

# Relative Effects of Flipped Classroom and Print Exposure on the Teaching and Learning of Contents in Integrated Curriculum

**Ayodele Christiana Ayo**

Dept. of Arts and Language Education

Ekiti State University

*Email:* [xyayodele@gmail.com](mailto:xyayodele@gmail.com)

**Abstract**— This study investigated the relative effects of flipped classroom and print exposure on the teaching and learning of contents in Integrated Curriculum. It is a quasi-experimental research design of the pretest post-test control group type. The population of the study consisted of all the Junior Secondary School II (JSS 2) of public secondary schools in Ekiti State. The sample of the study involved 134 JSS 2 students. The samples were selected using intact classes. The researcher assigned the sample to two experimental groups and a control group. Two (2) research instruments tagged Students Performance in Integrated Curriculum (SPIC) and Students' Attitudinal Questionnaire (SAQ) were used to elicit information for this study. The instruments were validated by two experts in Curriculum and Instruction and an expert in Language Education. The reliability of the instruments were determined by using the test-retest method of testing reliability and a reliability coefficient of 0.78 and 0.69 were obtained for SPIC and SAQ were obtained respectively. Two research questions and one hypothesis were raised and formulated for this study respectively. The research questions were analysed using frequency count, means and standard deviation while the hypotheses was analysed using inferential statistics of t-test. The hypothesis was tested at 0.05 level of significance. The findings of the study revealed that flipped classroom and print exposure have significant effects on the teaching and learning of curriculum integration. It also revealed that flipped classroom has high significant effect on curriculum integration compared to print exposure. Based on the findings of the study, the following recommendations were made: School should implement the use of flipped classroom and print exposure in teaching and learning process particularly integrated curriculum, the regulatory bodies on education such as Ministry of Education and other regulatory agencies should update their curriculum by integrating flipped classroom model and print exposure in the teaching and learning processes among others.

**Keywords**— Flipped Classroom, Print Exposure, Teaching and Learning, Curriculum Integration and 21st Century Learning.

## INTRODUCTION

The world is a global village where there is a continuous search for knowledge. Learners are no longer depending on their teachers alone to receive facts in order to pass examination. They also need to learn and receive instruction to acquire knowledge and retain learning for long life education. They are supposed to manage learning to survive in the society and be able to solve the complex problems they can encounter in their day to day activities. They need to make a distinction between facts that are relevant to their learning and other information. They also need to acquire and develop critical thinking which will enable them to navigate the world in the 21st century.

The 21st century learners are expected to develop in learning, acquire series of knowledge, literacy skills as these are part of what the classroom experience entails. Nicholas (2019) stated that, 21st C has become an integral part of educational thinking and planning for the

future and that, educators and administrators are actively searching for ways to prepare students for the future and the educational system has been evolving faster than ever before.

21st century learning has been profoundly established by learner's centre and technology based influenced. In order to assist learners to be successful in life, learning has to be learner-centered. This means that, teachers should not have it all in the dissemination of knowledge. Students will need to acquire new information and connect the new information with the knowledge they already have and apply it to solving the problem at hand (Nicholas 2019). Learners are encouraged to learn in diverse ways, curriculum is designed to make learners to be very unique in their own way and to endow them with the strength that they need to forge ahead in their education. (Ayodele 2022).

The term often refers specifically to a planned sequence of instruction, (wikipedia) curriculum encompasses what happen in the school and all other academics as well as arts, physical education, extra curriculum activities and support services and programs (Nationa Michelle School Association 2020). In the same vain, Ayodele (2020) explained that, curriculum is a planned, organized learning opportunities meant to be imparted on the learners under the guidence of the school in order to bring about the desirable changes in the learners' behaviour.

Curriculum is what teachers are expected to teach in a course of study. Study com (2022) also stated that, curriculum is a series of planned learning events that often build upon each other, with the goal of obtaining mastery of te topic. In the view of Shao (2012) stated that a curriculum is a plan for providing opportunities to achieve broad goals and related specific objectives for identifiable learning. A planned learning content that will lead to achievable learning outcome. The curriculum does not stand alone in isolation and it has some ways of relatedness or connectedness to other contents and it has to be infused in other disciplines to achieve success (studocu).

