Arab World English Journal

INTERNATIONAL PEER REVIEWED JOURNAL ISSN: 2229-9327

Blended Learning and Flipped Classroom's Application during Post Pandemic

Asma Rahmani
Department of Media, Communication and Library Sciences
Faculty of Social and Human Sciences
Batna-1 University, Algeria
Corresponding Author: asma.rahmani@univ-batna.dz

Khadidja Samira Zitouni
Department of English language and literature
Faculty of Letter and Foreign Languages
Barika University Center, Algeria

Abstract:
The adoption of online learning is continuously growing in the post-COVID-19 pandemic era in the Algerian context. In this account, teachers and academicians tend to change and adjust their teaching pedagogies to fit this type of learning to ensure a high quality of education. Two crucial pedagogical approaches are blended learning and flipped classrooms, which depend on online and face-to-face learning processes. The actual research implements this approach in different subjects taught in a limited four face-to-face courses during the post-pandemic period. The central aim of this paper is to investigate the extent of efficacy of blended learning in combination with the flipped classroom in Algerian foreign language classes. The hypothesis set is that blended learning combined with the flipped online classroom assists learners to a great extent in their learning. To gain empirical data, grids of observation were used by the researchers. The sample of this research consists of 165 learners who belong to different educational levels at both Batna-1 University and Barika's University Center, Algeria. One of the significant findings of this investigation reveals that blended learning and flipped classrooms efficiently promote a high quality of learning among learners. Likewise, the results indicate that the embedment of this teaching approach reinforces learners' adoption of online learning.
Keywords: Blended learning, online learning, Flipped classrooms, COVID-19 pandemic

Introduction

The spread of the recent COVID-19 pandemic affects higher education methodologies and impacts and modifies higher educational institutions' methods, models, approaches, and even resources worldwide. In over 200 countries, on March 12, 2020, the provisional suspension of face-to-face teaching was announced to limit the spread of this deadly virus (UNISCO,2020). On the other hand, universities and institutions must pursue and finish their academic year's agenda. Official correspondence from the Algerian Ministry of Higher Education and Scientific research ordered its sector to shift toward online learning and provide the learners with courses on the official universities' websites or some recommended educational platforms and set the end of March 2020 as a deadline for teachers to display their online courses. As a primary step, teachers provided learners with PDF forms of courses to ensure that learners have access to these courses considering the internet-related problems and lack of computer factors. After that, teachers assisted learners' in online learning by offering a range of synchronous and asynchronous educational choices. For instance, teachers used Facebook educational groups and pages, Skype, Zoom, Big Blue Bottom, or other video-conferencing sessions, Google Classrooms, Moodle classes, and other educational online tools.

In September 2020, as the country's declared infected cases were noticeably decreased, the Algerian Ministry of Higher Education and Scientific's guidelines permitted the optional integration of some face-to-face revision sessions for some subjects and their final summative assessments. Consequently, this was interpreted as the official integration of blended learning in its sections.

As the blended learning form proves its efficacy, it was adopted in the academic year 2020-2021. Some teachers shifted towards the flipped classroom approach to gain more benefits and invest in the limited allotted face-to-face sessions, as only four sessions divided into four weeks are allowed for each group/ subject.

In this account, teachers dedicated the online learning to the theoretical teaching based on the Expositive Approach and exploited the face-to-face session for practice activities. This is a form of the flipped classroom. In this respect, one research question is asked: to what extent the combination of blended learning and flipped classroom in Algerian foreign language classes is efficient. Therefore, the following hypothesis is formulated:

Combining blended learning and flipped classroom approaches assists learners considerably in their learning.

Investigating the efficacy of this type of class is set as the main aim of the in-hand research. However, a sum of objectives is targeted, including:

1. Unveiling the effect of this type of class in developing learners' self-centred learning.
2. Revealing the impact of this learning on peer instructions.
3. Examining learners' engagement in learning using this combination.

