



ISSN (Online): 3007-1038 Pages: 59-68 DOI: 10.55737/rl 2025.44126 © The Author(s) 2025 https://regionallens.com

Effectiveness of Flipped Classroom in Enhancing Receptive Skills

Syed Ahmad Raza Shah Gillani ¹ Aimen Latif ² Naghma Gul ³ Bushra Jabin ⁴ Fakhar Naz ⁵

Abstract: The research was an experimental study that aimed to determine the efficacy of the flipped classroom model in the development of the receptive aspect of listening and reading among male students of F.Sc. Part I. To determine the effect of using the flipped classroom model during instruction on student performance in a classroom, a pretest-posttest control group design was used, whereby 44 students were randomly assigned either to an experimental (instructions were administered using the flipped classroom model) or control (instructions were administered using traditional lecture-based methods) group for a one-month intervention. The researcher used self-constructed tests to measure listening and reading skills. Data were analyzed using descriptive statistics (mean, standard deviation) and inferential statistics (independent samples t-test). The results indicated a significant difference in the post-test scores, leading to the rejection of the null hypotheses. The findings conclude that the flipped classroom model is more effective than traditional lectures in improving students' listening and reading comprehension, providing valuable evidence for educators seeking to strengthen these foundational language abilities.

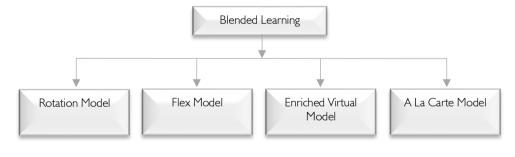
Key Words: Flipped Classroom, Receptive Skills, Listening Skills, Reading Skills, Experimental Study, Pre-Test, Post-Test

Introduction

Overview of the Study

The design of a course is known as a model, and blended learning has 4 fundamental models (Rotation, Flexibility-Enriched Virtual Live) (Christensen, 2013). The number of models that can be blended in learning is quite high; however, most of the models can be separated into the four fundamental models below.

Figure I



¹ HOD / Lecturer, Department of Advanced Studies in Education, The University of Agriculture, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan. Email: ahmadgillani996@gmail.com

Citation: Gillani, S. A. R. S., Latif, A., Gul, N., Jabin, B., & Naz, F. (2025). Effectiveness of Flipped Classroom in Enhancing Receptive Skills. *Regional Lens*, *4*(4), 59-68. https://doi.org/10.55737/rl 2025.44126

² M.Phil. (Education), Institute of Education & Research, Quaid-E-Azam Campus, Gomal University, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan. Email: amindanish1980@gmail.com

³ PhD (Education) Scholar, Institute of Education & Research, Quaid-E-Azam Campus, Gomal University, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan. Email: naghmagul01@gmail.com

⁴ Lecturer, Department of Education, University College of Zhob, Sub Campus, BUITEMS, Quetta, Balochistan, Pakistan. Email: bushra.jabin@buitms.edu.pk

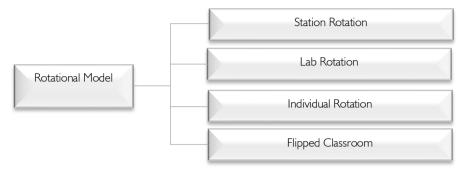
⁵ M.Phil. (Education) Scholar, Institute of Education & Research, Quaid-E-Azam Campus, Gomal University, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan. Email: fakharnaz0035@gmail.com

Rotation Model

Web-based training is one of them in which a person learns about the Rotation blended learning model. Beginners will be required to follow the appropriate learning plan, where they promptly switch between training in the classrooms, eLearning, and other hybrid collaborative learning methods, like group training, and, consequently, debates.

There are 4 sub-models under the rotation model:

Figure 2



The formal learning types I-3 are largely used in K-I2 (primary and lower/ upper secondary school), and there is an exception of informal/ formal hybrid, which also occurs at the university level, and the Adjacent domain of corporate training. They would be highly beneficial in the implementation of the flipped classroom as one of their training options.

Flipped Classroom

Flipped Classroom can also be referred to as an inverted classroom and can be used to refer to the reversal of the traditional classroom training whereby learners are trained virtually in an online training program, and thereafter they are presented in the classroom physically. This can also be useful to the students who are training in the classroom setting, and they are also exposed to the basic concepts. The classroom is then utilized to elaborate on more details/information, or for the learner to apply what he/she has learnt.