The curriculum contains objectives contents, methodologies and learners activities .one of the fundamental principles of curriculum is that, it must be integrated. This type of curriculum is known as curriculum integration. It helps in the selection and organizing learning. It really focus on the learners ability and mode of learning and learning outcome. This means that curriculum tends to build holistic learner. It is often said that the more meaningful the content, the easier it is to remember and that if the contents do not make sense or not relevant enough to learners' need, learners will have a harder time in learning.

Content is the heart of the curriculum. Content must be cleared enough and perfectly understood by the learners. Learning can then be repeated as many times as possible. It can also be inferred in making sure that learners make progress . In this case, teachers can cite hints from related subjects having the same content or contents related subjects. Mcphail (2020) emphasizes that the subject concepts and contents from the different subjects should be complementary. According to Borton (2019) an integrated curriculum is desorbed as one that connects different areas of study by cutting across subjects matter lines and emphasizing unifying

concepts. In the view of Jonesboro (2021) integrated curriculum makes learning more relevant and connected to the world, enables students to examine situation or problems holistically and better equips students to apply their skills across discipline. Springer (2016) equally stated that, curriculum integration takes as its ultimate aim helping learners lives new as well as in the future, not merely gathering more information for possible later use..

The essence is to make learning more real and accessible for learners. It is also a means of diversifying contents for proper understanding of a concept. It is an understanding and having knowledge of other contents in a related contents in which learners can be assisted in comprehending the subject matter that cut across the curriculum. Their integration has the potential to enrich students understanding of subject. Linking subject matter in various subjects to teach a concept also broaden learners horizon and expand their knowledge. It makes learning to be fun and allows full participation of learners as well as enlist their interest in the classroom activities. Mcphail (2020) explained that, linking subjects through a relational idea could be more engaging for students and provide a net real world of stimuli for learning. Also Nexterp (2020) opined that, it is crucial for the 21st century learners to understand the cross disciplinary connections in academics. Teachers should constantly seek for a means of diversifying learning activities in order to make learners more engaging.

However, learners learn best when teachers back their learning with technology and involve learners to take charge of full activity in learning, instead of the teachers having the whole responsibility in the classroom interaction. This curriculum integration can only be effective if it is back up with method of teaching such that encourage individual work and direct instruction. Some of those methods are flipped classroom and print exposure. Hence, this study examined the relative effect of flipped classroom and print exposure on the teaching of curriculum integration in Yoruba language.

Flipped classroom means making students to access information in the process of acquiring knowledge prior to regular classroom interaction. Ayodele (2022) explained that flipped classroom is a strategy whereby learners work and participate on an assigned content either individually or as a group. This is with a view of making the learners to interact wit the learning content

and later come to the class for additional information. It is a form of blended learning. Stray (2017) defined flipped classroom as an innovative classroom structure which moves teaching and learning outside the classroom through modern technology and moves homework and practice with concepts to the classroom via learning activities.

Flipped classroom is a methodology that helps teachers to prioritize activity learning during class time by assigning students lecture materials and presentation to be viewed at home or outside of class (Lesley 2023). The essence is to create an atmosphere for active learning and participatory. It enables the teachers to spend more time with struggling students while allowing more advanced learners the freedom to work ahead (Lesley). It gives the students the opportunity to inquire and seek content knowledge that can assist in learning. Students are able to discover learning on their own. It also promotes the process of knowledge internalization inside the classroom by creating a good opportunity for teachers and students to communicate, produce thought collision and also enter into deeper level of real time study.

In flipped classroom, the teacher makes use of the aid of information technology, the teacher can provide learning resources in form of teaching videos, whatsapp messages which students can download, watch and work on prior to the lesson time. During the classroom interaction, the subject matter is further explained as the teachers and the learners actively participated in the class activities and brainstorming. Students can further be involved in multiple activities. The classwork is for students and the teachers for coordinate and perfect learning. It is also expected that the teachers will take a feedback from the learners. The teachers will still guide the learners so as to sustain the learning goal.