Literature Review
Flipped Classroom

Flipped teaching provides more in-depth learning of content. King (1993) argues that this teaching methodology is, by excellence, an educational methodology that exchanges the timing and location dedicated for both theoretical teaching and practical activity of the traditional educational model. Also, Fidalgo; Sein; and García (2019) believe that flipped classroom is an active educational methodology from a constructivist educational methodologie, view while Kilpatric (1918) notes that flipped classroom is associated with Project-Based to cognitive constructivism (Piaget,1967). Furthermore, from cognitive constructivism considerations, the flipped classroom is a problem-based and thinking-based type of learning (Barrows,1996; Swartz & Parks,1994). Additionally, the Flipped Classroom is linked to Cooperative Learning and Collaborative Learning (Johnson; Johnson& Smith,1991; Cohen, 1994).

To Horn and Staker (2014), the flipped classroom is a form of Blended Learning. It is worth mentioning that Blended Learning is an educational methodology that combines and connects face-to-face teaching with distance learning (Pascual, 2003; Bonk & Graham,2006). More importantly, Bergmann, Overmyer, and Wilie (2011) argue that flipped classroom is an approach that transfers learning responsibility from the teacher to the student. Likewise, the flipped classroom is an active, student-centred approach created to increase the quality of learning through more practice. Sams and Bergmann (2014) note that the flipped classroom means "what is done at school done at home, homework done at home completed in class"(p.35). In other words, learners are invited to read and prepare the theoretical part of courses and prepare any possible questions or inquiries to be discussed once in class. Besides, teachers schedule supporting activities to reinforce learners' understanding of the courses. An approach that transfers learning responsibility from the teacher to the student (Bergmann, et al., 2011).

> Additionally, flipped learning is argued to be:
> pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter (Yarbro, Arfstrom, McKnight & McKnight, 2014, p. 5).

To the same researchers, the meaning of flipped learning is broadly summarized in its acronym FLIP:

F: Flexible Environment: Flexibility in terms of assessment, selecting the suitable time to learn.
L: Learning Culture Shift: this reflects the teacher's role change from being the source of information to guiding students' learning.
I: Intentional Content: This indicates teachers' knowledge about the actual teaching content provided to learners and deciding about what should be delivered online or in face-to-face sessions.
P: Professional Educators: In this context, teachers are supposed to be creative when designing face-to-face interaction activities and encourage learner-centred learning to construct new knowledge and understanding among learners.
These are the commonalities between the different types of flipped classrooms.

Technology and Types of the flipped classroom

The application of this type of learning permits teachers to use any possible sources that assist them in explaining their subjects effectively. They are not limited to explanatory videos. However, many teachers prefer to utilize their personal created videos besides providing some PDFs, Websites, or even recorded sounds. In this account, Tucker (2012) maintains that teachers can use some lecture videos from some internet sites Khan Academy, YouTube, or Ted.

On the other hand, several types of flipped classrooms exist. Bergmann and Sams (2012) note that "...there is no single way to flip your classroom there is no such thing as the flipped classroom" (p. 37). In this spectrum, the teacher can select the type they believe fulfils learners' educational needs and preferences of and adapt eventually to the surrounding social, educational, and even health circumstances.

Traditional flip: this type depends on assigning learners lecture videos to be watched at home to gain prior knowledge about the subject. Supporting activities are provided once they are in class.

In-class flip: it is similar to the traditional flip-type; however, it insists that lecture videos should be completed at home and the supporting activities. Learners of this type are not supposed to know about the subject before coming to the class as the introductory lecture and information are delivered at home.

Virtual Flipped Classroom: This indicates that both the lectures- videos, and the supporting activities are held in the virtual context.

On the other hand, the combination of traditional flip classrooms and online learning classes creates a new and effective blended learning model that improves the learning quality through relevant courses (Valiathan, 2002).