The flipped classroom is simply an active speaker cycle that was anticipated to offset the ineffectiveness of what is performed in a conventional classroom session. On the whole, although this approach, which is largely used in Physics, has not been neglected by teachers and academics in other areas over recent years, educators and researchers in these fields have also paid attention to it. A reverse classroom that instructs quickly, which was recently trendy in the world (Ozdamli & Asiksoy, 2016).

English Language Skills

Excellent skills in the English language are vital in the modern world, where globalism is the order of the day, because they can improve communication, academic success, and chances of a better career. Fluency in English has a number of important components, which include reading, writing, speaking, and listening. All these are skills that help an individual in general in the understanding and description of information. Recent works emphasize the need to incorporate digital tools and media in language learning that may offer immersive and interactive experiences, which may increase comprehension and recall. Moreover, the emphasis on cultural background and practical use is also critical to the development of fluency since it enables the learners to understand the peculiarities of language application in different social and workplace contexts (Williams et al., 2014).

Receptive Skills

Listening Skill

In English language learning, listening skills are considered the ability to receive and interpret spoken language correctly in order to communicate and be understood effectively. As the latest researches indicate, as of 2015, there are several main elements to effective listening, which include: comprehensive vocabulary and grammar understanding,

comprehension of the key points and details, intention of the speakers, and context-related inferences (Vandergrift & Baker, 2015). Higher level listening involves bottom-up and top-down, in which one tries to distinguish sounds and words, and listen to the spoken word, respectively (Goh, 2019).

Reading Skill

English reading skills refer to an individual possessing skills in comprehending, interpreting, and analyzing written texts, including vocabulary, grammar, and understanding. Learners should also have competence in reading, which greatly determines academic success and effective communication, because it improves cognitive ability and critical thinking. According to the recent research on the phenomenon, the most important issues are early reading and exposure to various reading material and the use of active engagement tools, including questioning and summarizing, during the utilization of comprehension and remembering (Hulme & Snowling, 2016).

Listening Skills in the Flipped Classroom

Authentic Listening Materials

Listening comprehension is a crucial aspect of language learning, and the flipped classroom offers a rare opportunity to develop this aspect. The students are provided with audio or videos to watch out of the classroom in a flipped model, and this facilitates students to manage the speed of learning by pausing, rewinding, or replaying the content. Such real-life sources, e.g., interviews, podcasts, or audio-recorded lectures, allow students to be exposed to other accents, rates, and situations of spoken English, which are essential in the real world (Zou, 2020). Stanley & Lynch-Caris (2015) state that the option to go through listening content again provides a learner with a chance to develop confidence and understanding step-by-step. With the flipped classroom, the students can work on the listening tasks more than once outside the classroom, and the time spent in the classroom can be focused on the practice of the listening strategies (note-taking, summarizing, or predicting the content). This strategy facilitates the process of better grasping the content, where students will have more time to digest what they will listen to without the stress of taking the test straight after the lesson.

Interactive Listening Activities

Flipped classes also help to have more dynamic and interactive listening practices. Having worked with audio materials in the home environment, students are encouraged to discuss the material in a group, role-play, or debate in the classroom, which presupposes active listening and responding to classmates (Abdullah et al., 2019). Such interaction assists in training the listening and speaking abilities simultaneously, since students have to understand spoken input and give the needed reaction, thus in real-time. In such basic experimental research on learning, Lee & Wallace (2018) demonstrated how the grade of listening skills of students is better in the flipped classroom setting compared to the traditional classroom setting. The researchers have observed that this has improved self-paced and pre-class listening and involvement in in-class activities that were more organized and structured, and are more facilitative to active and critical listening.

Reading Skills in the Flipped Classroom

Reading Comprehension

Reading is part of language acquisition and the foundation of other skills of language. The review of literature shows that the flipped classroom model can enhance the level of reading in a student because he or she is not limited in his/her ability to work with text at any time of his/her liking and can re-read any problematic concepts (Hung, 2015). It is possible to provide students in a flipped classroom with reading materials, articles, book chapters, or even online materials before the lesson. In this way, they are able to get acquainted with the text and textual contents so that they can engage in more productive discussions in the classroom (Cheng & Weng, 2017). Extensive reading with students possibly carrying out critical analysis, summarization, and group discussion, then takes the place of class time in a flipped classroom, which improves the understanding of students. Zhang (2018) reveals that the student reading activities in a

flipped classroom had higher results in terms of comprehensibility than those of students in a traditional classroom. This is attributed to the fact that students have been exposed to the reading of texts before the classes, and this provides them with time to process the information on their own.