In all these, learners learn in advance form work groups and group members are encouraged based on what they have prepared individual, to collaboratively discuss the material in depth, develop their conceptual understanding and achieve shared goal (Ayodele 2022). Learners are able to manipulate digital tools and be verse in it while using flipped classroom method. In addition to the use of flipped classroom in engaging learners to access instruction, learners can still make use of print materials to acquire knowledge, Print exposure can be described as the extent at which learner's usage of text to access information on any content.

K12 academic (2023) explained that print exposure is simply the amount of time a child or person spends being virtually ware of the written words (reading) whether that be through Newspaper, Magazines, Books, Journals, Scientific papers or more. Access to reading or print is one of the ways to have new knowledge for enhanced learning, through this, learners are able to get additional facts to enable them to process information. Exposing learners to print or text activate the brain and enhance critical thinking. It serves as means of building learning. It helps learners to concentrate more and retrieve information pertaining to the content of learning. Rasmed (2021) stated that, textbooks serve as a guide to the prescribed curriculum and syllabus adding that, they play major roles for weak students to achieve good grades as they are able to read on their own. Learners need to access print/text constantly to follow up learning. Print materials can be used as often as the learners wish and in any location. It always serves as supplementary learning. It is the belief of researchers that exposure of learners to print materials can easily enhance in learner's academic performance. In spite of the increasing number and varieties of audio-visual materials being used today, for teaching and learning, print materials are still largely the most indispensable teaching resources available in many schools (Project House 2023).

Learners can take assignment through print which is the text book, learners can also read ahead of the teachers. The print alone may not be sufficient for learners if not motivated and with the guidance and assistance of the teachers. Many of the learners may find it difficult to understand the language of the others. The study therefore seek to know the relative effects of flipped classroom and print exposure on the teaching and learning of content in integrated curriculum.

### **Statement of the Problem**

Curriculum integration has been described as an aspect of the curriculum where contents can be derived from other related contents in another discipline to meet the needs of learners most especially in the 21st century learning. The 21st century learning demands learning to be activity based, to improve learner's engagement, satisfaction and achievement. In this case flipped classroom and print exposure were considered to be some of the ways by which learning through integrated curriculum can be enhanced.

The researcher also observed that, the students' performance in Yoruba language in secondary schools has reduced drastically and also there is no reduction in student's enrollment and lack of interest to further continue learning and studying the subject up to higher degree. There is need to salvage this situation. Hence this study found out the relative effect of flipped classroom and print exposure on be teaching and learning of contents in integrated curriculum.

**Purpose of the study**

The main purpose of this research was to study the relative effects of flip classroom and print exposure in the teaching and learning of curriculum integration. The specific objectives of this study were to:

1. determine the performance of students exposed to flipped classroom, print exposure and conventional method in Yoruba grammar and essay writing;
2. determine the attitude of students exposed to flipped classroom, print exposure and conventional method towards Yoruba grammar and essay writing; and
3. investigate the difference in the performance of students exposed to flipped classroom, print exposure and conventional method in Yoruba grammar and essay writing.

**Research Questions**

The following research questions were raised for this study:

1. What is the extent of students performance in Yoruba grammar and essay writing when exposed to flipped classroom, print exposure and conventional method?
2. What is the attitude of students exposed to flipped classroom, print exposure and conventional method towards Yoruba grammar and essay writing?

**Research Hypotheses**

There is no significance difference in the performance of students exposed to flipped classroom, print exposure and conventional method in Yoruba grammar and essay writing.

