1–22. https://doi.org/10.1186/s41039-016-0044-2.

Lo, C., Lie, C., & Hew, K. (2018). Applying first principles of instruction as a design theory of the flipped classroom. *The Journal of Economic Education, 31*(1), 30-43.

Maheshwari, P. & Seth, N. (2019). Effectiveness of flipped classrooms: A case of management education in Central India. *International Journal of Educational Management,33*(5),860-886. https://doi.org/10.1108/IJEM.10-2017-0282.

Martínez-Carrascal, J. Cebrián, D., Sancho-Vinuesa, T., & Valderrama, E. (2020). Impact of Early Activity on Flipped Classroom Performance Prediction: A Case Study for a First-Year Engineering Course. *Computer Applications in Engineering Education,28*(3) 590-605. https://doi.org/10.1002/cae.22229.

McLaughlin, J., White, P., Khanova, J. & Yuriev, E. (2016). Flipped Classroom Implementation: A Case Report of Two Higher Education Institutions in the United States and Australia. *Computers in the Schools, 33*(1), 24–37. https://doi.org/10.1080/07380569.2016.1137734.

McMillan, J. (2012). *Educational research: Fundamentals for the consumer*. Pearson, Boston.

Molnar, K. (2017). What Effect Does Flipping the Classroom Have on Undergraduate Student Perception and Grades? *Education and Information Technologies*, 22, 2741-2765. https://doi.org/10.1007/s10639-016-9568-8.

Nahar, K. & Chowdhury, R. (2019). *Effectiveness of Flipped Classroom Model in Distance Learning*. Paper presented at the AAFF Conference, Brisbane, Australia.

Nanclares, N. & Rodriguez, M. (2016). Students' Satisfaction with a Blended Instructional Design: The Potential of "Flipped Classroom" in Higher Education. *Journal of Interactive Media in Education*, (1), 1–12. http://dx.doi.org/10.5334/jime.397.

Nielsen, K. (2020). Students video viewing habits during a flipped classroom course in engineering mathematics. *Research in Learning Technology*, 28, 2404. http://dx.doi.org/10.25304/rtl.v28.2404

O'Connor, E., et al. (2016). Flipping Radiology Education Right Side Up. *Academy Radiology,23*(7),810-822. http://dx.doi.org/10.1016/j.acra.2016.02.001.

O'Flaherty, J. & Phillips, C. (2015). The Use of Flipped Classrooms in Higher Education: A Scoping Review. *Internet and Higher Education*, 25, 85-95. http://doi.org/10.1016/j.iheduc.2015.02.002

Otero-Saborido, F. & Alvarez-Garcia, J. (2018). Flipped Learning and Formative Evaluation in Higher Education. *Education and Training, 60*(5), 421-430. https://doi.org/10.1108/ET.12-2017-0208.

Pandow, B., Inan, N., & Ananda, S. (2020). Evaluation of a flipped classroom model: A case study from Oman', *FIIB Business Review, 9*(1), 15-22. https://doi.org/10.1177/2319714520909006.

Persky, A. & Pollack, G. (2011). A Modified Team-Based Learning Physiology Course. *American Journal of Pharmaceutical Education, 75*(10), ar.204. http://doi.org/10.5688/aj7409170

Peterson, D. (2016). The Flipped Classroom Improves Student Achievement and Course Satisfaction in a Statistics Course: A Quasi-Experimental Study. *Teaching of Psychology,43(*1), 10–15. http://doi.org/10.1177/0098628315628315620063

Prevalla, B. & Uzunboylu, H. (2019). Flipped Learning in Engineering Education. *TEM Journal,8*(2),656-661. https://doi.org/ 10.18421/TEM82-46.

Qassem, A. (2020). The effectiveness of integrating technology in EFL/ESL writing: A meta-analysis. *Interactive Technology and Smart Education, 17*(4), 435-454. http://doi.org/10.1108/ITSE-03-2020-0033

Rathner, J. & Schnier, M. (2020). The Impact of Flipped Classroom Andragogy on Student Assessment Performance and Perception of Learning Experience in Two Advanced Physiology Subjects. *Advances in Physiology Education, 44*(1), 80-92. Available online at: https://doi.org/10.1152/advan.00125.2019.

Sanagustin, M., Opazo, D., Alvarez, R., Hilliger, I., Bey, A., Mahauad,, & Baier, J. (2021). A MOOC-based flipped experience: Scaffolding SRL strategies improves learners time management and engagement. *Computer Application in Engineering Education, 29(*4), 750-768. https://doi.org.library.iau.edu.sa/10.1002/cae.22337

Santilarn, B. & Wichadee, S. (2017). Flipping the Classroom for English Language Learners: A Study of Learning Performance and Perceptions', *iJET, 13*(9). http://doi.org/10.3991/ijet.v13i09.7792.