Vocabulary Development

Doing a lot of reading outside of school also aids students in increasing their vocabulary, which is an important element of the reading skill set. By providing texts that match the proficiency level of the students, the flipped classroom promotes extensive reading in the students. In this manner, students will receive new words in context, which will add to their vocabulary (Fisher et al., 2021). The classroom tasks, e.g., the vocabulary tests or group discussions, serve to support the acquisition of new words during the individual reading time. Scholars suggest that vocabulary and language acquisition would be most successful when a learner is subjected to understandable input, which is offered by the flipped model due to the opportunity to have an individual interaction with reading materials.

Statement of the Problem

The effectiveness of the flipped classroom model for developing listening and reading skills remains unclear, as existing research provides inconsistent results and often focuses on general academic performance or speaking skills. It is because of this gap that educators face challenges when confidently applying the model to enhance these basic receptive skills, and this has led to the necessity of finding conclusive evidence of its particular effects.

Research Objectives

- 1. To compare the listening skill scores of students in flipped classrooms with those in traditional lecture-based classrooms.
- 2. To compare the reading skill scores of students in flipped classrooms with those in traditional lecture-based classrooms.

Research Questions

- 1. Is there a significant difference in listening skill scores between students taught using a flipped classroom model and those taught using traditional lectures? (Align with Obj # 1)
- 2. Is there a significant difference in reading skill scores between students taught using a flipped classroom model and those taught using traditional lectures? (Align with Obj # 2)

Research Hypotheses

H01: There is no significant difference between the listening skill scores of students taught using a flipped classroom model and those taught using traditional lectures. (Align with Obj # 1)

H02: There is no significant difference between the reading skill scores of students taught using a flipped classroom model and those taught using traditional lectures. (Align with Obj # 2)

Significance of the Study

This research will be of great importance to language teachers and curriculum designers. Identifying the particular impacts of the flipped classroom on the listening and reading skills will give evidence-based instructions. The results will enable the instructors to make sound decisions on how to apply this model, enabling them to have more focused and efficient methods of instruction. Finally, the study will help in bettering the pedagogical strategies that directly enhance the background understanding skills that are indispensable in the general language proficiency of the students.

Delimitations of the Study

- 1. Listening and Reading Skills.
- 2. Only Part-I F.Sc. boys students.



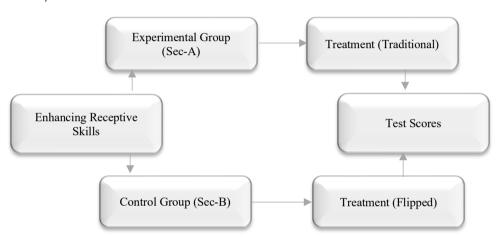
- 3. Owing to time constraints, the treatment was performed for only one month. Flipped classroom studies show statistically significant language skill improvements within 4-week interventions (Li, 2021).
- 4. Concordia College Saeed Ahmad Akhtar Campus D.I.Khan.

Research Methodology

In this study, the pretest-posttest control group design was used to measure its objectives. The sample population was made up of 80 F.Sc Part-I male students, of which a sample of 44 was randomly chosen and was further divided into an experimental group (n=22) and a control group (n=22). The experimental group used the flipped classroom model to provide instructions to the students, whereas the control group used a traditional lecture instruction over one month. The self-constructed tests of the researcher on listening and reading skills were chosen as the main tool for gathering information. The data analysis was done using both descriptive statistics of mean and standard deviation, as well as inferential statistics of the t-test, to compare the performance improvement between the two groups following the intervention.

Figure 3

Conceptual Model



Results and Discussions

Table IMarks of the Control Group regarding Listening Skill. (Align with Question#1)

Scores of Listening Skill						
Scores (Class-Interval)	Frequency	Percentage	Valid %	Cumulative %		
9-10	7	31.7	31.7	31.7		
11-12	2	9.1	9.1	40.8		
13-14	3	13.7	13.7	54.5		
15-16	5	22.7	22.7	77.2		
17-18	4	18.2	18.2	95.4		
19-20	I	4.6	4.6	100		
Total	22	100	100			

The frequency distribution of the Control Group's listening skill marks reveals that the majority of students (31.7%) scored in the lowest bracket of 9-10 marks. Performance is heavily skewed towards the lower end, with over half of the group (54.5%) scoring 14 marks or less, as indicated by the cumulative percentage. While a small number of students achieved higher scores, with 22.7% in the 15-16 range and 18.2% in the 17-18 range, only one student (4.6%) reached the top band of 19-20 marks, demonstrating a significant concentration of the group at the lower proficiency levels.