**METHODOLOGY**

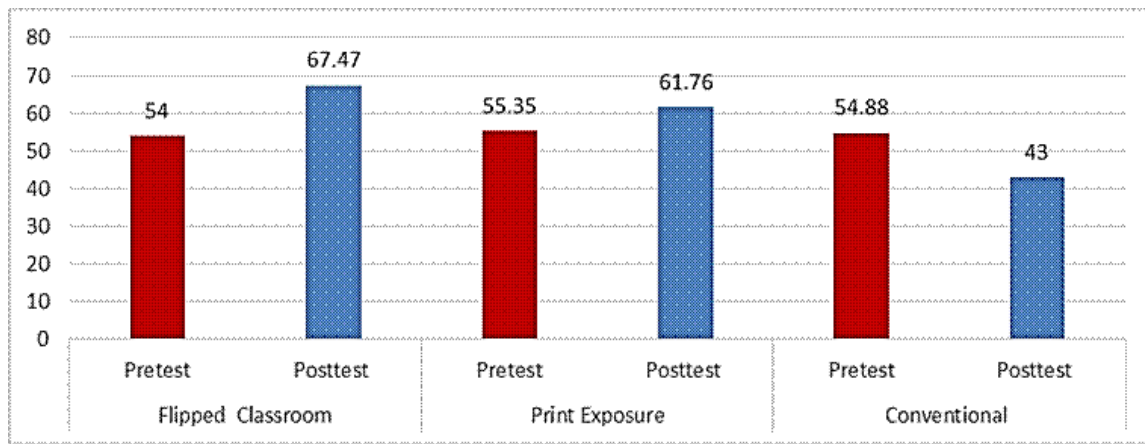
The study is a quasi-experimental research design of the pretest post-test control group type. The population of the study are all the Junior Secondary School II (JSS 2) of public secondary schools in Ekiti State. The sample of the study involve 134 JSS 2 students. The samples were selected using intact classes. The researcher assigned the sample to two experimental groups and a control group. Two (2) research instruments tagged Students Performance in Integrated Curriculum (SPIC) and Students' Attitudinal Questionnaire (SAQ) were used to illicit information for this study. The instruments were validated by two experts in Curriculum and Instruction and an expert in Language Education. The reliability of the instruments were determined by using the test-retest method of testing reliability and a reliability coefficient of 0.78 and 0.69 were obtained for SPIC and SAQ were obtained respectively. Two research questions and one hypothesis were raised and formulated for this study respectively. The research questions were analysed using frequency count, means and standard deviation while the hypotheses was analysed using inferential statistics of t-test. The hypothesis was tested at 0.05 level of significance.

**RESULTS**

**Research Question 1:** What is the extent of student's performance in Yoruba grammar and essay writing when exposed to flipped classroom, print exposure and conventional method? In answering the question, mean scores on performance of students in Yoruba grammar and essay writing before and after the treatment were computed and compared. The result is presented in Table 1 and Figure 1.

*Table1: Performance of students in Yoruba grammar and essay writing before and after the treatment*

| VARIABLE                 |          | N  | MEAN  | S.D   | Mean Difference |
|--------------------------|----------|----|-------|-------|-----------------|
| <b>Flipped Classroom</b> | Pretest  | 43 | 54.00 | 12.69 | 13.47           |
|                          | Posttest | 43 | 67.47 | 8.86  |                 |
| <b>Print Exposure</b>    | Pretest  | 47 | 55.35 | 9.24  | 6.41            |
|                          | Posttest | 47 | 61.76 | 16.47 |                 |
| <b>Conventional</b>      | Pretest  | 44 | 54.88 | 10.80 | 4.10            |
|                          | Posttest | 44 | 58.98 | 9.57  |                 |



**Figure 1:** Bar Chart showing the performance of the students in Yoruba grammar and essay writing before and after the treatment