Characteristics of Quality of Learning Using the Flipped Classroom

Several characteristics of learning can be covered during the flipped classroom with its different types. Leszczyński et al. (2018) stress that flipped classrooms effectively support the traditional way of learning. Johnson (2013) noted that learners significantly accept this type's self-paced nature of learning. In this context, learners select their timing, place, and even the amount of their learning. This could highly ameliorate their learning. Additionally, researchers like Abuhmaid and Mohammad (2020) found that exposing learners to the course's content before the face-to-face classes reorients their learning and permits them to focus on the most significant axes of courses.

Using this type of blended learning allows learners to control their learning and permits them to use e-learning technology as a new tool to learn (Bridge et al., 2009). Furthermore, Gustilo, Lapinid, Barrot, Gabinete, Magno, and Osman (2015) report that the flipped classroom improved learners' achievement. The flipped Classroom is based on what is called peer-assisted learning. Mazur (1997) noted that depending on peer feedback enables learners to understand the content of their courses better.

Blended Learning

Researchers and educationalists provide a myriad of definitions for blended learning. In this spectrum, Driscoll (2002) suggested that blended learning can result of combining, for instance, some pedagogical approaches, modes of web-based technology, or instructional technologies.

The most common definition of blended learning was provided by Graham (2006), who stated that blended learning is "Blended learning systems combine face-to-face instruction with computer-mediated instruction" (p. 5). In the same context, Garrison and Kanuka (2004) noted that blended learning is "the thoughtful integration of classroom face-to-face learning experiences with online learning experiences" (p. 96). What could be concluded is that blended learning reflects the use and adoption of two learning environments: virtual and in-person contexts.

Research Methodology and Tools

The current case study is qualitative descriptive-analytical research. An observation grid was designed to collect the needed data in this spectrum. This of this data gathering tool was used during the whole academic year 2020-2021 in both face-to-face, and online sessions. Learners have only four face-to-face sessions each semester and the rest of the learning sessions are done online. It is worth mentioning that before meeting learners in the in-person form of learning, learners were provided with the learning material in advance through online educational platforms.

Data Gathering Tool

The observation grid used in the current investigation encompasses 11 criteria. These criteria are evaluated according to a specific rating scale. The rating scale consists of a three-point Likert scale ranging from Absent, fairly present, or present. The observation grid did not include any demographical details (gender and age) as this information does not relate to the main aim of this study or directly impact the results. The observation grid targets:

⇒ Learners' online interaction (before the face-to-face session)
⇒ Learners' face-to-face interaction
⇒ Learners' online interaction (after the face-to-face session)
⇒ Learners' self-paced learning
⇒ Using more online learning activity type
⇒ Providing feedback (online context)
⇒ Providing feedback (face-to-face context)
⇒ Reflecting critical thinking (online context)
⇒ Reflecting critical thinking (Face-to-face context)
⇒ Solving Activities (online context)
⇒ Solving Activities (Face-to-face context)

To check the validity of this data-gathering tool, the observation grid was sent to other teachers to provide us with the necessary feedback. Additionally, depending on Cronbach's alpha psychometric test, we checked the reliability of the observation grid. The observation grid is assigned to 10 learners who do not belong to our sample. The obtained results are gathered, coded, and treated using the Statistical Package of Social Sciences (SPSS) Version.20. The obtained alpha

Arab World English Journal   455
www.awej.org
ISSN: 2229-9327

coefficient of reliability proves the reliability of the observation grid as it was equal to .853, which reflects a high internal consistency.

Population and Sample

The population of this study consisted of first- and second-year learners at the department of English at Batna-2 University besides first-year and master one learners from the department of foreign language at Barika University- Center. The sample selection was based on purposive selection as we should target subjects taught using blended learning form during the academic year 2020-2021. Also, being their teacher was another critical factor when selecting these groups to gain more reliable results and eliminate any possible extraneous variable that may affect the research process. The subject taught were: Written expression, phonetics, grammar, and research methodology.

In this respect, the sample consists of 165 learners. The following chart provides more details about the sample's study composition.

