



## **A Comparative Study of the Language Learning Environment of a Flipped Class Versus a Traditional Class**

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### **Abstract**

Flipped learning is one kind of the learning approaches that combines different types of techniques and technologies. Nowadays, flipped learning model is formed by combining face to face education and online learning activities mostly. Adopting a quasi-experimental design, the study compares a flipped classroom using Zunal WebQuest and ed.ted website and a traditional class structure in two intermediate- level English classrooms. The purpose of this study is to examine effects of flipping the classroom on English language learners' performance, perceptions, and cooperation and interaction. Students in this flip environment and in the traditional-homework environment are interviewed, observed and also a questionnaire is given to them. It was found that the model enables students and teachers to perform more effective education activities and the students perceived that the flipped classroom supports their learning and had positive attitudes towards the model.

**Keywords:** flipped learning, traditional classroom, zunal webquest, ed.ted website

### **INTRODUCTION**

Different teachers teaching different courses try to use multiple teaching methods to encourage and motivate their students. Inside the classroom, students take with themselves their knowledge of subjects, learning techniques, and personal strategies for learning. Each of these attributes influences students' performance somehow. Due to that, teachers face a variety of difficulties to overwhelm prior education gaps, learners' preferred learning styles, and an unmotivated classroom environment by modifying their teaching techniques and methods.

With the rapid enhancement in accessibility and quality of technology especially computer-based technology tools, many teachers and university professors are flipping or inverting their classrooms by taking advantages of technology to introduce content

to the students outside of class and trying engaging students inside the class. In most cases where the classes are flipped, the teachers express that they tried to actively attract and engage the students by using this technique (Bowers, 2002; Collins, 2002; Roane State Community College, 2003; Think well, 2002; Ursuline College, 2002).

Yarbo et al (2014) point that flipped learning is a "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 education guides students as they apply concepts and engage creatively in the subject matter" (p. 5). Talbert (2014) mentioned that flipping involves pre-class, in-class and post-class. Technology may be used to increase the educational efficiency and efficacy of flipped teaching but it is not without difficulties. The successfulness of a flipped approach depends on the cooperation between teacher and learners and needs continuous motivation and collaboration before, during and after the instruction. A flipped classroom changes the traditional educational model in order that the course content is taken outside of class, while class time is spent on homework. The main goal of a flipped classroom is to enhance students' learning and performance by replacing the traditional model of a classroom, emphasizing class time on student understanding rather than on teacher lecturing. Therefore, the present study attempted to flip the classroom for English language learners in an institute in Iran to examine its educational capability and its possible positive effects in language learning and teaching. The research questions of the study are as follows: (1) How does the learning environment of a flip classroom that uses Zunal WebQuest and ed.ted website differ from that of a traditional classroom? (2) What are the learners' perceptions of and attitudes toward their learning experiences in the flipped classroom? (3) What is the learners' participation level in the flipped classroom? (4) How could the Flipped Classroom be improved?

## METHOD

Due to the nature of the questions guiding this research and the context of the study, it was necessary to investigate the learning environments of classroom flip and traditional classrooms using both quantitative and qualitative research methods. A number of quantitative and qualitative instruments were developed to study learning environments. Therefore, data were collected from student interviews, in-class observations, audiotaped classroom sessions, and a classroom survey questionnaire.

## Setting and Participants

The sample was selected from Iranian Intermediate EFL learners, studying at Avesta Language Institute located in Khonj, south of Fars Province. The institute serves students in different levels and ages and has a population of approximately 600. Classes in the institute are equipped with LCD projector and an interactive whiteboard. In addition, the teacher has access to a computer lab. The data collection occurred during one term between April and June 2016. Students in the research varied in terms of age, sex and the ages of the students in two classes ranged from 16 to 22. The average class

size of the two classes in the study was 20 students. None of the students in the survey had been in a flipped classroom. As a result, that was the first time that the students had ever had a class that was taught using flipped classroom techniques.