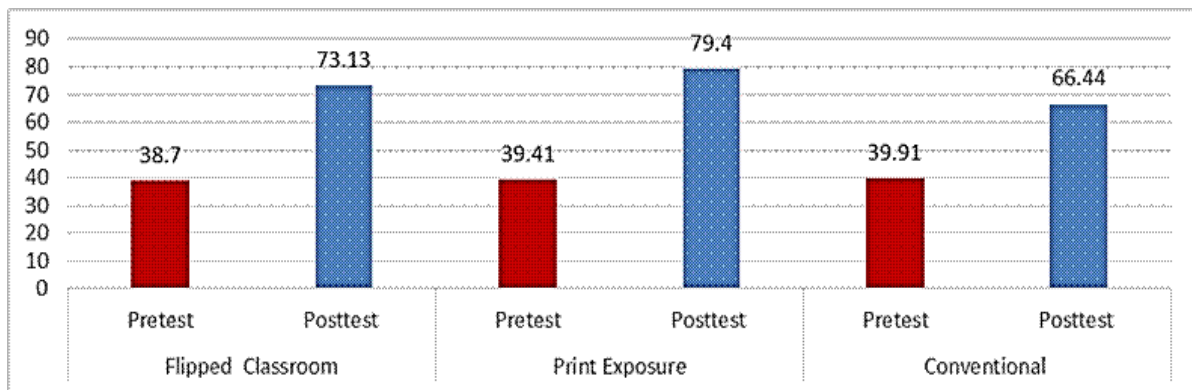
Table 1 and figure 1 showed the performance of students in Yoruba grammar and essay writing before and after the treatment. From the table, the performance of students exposed to flipped classroom had a mean score of 54.00 in the pretest and 67.47 in the posttest, students exposed to print exposure had a mean score of 55.35 in the pretest and 61.76 in the posttest while students exposed to conventional strategy had the mean score of 54.88 in the pretest and 58.98 in the posttest. Hence, the Mean Difference (MD) for flipped classroom, print exposure and conventional method are 13.47, 6.41 and 4.10 respectively. This implies that there was an

improvement in the performance of the students after exposing them to the treatment in each of the groups.

**Research Question 2:** What is the attitude of students exposed to flipped classroom, print exposure and conventional method towards Yoruba grammar and essay writing? In answering the question, mean scores on attitude of students towards Yoruba grammar and essay writing before and after the treatment were computed and compared. The result is presented in Table 2 and Figure 2.

**Table 2:** Descriptive analysis of the attitude of students towards Yoruba grammar and essay writing before and after treatment.

| VARIABLE          |        | N  | MEAN  | S.D   | Mean Difference |
|-------------------|--------|----|-------|-------|-----------------|
| Flipped Classroom | Before | 43 | 38.70 | 10.55 | 34.70           |
|                   | After  | 43 | 73.13 | 8.82  |                 |
| Print Exposure    | Before | 47 | 39.41 | 11.93 | 39.99           |
|                   | After  | 44 | 79.40 | 9.56  |                 |
| Conventional      | Before | 44 | 39.91 | 9.99  | 26.91           |
|                   | After  | 43 | 66.44 | 10.71 |                 |



**Figure 2:** Bar Chart showing the attitude of students towards Yoruba grammar and essay writing.

Table 2 and figure 2 showed the attitude of students in Basic science before and after they were exposed to the treatment. From the table, the attitude of students exposed to flipped classroom had a mean score of 38.70 before treatment and 73.13 after treatment, students exposed to print exposure had a mean score of 39.41 before treatment and 79.40 after treatment while students exposed to conventional strategy had the mean score of 39.91 before treatment and 66.44 after treatment. Hence, the Mean Difference (MD) for flipped

classroom, print exposure and conventional strategy are 34.70, 39.99 and 26.91 respectively. This implies that there was an improvement in the attitude of the students after exposing them to the treatment in each of the groups.

**Research Hypotheses:** There is no significance difference in the performance of students exposed to flipped classroom and print exposure in Yoruba grammar and essay writing.

**Table 3:** Analysis of Variance showing mean difference of the performance of students exposed to flipped classroom, print exposure and conventional methods respectively in Yoruba grammar and essay writing before and after treatment.

| Variations     | Sum of Square | Df  | Mean Square | F     | P     |
|----------------|---------------|-----|-------------|-------|-------|
| Between Groups | 4350.854      | 5   | 870.171     | 6.528 | 0.000 |
| Within Groups  | 28526.105     | 214 | 133.300     |       |       |
| Total          | 32876.959     | 219 |             |       |       |

p<0.05

Table 4 shows that the value of F is 3.5, which reaches significance with a p-value of 0.000 (which is less than the 0.05 alpha level). Hence, the null hypothesis was rejected. This implies that there was significant

difference in the performance of students to flipped classroom, print exposure and conventional methods respectively in Yoruba grammar and essay writing before and after the treatment.