Table1: *Population and Sample number*

The Sample Total Number		165
Batna-2 University		95
1st-year learners (Written Expression)	2nd-year learners (Phonetics)	
43	52	
Barika University Center		70
1st-year learners (Grammar)	Master 1 (research methodology)	
33	37	

Findings

The obtained data were analyzed using descriptive analyses of SPSS to calculate the frequencies of the learners' responses and the mode. The sum of the results was gathered and tabulated in table Two.

Table Two: *Observation grid's results*

The observed criteria	Absent	Fairly present	Present	Mode
Learners' online interaction (before the face-to-face session)	63%	26%	11%	1
Learners' face-to-face interaction	13%	63%	24%	2
Learners' online interaction (after the face-to-face session)	17%	31%	52%	3
Learners' Self-paced learning during online Learning	3%	18%	79%	3

Using more online learning activity type	14%	10%	76%	3
Providing feedback online	10%	9%	81%	3
Providing feedback face-to-face	10%	26%	64%	3
Reflecting critical thinking online	2%	10%	88%	3
Reflecting critical thinking in face-to-face	1%	11%	88%	3
Solving activities online	12%	00%	88%	3
Solving activities in class	21%	00%	79%	3

Results

The results demonstrate that learners' online interaction (before the face-to-face session) and their online interaction (after the face-to-face session) demonstrate that the mode of these criteria was equal to one and three, respectively. This indicates that the lion's share of learners' interaction in the first case was absent while in the second case increased where more than half of learners' interaction was noted.

Learners' face-to-face interaction in the four in-person session mode was equal to two, which refers to a fairly present interaction. A minority of learners (13%) were constantly absent during classes, while (24%) were always interacting permanently. Mainly, learners hesitate to interact in this situation due to some psychological factors that forbid it. For instance, fear of judgment or anxiety can be regarded as these psychological factors. This was consolidated when we compared their online interaction before the in-person sessions.

After the in-person sessions, learners get to know each other. What was noticed during these sessions is that some psychological factors are decreased. In this respect, learners feel less stressed when they answer, accept others' feedback, feel more comfortable asking and answering questions, and ask for clarifications from teachers and peers.

Also, the results prove that learners' online interactions after the in-person sessions increased. Learners were motivated to interact as they knew other learners.

Learners' self-paced learning mode was equal to three. This indicates that learners in this type of learning were selecting the courses' content and doing the related activities according to their preferences. Also, this was noticed particularly when they were solving their assignment online and during the in-person activities.

The results indicate that learners were varying the online learning material they were using in the online learning as the mode of this criteria was equal to three (76%).

Comparing the feedback criteria, learners were providing feedback in both online, and in-person sessions as the mode of both criteria were equal to three. However, the provided online feedback (81%) was much higher than the in-person sessions (55%).

The results denote that learners' creative thinking criteria mode in online and in-person sessions was equal to three. Learners show more skills in analyzing and discussing in the online

learning sessions. Finally, the recorded mode of learners solving activities and assignments was equal to three in both online and in-person settings.

However, due to time constraints, learners tend to solve more activities in an online context than in an in-person class.

Discussion

The analysis of the first tree criterion unveiled that learners' interaction was gradually increased. This can be explained by the fact that: first, in-person sessions assisted learners in knowing their learning environment, their teachers, and the other learners. However, the online sessions prove that this interaction was highly improved as the learning environment is more flexible in selecting the timing of learning and interacting. Also, the learners' interaction clearly proves what Yarbro, Arfstrom, McKnight, and McKnight (2014) named the Learning Culture Shift. The teachers' role was to provide the necessary guidance and support for their interaction.

Learners' high interaction in online and in-person settings is related to the content selected by their teachers. The Flipped Classroom's intentionally content selected by teachers for each session boosted learners' integration in the courses, raised their interaction, and improved their learning quality which was later consolidated by their obtained grades in both formal and informal exams. Additionally, the variation of learning sources in online learning and activities in both online and in-person learning proved teachers' professionalism that positively raised learners' autonomous learning and their motivation to provide peer feedback. All this consolidated the meaning of flipped classrooms provided by Yarbro, Arfstrom, McKnight, and McKnight (2014).