 Table 2

 Marks of the Control Group regarding Reading Skill. (Align with Question#2)

Scores of Reading Skill						
Scores (x)	Frequency	Percentage	Valid %	Cumulative %		
5		4.6	4.6	4.6		
6	2	9.1	9.1	13.7		
7	5	22.7	22.7	36.4		
8	14	63.6	63.6	100		
Total	22	100	100			

The frequency distribution of the Control Group marks on the reading skill demonstrates that there is a great concentration of the students on the higher end of the given scale, and that the majority of them (64%) are 8 marks. This clustering is also evidenced by the cumulative percentage, which indicates that the whole group (100) has scored 8 marks or less, with more than one-third (36) scoring 7 marks or less. The fact that there is no score over 8, therefore, shows that there is a very clear performance ceiling of the group, with a rather consistent level of reading performance with little variability.

 Table 3

 Marks of the Experimental Group regarding Listening Skill. (Align with Question#1)

Scores of Listening Skill							
Scores (Class-Interval)	Frequency	Percentage	Valid %	Cumulative %			
3-6	2	9.1	9.1	9.1			
7-10	6	27.3	27.3	36.4			
- 4	12	54.5	54.5	90.9			
15-18	2	9.1	9.1	100			
Total	22	100	100				

The frequency of listening skill marks of the Experimental Group shows that most of the students (54.5 percent) fell within the middle range of 11-14 marks. The cumulative percentage indicates that more than one-third of the sample (36.4) had a score of 10 marks and below, and almost all students (90.9) had a score of 14 marks and below. Those who scored in the 15-18 range (only 9.1%certified higher scores) are proving that though the performance of this group is concentrated between the middle and the upper scores, the high-level scores are not widespread.

 Table 4

 Marks of the Experimental Group regarding Reading Skill. (Align with Question#2)

Scores of Reading Skill							
Scores (x)	Frequency	Percentage	Valid %	Cumulative %			
3	2	9.1	9.1	9.1			
4		4.6	4.6	13.7			
5		4.6	4.6	18.3			
6	4	18.2	18.2	36.5			
7	2	9.1	9.1	45.6			
8	12	54.4	54.4	100			
Total	22	100	100				

Based on the frequency distribution of reading skill marks of the Experimental Group, it was observed that most of the students (54.4) scored the highest score of 8 marks. Performance is polarized, as shown by the cumulative percentage, indicating that over one-third of the group (36.5%) scored 6 marks or less. While a substantial segment of students demonstrated lower proficiency, the distribution is ultimately dominated by the high concentration of top scores, establishing a strong tendency toward the upper performance level within the group.

Table 5T-Test displaying mean change between Control and Experimental Groups regarding Listening Skill. (Align with Hypothesis#1)

Listening Skill (T-Test)						
Test Scores 20 (Mean Ra	nge 1-20)					
Ist Year Students	N	Mean	S.D	t _{-cal}	t _{-tab}	P-value
Control Group	22	13.3	19.40	2 209	±1.96	0.032
Experimental Group	22	11.1	22.45	2.209	⊥1.70	0.032

Based on the independent samples t-test results for listening skill, a statistically significant difference exists between the Control Group and the Experimental Group. The t-value of 2.209 is greater than the critical table value of ± 1.96 , whereas the p-value of 0.032 is below the normal significance level of 0.05. It means that the greater mean score of the Control Group (13.3), in comparison with the Experimental Group (11.1), is a significant result, and the null hypothesis is rejected.

Figure 4

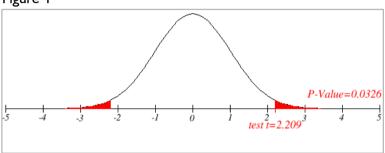


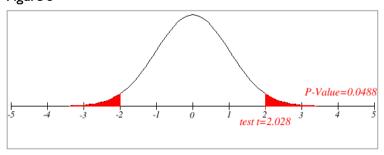
Table 6

T-Test displaying mean change between Control and Experimental Groups regarding Reading Skill. (Align with Hypothesis#2)

Reading Skill (T-Test)						
Test Scores 8 (Mean Ra	nge 1-8)					
Ist Year Students	N	Mean	S.D	t _{-cal}	t _{tab}	P-value
Control Group	22	7.5	0.25	2.020	+196	0.048
Experimental Group	22	6.7	0.65	2.028	土1.76	0.046

According to the independent samples t-test outcomes of reading skill, a statistically significant difference has been found between the Control Group and Experimental Group. The computed t-value of 2.028 is more than the critical table value of ± 1.96 , and the p-value of 0.048 is not higher than the standard level of significance of 0.05. This means that the mean score of the Control Group (7.5) is greater than that of the Experimental Group (6.7), and so it is a significant outcome that results in the null hypothesis being rejected.