**Table 4:** Scheffe's Post-Hoc Analysis of the mean difference of the performance of students exposed to flipped classroom, print exposure and conventional methods respectively in Yoruba grammar and essay writing before and after treatment

| Performance Grouping         | N  | Subset for alpha = 0.05 |       |
|------------------------------|----|-------------------------|-------|
|                              |    | 1                       | 2     |
| Flipped Classroom (Pretest)  | 43 | 54.00                   |       |
| Conventional (Pretest)       | 44 | 54.88                   |       |
| Print Exposure (Pretest)     | 47 | 55.35                   |       |
| Conventional (Posttest)      | 44 | 58.98                   | 58.98 |
| Print Exposure (Posttest)    | 47 | 61.76                   | 61.76 |
| Flipped classroom (Posttest) | 43 |                         | 67.47 |
| Sig.                         |    | 0.16                    | 0.09  |

Table 4 indicated that the mean difference of the performance of the students exposed to flipped classroom (67.47) is more significant than those exposed to print exposure (61.76) and conventional (58.98) respectively.

**DISCUSSION**

The finding of the study revealed that there was an improvement in the performance and attitude of the students after exposing them to the flipped classroom and print exposure. The two strategies influence the performance of students in integrated curriculum (Yoruba grammar and essay writing). This finding corroborated Zhou (2017) who said that flipped

classroom promotes the process of knowledge internalization inside the classroom by creating a good opportunity for teachers and students to communicate, produce thought collisions, and also enter into deeper levels of real time study. According to Liu, Zhang, Fan (2013), flipped classroom reduces the distance between a teacher and his students, and also between students and other students. It equally leads to improved learning outcome. This is because most activities are task driven, thus students could set their goals and work hard to achieve them. Also Kim and Krashen (2018) used print exposure recognition checklists and a vocabulary recognition checklist with a group of Korean high

school students studying English as a foreign language. Words in the vocabulary recognition test came from those words used in textbooks and in free reading materials read by the students. Kim and Krashen found, consistent with previous research, that students who read more had higher levels of vocabulary knowledge. Krashen (2014) carried out experimental research on the use of free voluntary reading among first and second language acquirers has supported the causal link between print exposure and literacy development. He reviewed 54 comparison studies of sustained silent reading versus traditional, skills-oriented instruction, concluding that, when implemented properly, increased opportunities to read lead to greater literacy development than did traditional skill-building approaches. McQuillan (2018) also found a similar relationship in his review of second and foreign language sustained silent reading studies.

The findings of the study revealed that the performance of the students exposed to flipped classroom is more significant than those exposed to print exposure and conventional respectively. This implies flipped classroom is more effective compared print exposure. This finding corroborated the finding of Zhou (2017) who found that flipped classroom promotes the process of knowledge internalization inside the classroom by creating a good opportunity for teachers and students to communicate, produce thought collisions, and also enter into deeper levels of real time study. According to Liu, Zhang, Fan (2013), flipped classroom reduces the distance between a teacher and his students, and also between students and other students. It equally leads to improved learning outcome. This is because most activities are task driven, thus students could set their goals and work hard to achieve them

## CONCLUSION

From the findings of this study, it was concluded that flipped classroom and print exposure have significant effects on the learning outcomes of Junior Secondary Schools students in integrated curriculum (Yoruba grammar and essay writing). However, the study revealed that flipped classroom is more effective in teaching integrated curriculum compared to print exposure. The effective use of flipped classroom and print exposure will help in promoting the process of knowledge internalization inside the classroom by creating a good opportunity for teachers and students to communicate, produce thought collisions, and also enter

into deeper levels of real time study which will in turn improve their performance in integrated curriculum.