Findings of Learners' increase in the provision of feedback in both in-person and online sessions align with Johnson, Johnson, and Smiths's (1991) and Cohen's (1994) findings which states that flipped classroom support the collaborative form of learning. Furthermore, Mazur (1997) states that Flipped Classroom is a type of learning based on peer-assisted learning. Data collected from the current research confirm this finding as learners demonstrate a high level of exchanging feedback in both contexts.

Also, the finding of this paper, namely learners' use of various online activities and selecting their learning pace, confirms Bridge et al.'s (2009) findings that note that such a learning environment is an opportunity to control the learning and use electronic learning as a new learning tool.

Ultimately, all the findings assist us in noting that the combination of traditional flipped classrooms and online learning classes is an efficient, practical, and encouraging learning environment that generates more autonomous learning and makes the learning journey more beneficial. This aligns with Valiathan's (2002) findings.

Conclusion

In the light of what was discussed, the hypothesis set for this research paper that states that blended learning and flipped classroom assist learners to a great extent in their learning are accepted as the adoption of flipped classroom succeeded improving learners' learning skills.

Additionally, the flipped classroom is an environment where learners can experience a blending of direct instruction with constructivist learning. Also, the flipped classroom is a tool that highly assists learners in integrating into online learning and thus engages them to be responsible for their learning. In this respect, learners will be more autonomous learners and reach better educational outcomes. Moreover, blended learning assists learners in overcoming certain psychological factors that hinder their appropriate learning and enriching their learning experience.

Therefore, based on the evidence and results provided, it is recommended to organize a systematic training programme for teachers to enhance their knowledge and competency in blended learning and flipped classrooms. Besides, it would be desirable to emphasize the development of learners' autonomy and self-independence to fit the needs of the new world. Finally, it is preferable to afford a platform for teachers to exchange their experiences, methods and techniques concerning online teaching in general and blended learning and flipped classrooms in particular.

About the author

Asma RAHMANI is an assistant professor at the department of Media, Communication, and Library Sciences, Batna-1 University Algeria. Ph.D. holder in TEFL. She is an active member in Psychology of Road User Laboratory. Her area of interest is TEFL and Applied Linguistics.

Dr. Khadidja Samira ZITOUNI, a Ph.D. holder in Applied Linguistics. She is an assistant professor at Barika's University Center. She was a member in AELT. She is an active member in the Psychology of Road`s User laboratory. Her area of interest is Applied Linguistics and TEFL.

References

Abuhmaid, A., & Mohammad, A. (2020). The impact of flipped learning on Procrastination and students' attitudes toward It. *Universal Journal of Educational Research, 8*(3), 566–573. https://doi.org/10.13189/ujer.2020.080228.

Barrows, H.S. (1996). *Problem-Based Learning in medicine and beyond: A brief overview*. New Dir. Teach. Learn. 3–12.

Bergmann, J., Overmyer, J., & Wilie, B. (2011). *The Flipped Class: Myths vs. Reality*. Retrieved May 5, 2015, from The Daily Riff. http://www.thedailyriff.com/articles/the-flipped-class-conversation-689.php

Bonk, C.J., & Graham, C.R. (2006).*The Handbook of Blended Learning Environments: Global Perspectives, Local Designs;* Jossey-Bass: San Francisco, CA, USA, ISBN 978-0-787-97758-0.

Bridge, P. D., Jackson, M., & Robinson, L. (2009). The effectiveness of streaming video on medical student learning: A case study. *Medical Education Online, 14*(1), 4506.

Cohen, E.G. (1994). *Designing Group-Work: Strategies for the Heterogeneous Classroom;* Teachers College Press: New York, NY, USA, ISBN 978-080-775-566-2.

Driscoll, M. (2002). Blended learning: Let's get beyond the hype. *eLearning, 1*(4), 1–4.

Fidalgo, Á, Sein, M.L.& García, F.J. (2019*). Flipped Classroom, Flip Teaching*, Aula Invertida, Aula Inversa. Zenodo.