Figure 5



Findings

- I. On the basis of the analysis, it was established that there was a considerable difference between the Control and Experimental Groups regarding their listening skill performance. The Control Group had a higher mean score, 13.3, and a performance that is highly skewed towards the downside; 54.5% of the students of the Control Group scored 14 marks or below, and 31.7% were concentrated at the lowest end (9-10 marks). Conversely, the Experimental Group had the lowest average score of 11.1, and most of them (54.5) fell under the mid-range of 11-14 marks, and 90.9 fell under 14 marks. The null hypothesis was rejected, and the t-test, independent samples confirmed that this difference was statistically significant (t = 2.209, p = 0.032). (Align with Tables # 1,3&5)
- 2. According to the statistical analysis of the reading skills, there was a considerable difference between the two groups. The Control Group had a greater mean score of 7.5, where a significant number of students (64) got the highest score of 8, but this did not go above the 8 mark. On the other hand, the Experimental Group was below the mean score of 6.7. Although the majority (54.4) also scored the highest mark of 8, its performance was more concentrated, as more than a third of the group (36.5%) scored 6 marks or below. Statistical significance of this difference was observed with an independent samples t-test (t = 2.028, p = 0.048), and this null hypothesis was rejected. (Align with Tables # 2,4&6)

Discussions

- 1. Recent research supports the finding that, Control Group (Mean=13.3) significantly did better than the Experimental Group (Mean=11.1), with the largest proportion of control students in the top score bracket being 31.7%. The same was proved by a study by Bui, (2024), who found that a traditional instruction group had a much higher mean score of 81.4% than the experimental, technology-enhanced group of 73.6%. The study has shown that 68 percent of students in the traditional group claimed to feel more confident in listening activities, and this may imply that traditional techniques offer a more secure structure in the development of the skills. This supports the existing findings, in which the new components of the experimental intervention could have interfered with the learning process, resulting in the Concentration of students in the middle scores (54.5) and only 9.1% getting high marks in the Experimental Group. (Align with Finding # 1)
- 2. The comparison has revealed a statistically significant reading difference such that the Control Group (M=7.5) performed higher than the Experimental Group (M=6.7). A meta-analysis by Leenknecht & Carless, (2023) supports this counterintuitive finding, in which the conventional approach was more productive. They reviewed 36 studies and concluded that explicit training of text comprehension effects led to a significant reading score (ES = 0.62, p < .001) improvement in reading, as opposed to more unstructured independent reading strategies. This is in line with the present results, indicating that the structured, teacher-led instruction probably received by the Control Group offered a better basis for reading comprehension than the experimental intervention, which might not have been adequately instructor-based based resulting in the increased percentage (36.5%) of low scorers in the Experimental Group. (Align with Finding # 2)

Conclusions

- I. In regard to the evidence, it is possible to conclude that, although the instructional strategy employed with the Experimental Group produced a more consolidated mid-range performance, the approach proved less effective in terms of the acquisition of listening skills, in comparison with the strategy employed to address the Control Group. This huge difference in results demonstrates clearly that not every teaching method can have similar results. Consequently, the given methodology applied to the control cohort was found to be more effective in the improvement of student performance in this very area of skills, which provides the importance of the pedagogical choice in the learning process. (Align with Obj # 1)
- 2. The reading skill analysis shows that there was an evident advantage of the teaching approach applied to the Control Group. Though the majority of high achievers were similar in both groups, the method used in the



Experimental Group led to a more significant difference in performance and an even higher percentage of low-performing students. This notable difference proves that the pedagogical strategy applied to the control group proved to be more efficient in general terms of developing the understanding of reading comprehension because it resulted in a better average result with no comparable level of disparity between learners. (Align with Obj # 2)