## RECOMMENDATIONS

Based on the findings of this study, the following recommendations were made:

1. School should implement the use of flipped classroom and print exposure in teaching and learning process particularly integrated curriculum.
2. The regulatory bodies on education such as Ministry of Education and other regulatory agencies should update their curriculum by integrating flipped classroom model and print exposure in the teaching and learning processes
3. The Ministry of Education empowered by the federal and state government should make adequate provisions for ICT facilities, online resources, and internet connections in all the public schools to support the use of flipped classroom.
4. Workshops, seminars and conferences should be organized by government and school authorities to equip teachers with the needed ICT skills for flipping the classroom.

## REFERENCES

- [1] Ayodele C.A. (2020) The place of Evaluation in the curriculum process. International Journal of Creative Research Thought (IJCRT) www.ijcrt.org 8(5) 672-679.
- [2] Ayodele C.A. (2022) Flipped classroom: Panacee for promoting Active Language Teaching and Learning In Schools. Journal of International Association of Language Educators (3) 71-80
- [3] Berton Tara(2019),Integrated Curriculum: changing the Future of Teaching. <https://servelearn.co>
- [4] Delialio~glu,O. (2012). Student engagement in blended learning environments with lecture-based and problem-based instructional approaches. Educational Technology & Society, 15(3), 310– 322.
- [5] Dowden, T. (2017). Relevant, challenging, integrative and exploratory curriculum design: Perspectives from theory and practice for middle level schooling in Australia. The Australian Educational Researcher, 34, 51-71.
- [6] Dupuy, B., &Krashen, S. (2013). Incidental vocabulary acquisition in French as a foreign language. Applied Language Learning, 4, 55-63.
- [7] Elley, W., &Mangubhai, F. (2019). The impact of reading on second language learning. Reading Research Quarterly, 19, 53-67.

- [8] Herman B.M, & Anderson N.P. (2019). Creating classrooms for authors: The reading-writing. Portsmouth, NH: Heinemann Educational Books, Inc.
- [9] Jacobs, H. (Ed.). (2019). Interdisciplinary curriculum: design and implementation. Alexandria, VA: ASCD.
- [10] Kim, H., & Krashen, S. (2018). The Author Recognition and Magazine Recognition Tests and Free Voluntary Reading as predictors of vocabulary development in English as a Foreign Language. *System*, 26, 515-523.
- [11] Jonesbero, Arkansas(2021)Implementing an Integrated School Curriculum. Arkansas State University <https://dgree.astate.edu>
- [12] K12 academic (2023) print exposure Reading Education in the United States <https://www.k12academic.com>
- [13] Krashen, S. (2014). The power of reading. 2nd edition. Englewood, CO: Libraries Unlimited.
- [14] Laird, T., & Kuh, G. (2015). Student experiences with information technology and their relationship to other aspects of student engagement. *Research in Higher Education*, 45(2), 211–233
- [15] Lee, Y., Krashen, S., & Gribbons, B. (2017). The effect of reading on the acquisition of English relative clauses. *ITL: Review of Applied Linguistics*, 113-114, 263-273.
- [16] Liu, G., Zhang, Y., & Fan, H. (2018). Design and development of a collaborative learning platform supporting flipped classroom. *World Transactions on Engineering and Technology Education WIETE*, 11(2).
- [17] Mason, B., & Krashen, S. (2017). Extensive reading in English as a foreign language. *System*, 25, 91-102.
- [18] McQuillan, J. (2018). The use of self-selected and free voluntary reading in heritage language programs: A review of research. In S. Krashen, L. Tse, & J. McQuillan (Eds.), *Heritage Language Development* (pp. 73-87). Culver City, CA: Language Education Associates.
- [19] Mcpheul.C (2020) An Introduction to Curriculum Integration. [educationhub.org.nz](http://educationhub.org.nz)
- [20] Micholas J.R(2019) 4 essential rules of 21st-C Learning. Teach thought. <https://www.teachthought.com>
- [21] Nagy, W., Herman, P., & Anderson, R. (2017). Learning words from context. *Reading Research Quarterly*, 20, 233-253
- [22] National Middle School Association. (2020). *This We Believe: Successful schools for young adolescents*. Westerville, OH: Author.
- [23] Ontario Ministry of Education. (2016). *21st Century Competencies: Foundation Document for Discussion*. [http://www.edugains.ca/resources21CL/About21stCentury/21CL\\_21stCenturyCompetencies.pdf](http://www.edugains.ca/resources21CL/About21stCentury/21CL_21stCenturyCompetencies.pdf)
- [24] Pate, P.E., Homestead, E.R., & McGinnis, K.L. (2018). *Making integrated curriculum work: Teachers, students, and the quest for coherent curriculum*. New York, NY: Teachers College Press.
- [25] Pate, P.E. (2013). Academically excellent curriculum, instruction, and assessment. In P.G. Andrews (Ed.), *Research to guide practice in middle grades education* (pp. 165-186). Westerville, OH: Association for Middle Level Education.
- [26] Pitts, M., White, S., & Krashen, S. (2017). Acquiring second language vocabulary through reading: A replication of the Clockwork Orange study using second language acquirers. *Reading in a Foreign Language*, 5, 271-275.
- [27] Ramos, F., & Krashen, S. (2018). The impact of one trip to the public library: Making books available may be the best incentive for reading. *The Reading Teacher*, 51(7), 614-615.
- [28] Roehl, A., Reddy, S., & Shannon, G. (2013). The flipped classroom: An opportunity to engage millennial students through active learning strategies. *Journal of Family & Consumer Sciences*, 105(2), 44–49.
- [29] Schell M.A, Julie F.O, (2018). Mix it up: Teachers' be-liefs on mixing mathematics and science. *School Science and Mathematics*, 109, 146-152.
- [30] Schlechty, P. (2015). *Creating great schools: Six critical systems at the heart of educational innovation*. San Francisco, CA: Jossey-Bass.
- [31] Shift e-learning-6 critical Factors that Affect How people Learn. <https://www.shiftlearning.com>
- [32] Springer M. K. (2016). Flipped learning in higher education chemistry: Emerging trends and potential directions. *Chemistry Education: Research and Practice*, 16(4), 758–768. <https://doi.org/10.1039/C5RP00136F>.
- [33] Stokes, J., Krashen, S., & Kartchner, J. (2018). Factors in the acquisition of the present subjunctive in Spanish. *ITL: Review of Applied Linguistics*, 121-122, 19-25.