Shahnama, M., Ghonsooly, B., & Shirvan, M. (2021). A meta-analysis of relative effectiveness of flipped learning in English as second/foreign language research. *Education Technology Research development*, 69, 1355-1386. http://doi.org/10.1007/s11423-021-09996-1

Shih, W. & Tsai, C. (2017). Students Perception of a Flipped Classroom Approach to Facilitating Online Project-Based Learning in Marketing Research Courses. *Australian Journal of Educational Technology, 33(*5), 32-49. http://doi.org/10.14742/ajet.2884

Sojayapan, C., & Khlaisang, J. (2018). The Effect of a Flipped Classroom with Online Group Investigation on Students Team Learning Ability. *Kasetsart Journal of Social Science,41*(1). https://doi.org/10.1016/j.kjss.2018.02.003.

Sun, J., Wu, Y., & Lee, W. (2017). The effect of the flipped classroom approach to OpenCourseWare instruction on students' self-regulation. *British Journal of Educational Technology, 48(*3), 713-729.

Thai, N., Wever, B., & Valcke, M. (2017). The Impact of a Flipped Classroom Design on Learning Performance in Higher Education: Looking for the Best Blend of Lectures

and Guiding Questions with Feedback. *Computer & Education,* 107, 113-126. https://doi.org/10.1016/j.compedu.2-18.01.003.

Talan, T. & Gulsecen, S. (2019). The Effect of a Flipped Classroom on Students Achievement, Academic Engagement and Satisfaction Levels. *Turkish Online Journal of Distance Education-TOJDE,20*(4), 31-60. http://doi.org/10.17718/tojde.640503

Turan, Z. & Goktas, Y. (2016). The flipped classroom: Instructional efficiency and impact of achievement and cognitive load levels. *Journal of e-Learning and Knowledge Society, 12*(4). http://www.learntechlib.org/p/173672/.

Van-Alten, D., Janssen, J., & Kester, L. (2019). Effects of Flipping the Classroom on Learning Outcomes and Satisfaction; A Meta-Analysis. *Educational Research Review*,28. Retrieved 16 August, 2020 from Available online at: http://doi.org/10.1016/j.edurev/2019.05.003.

Velegol, S., Zappe, S., & Mahoney, E. (2015). The Evolution of a Flipped Classroom: Evidence-Based Recommendations. *Advances in Engineering Education, 4*(3), 1–37. Retrieved 3 March, 2021 from https://eric.ed.gov/?id=EJ1076140

Vitta, J. & Al-Hoorie, A. (2020). The flipped classroom in second language learning: A meta-analysis. *Language Teaching Research, 1*(25). http://doi.org/10.1177/1362168820981403

Vliet, E., Winnips, J., & Brouwer, N. (2015). Flipped-Class Pedagogy Enhance Student Metacognition and Collaborative-Learning Strategies in Higher Education but Effect Does Not Persist. *CBE Life Science Education, 14*(3), ar.26. https://doi.org/10. 10.1187/cbe.14-09-0141.

Ward, M., Knowlton, M., & Laney, C. (2018). The flip side of traditional nursing education: A literature review. *Nurse Education in Practice*, 29, 163-171. http://doi.org/10.1016/j.nepr.2018.01.003

Wells, M. & Holland, C. (2016). *Flipped learning! challenges in deploying online resources to flipped learning in higher education,* in: Keengwe, J. and Onchwari, G. (Eds.) Handbook of Research on Active Learning and the Flipped Classroom Model in the Digital Age, IGI Global, Hershey, USA, 1-18.

Yacout, D. (2016). Nursing Students Perceptions towards Flipped Classroom Educational Strategy. *Journal of American Science, 12*(2), 62-75. https://doi.org/10.7537/marsjas12021607.

Yoon, S., Kim, S., & Kang, M. (2020). Predictive Power of Grit, Professor Support for Autonomy and Learning Engagement on Perceived Achievement within the Context of a Flipped Classroom. *Active Learning in Higher Education, 21*(3), 233-247. https://doi.org/10.1177/1469787418762463.

Zain, F., Sailin, S., & Mahmor, N. (2022). Promoting higher order thinking skills among pre-service teachers through group-based flipped learning. *International Journal of Instruction, 15*(3), 519-542.