Recommendations

- ▶ Introduce differentiated listening instruction to the Experimental Group, with the initial emphasis on the development of basic skills to the large majority of participants who scored in the mid- to low-range, to deal with their much poorer overall level of comprehension than that of the Control Group. (Align with Finding # 1)
- Implement intervention-level reading-strategy interventions in the Experimental Group to lessen polarization in performance, namely, by giving consistent support to the large percentage of students at the 6 or fewer level, so that the students would report better and more balanced scores. (Align with Finding # 2)

Guidelines for Future Researchers

- I. **Increase the Span of the Intervention:** The investigation should span a longer timeframe, e.g., an entire academic semester, to examine whether the initial gains in receptive abilities are maintained and to see the effects of the flipped classroom model in the long term.
- 2. **Diversify the Participant Group:** Incorporate females as well as participants of various academic levels and educational backgrounds to ascertain how the findings can be generalized by the various demographics.
- 3. **Include Qualitative Measures:** Go deeper than test scores by interviewing, observing, or surveying the student and teacher experiences, challenges, and perceptions of the flipped classroom process.

References

- Abdullah, M. Z., Daud, I., Idris, M. R., & Rahman, M. N. A. (2019). Kesan pembelajaran flipped classroom terhadap sikap bagi penyelesaian masalah bagi algebra. *JuKu: Jurnal Kurikulum & Pengajaran Asia Pasifik*, 7(4), 1-10. https://juku.um.edu.my/article/view/19983
- Bui, H. P. (Ed.). (2024). *Applied Linguistics and Language Education Research Methods: Fundamentals and Innovations:* Fundamentals and Innovations. IGI Global.
- Cheng, Y. H., & Weng, C. W. (2017). Factors influencing the digital media teaching of primary school teachers in a flipped class: A Taiwan case study. *South African Journal of Education*, 37(1), 1-12. https://hdl.handle.net/10520/EJC-5cdcb4d6d
- Christensen, C. M., Horn, M. B., & Staker, H. (2013). Is K-12 Blended Learning Disruptive? An Introduction to the Theory of Hybrids. *Clayton Christensen Institute for Disruptive Innovation.*https://www.christenseninstitute.org/publication/hybrids/
- Fisher, R., Perényi, A., & Birdthistle, N. (2021). The positive relationship between flipped and blended learning and student engagement, performance, and satisfaction. *Active Learning in Higher Education*, 22(2), 97-113. https://doi.org/10.1177/1469787418801702
- Goh, C. C. (2019). Comprehending speech genres for the listening classroom. Second handbook of English language teaching, 847-859.
- Hulme, C., & Snowling, M. J. (2016). Reading disorders and dyslexia. Current opinion in pediatrics, 28(6), 731-735. https://doi.org/10.1097/MOP.0000000000000111
- Hung, H. T. (2015). Flipping the classroom for English language learners to foster active learning. *Computer Assisted Language Learning*, 28(1), 81-96. https://doi.org/10.1080/09588221.2014.967701
- Lee, G., & Wallace, A. (2018). Flipped learning in the English as a foreign language classroom: Outcomes and perceptions. *TESOL Quarterly*, *52*(1), 62-84. https://doi.org/10.1002/tesq.372
- Leenknecht, M. J., & Carless, D. (2023). Students' feedback seeking behaviour in undergraduate education: A scoping review. Educational research review, 40, 100549. https://doi.org/10.1016/j.edurev.2023.100549
- Ozdamli, F., & Asiksoy, G. (2016). Flipped classroom approach. World Journal on Educational Technology: *Current Issues, 8*(2), 98-105.
- Stanley, R., & Lynch-Caris, T. (2015). Applying the flipped learning method in engineering courses by using web-based tools: An innovative approach. *Journal of Online Engineering Education*, 6(1). https://www.onlineengineeringeducation.com/index.php/joee/article/view/68
- Vandergrift, L., & Baker, S. (2015). Learner variables in second language listening comprehension: An exploratory path analysis. Language learning, 65(2), 390-416. https://doi.org/10.1111/lang.12105
- Williams, L., Abraham, L., & Bostelmann, E. D. (2014). A survey-driven study of the use of digital tools for language learning and teaching. Digital literacies in foreign and second language education, 29-67.
- Zhang, L. (2018). The English flipped classroom teaching model is based on cooperative learning. *Educational Sciences: Theory & Practice,* 18(6). https://doi.org/10.12738/estp.2018.6.278
- Zou, D. (2020). Gamified flipped EFL classroom for primary education: Student and teacher perceptions. *Journal of Computers in Education*, 7(2), 213-228. https://doi.org/10.1007/s40692-020-00153-w