- [34] Strayer, J. F. (2017). The Effects of the Classroom Flip on the Learning Environment: A Comparison of Learning Activity in a Traditional Classroom and a Flip Classroom that Used an Intelligent Tutoring System. The Ohio State University.
- [35] Study com(2023) what is Integrated Curriculum? <https://study.com>.
- [36] Studocu-Approaches to the curriculum studocu. <https://www.studocu.com>
- [37] Voogt, J., Erstad, O., Dede, C., & Mishra, P. (2013). Challenges to learning and schooling in the digital networked world of the 21st century. *Journal of Computer Assisted Learning*, 29(5), 403–413.
- [38] White R, &Salovey M, (2012). How Technology can Improve Education, Tech&Learning.com, Retrieved from: <http://techlearning.com/default.aspx?tabid=100&entryid=261>
- [39] Yu, A. F. M., Tarmizi, R. A. Jaafar, W. M. W., Ali, W. Z. W., & Luan, W. S. (2010). Factors influencing students' use a Learning Management System portal: Perspective from higher education students, " *International Journal of Education and Information Technologies*, 2, pp. 4.
- [40] Yueh, H., Lin, W., Huang, J., & Sheen, H. (2012). Effect of student engagement on multimedia assisted instruction. *Knowledge Management & E-Learning: An International Journal*, 4(3), 346–358.
- [41] Zhao, Y. Deng, X and Zhai, S. (2016). The analysis of flipped classroom mode of CIMA financial operation course. 6th International Conference on Electronic, Mechanical, Information and Management.
- [42] Zhou, W. (2017). The future of classroom: flipped classroom. Retrieved on March 12, 2022 from: [http://blog.sina.com.cn/s/blog\\_624df0fc0102dtld.html](http://blog.sina.com.cn/s/blog_624df0fc0102dtld.html), 2011.
- [43] Wikipedia: -Curriculum-Article Talk <https://en.m.wikipedia.org>