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education, 7*, 95–105. https://doi.org/10.1016/j.iheduc.2004.02.001.

Graham, C. R. (2006). Blended learning systems: Definition, current trends and future directions. In C. J. Bonk & C. R. Graham (Eds.), *The handbook of blended learning*: Global perspectives, local designs (pp. 3–21). San Francisco: Pfeiffer

Gustilo, L. E., Lapinid, M. R. C., Barrot, J. S., Gabinete, M. K. L., Magno, C. P., & Osman, A. J. M. (2015). Effects of knowledge channel videos on the achievement of students in various learning environments. Advanced Science Letters, 21(7), 2276-2280.

Horn, M.B.; Staker, H. (2014). *Blended: Using Disruptive Innovation to Improve Schools*; Jossey-Bass: San Francisco, CA, USA. ISBN 978-111-895-515-4.

Johnson, D.W., Johnson, R.T., & Smith, K.A.(1991).*Cooperative Learning: Increasing College Faculty Instructional Productivity*; Jossey-Bass: San Francisco, CA, USA, ISBN 978-187-838-009-8.

Johnson, G. B. (2013). *Student perceptions of the flipped classroom*, University of British Columbia.

Kilpatric, W.H. (1918). The Project Method. Teach. *Coll. Rec. 19*, 319–335.

King, A. (1993). From sage on the stage to guide on the side. *Coll. Teach. 41*, 30–35.

Leszczyński, P., Charuta, A., Łaziuk, B., Gałązkowski, R., Wejnarski, A., Roszak, M., &Kołodziejczak, B. (2018). Multimedia and interactivity in distance learning of resuscitation guidelines: A randomised controlled trial. *Interactive Learning Environments, 26(2),* 151–162. doi:10.1080/10494820.2017.1337035.

Mazur, E. (1997). Peer instruction: getting students to think in class. In , 399. The changing role of physics departments in modern universities, *AIP Conference Proceedings* (pp. 981e988).

Pascual, M.P. (2003). El Blended Learning reduce el ahorro de la formación on-line peroganaencalidad. *Educaweb. 69*, 34–49. 20.

Piaget, J. (1967). *Psicología de la Inteligencia;Psique*: Buenos Aires, Argentina.ISBN 978-987-629-350-1.

Swartz, R.J., & Parks, S. (1994) Infusing the Teaching of Critical and Creative Thinking into Content Instruction: *A Lesson Design Handbook for the Elementary Grades*; Critical Thinking Press and Software: Ciudad de México, México, ISBN 978-089-455-481-0.

Tcker, B. (2012). The flipped classroom. *Education Next, 12*(1), 82-83.

Tourón, J., & Santiago, R.(2015). *El modelo Flipped Learning y el desarrollo del talentoen la escuela. Rev. Educ.* 196–231.

United Nations Educational, Scientific and Cultural Organization COVID-19 Impact on Education. Available online: https://en.unesco.org/covid19/educationresponse (accessed on 15 March 2020).

Valiathan, P. (2002). Blended learning models. Learning Circuits, Retrieved October 17, 2009, from http//www.learningcircuits.org/2002/aug2002/valiathan.html.

Yarbro, J., Arfstrom, K. M., McKnight, K., & McKnight, P. (2014). Extension of a Review of Flipped Learning. Flipped Learning Network, Retrieved from http://goo.gl/jZ2yBf. Accessed 5 Mar 2016.

Appendix

The student number	The observed criteria	Absent	Fairly present	Present
	Learners' online interaction (before the face-to-face session)			
	Learners' face-to-face interaction (before the online session)			
	Learners' online interaction (after the face-to-face session)			
	Learners' face-to-face interaction (before the online session)			
	Self-paced learning			
	Using more online learning tools			
	Providing feedback online			
	Providing feedback face-to-face			
	Analyzing			
	Reflecting critical thinking			
	Solving activities online			
	Solving activities in class			