## **Instruments**

### ***Individual Student Interview***

This study was both qualitative and quantitative and the primary data collection strategies were interviews, in-class observations, audiotaped classroom sessions, and a classroom survey questionnaire. One of the reasons for using qualitative interviews was that it gives us the opportunity to do in-depth research. In order to conduct an in-depth investigation of the research question the researcher decided to interview a sample of students. A total of 10 students were chosen at random to participate in the interviews (see appendix A). Student responses from questionnaires and interviews were also used to determine students' preferences, perceptions and the effectiveness of flipped learning model.

### ***Class observation Sheet***

In order to validate and support the data given by students, the researcher observed the classes (10 sessions) based on a checklist consisting of 11 Yes-No questions (see appendix B). During the class observations, the researcher attempted to analyze themes and patterns related to student and group similar behaviors, repeated behaviors, behavioral changes, desired and undesired behaviors, student expression of attitudes, and participation resulting from the traditional classroom model and also tried to see if the students were interested in the flipped classroom and the focus was mainly on students' interaction and motivation.

### ***Classroom survey Questionnaire***

Three weeks before applying of their final exam, students were given a questionnaire (see appendix C). Students in one of the classes spent over 3 months with the flipped classroom and had chances to build their feelings such as likes, dislikes, and other feelings about Flipped Classroom approach. The study focused on five main topics including preference, pacing, time, learning engagement and learning satisfaction, and some particular Flipped Classroom questions. The study consisted of 16 five-level Likert Scale items which provided the quantitative data for the research.

## **Procedure**

The sample was selected from Iranian intermediate EFL learners, studying at Avesta Language Institute in Khonj city, Iran. 40 male and female participants who were randomly assigned to experimental and control group with 20 students in each went under the study for one term. In addition, taking their overall language ability and the homogeneity into consideration they have all gone through the same filters in the institute. That is due to the fact of selecting the participants just from one institute

which has got a set of clear criteria for placing students in the intermediate levels; consequently they were all homogenized previously by taking part in the same placement test of the institute as well as the same structured interview. As a result, they were all at the same level of English proficiency. Moreover, by the time the study began, they had all finished Headway Pre-intermediate, 4<sup>th</sup> edition. Also, the educational setting was selected based on the accessibility and availability of the researcher. This study selected a posttest-only quasi-experimental design to analyze the effects of flip teaching on student learning, with a specific focus on participating students in the flipped classroom through different types of technology. The independent variable was the flipped classroom approach with two different patterns of educational design: flip lessons (experimental group), and non-flip lessons done in a rather traditional manner (control group). The dependent variables were the students' fulfillment (as evaluated by a final exam), learning opinions and understandings (as assessed by the classroom survey questionnaire and semi-structured interviews). Both quantitative and qualitative data were analyzed in this study to achieve understanding into the English language learners' flipped classroom experiences.

The experimental group was organized according to the flipped method. Outside of class, new content was introduced to learners by supplying related videos and materials using Zunal WebQuest and et.ted website. When students came to class, they accomplished activities that were made to help them join the subject matter they were learning in a different context and situation. Students could communicate and interact with each other. The other class (control group) was formed according to a traditional format where the students came to an ordinary classroom mostly without or a little preparation of the content and the teacher started teaching the content. Students' grades in both of these classes were determined by their performance on identical final exams. The identical final exams were chosen as a way to keep stability and consistency in evaluation between the two groups.

In order to validate and support the data given by students, the researcher observed the classes (10 sessions) based on a checklist. During the class observations, the researcher attempted to analyze themes and patterns related to student and group similar and repeated behaviors, changing in behaviors, preferred and unpreferred behaviors, student assertion of attitudes, and participation resulting from the traditional classroom mode. Three weeks prior to the administration of their final exam, students were given a questionnaire. The survey consisted of 16 five-level Likert Scale items which provided the quantitative data for the study. Moreover, in order to conduct an in-depth investigation of the research questions, the researcher decided to interview a sample of students. A total of 10 students were chosen at random to participate in the interviews. Student responses from questionnaires and interviews were also used to determine students' likes, understandings and the efficiency of the flipped learning model.

### **Data Analysis**

This study employed a mixed-methods approach for analyzing the data in order to let the data speak for themselves and to play down any bias that the quantitative research

can present into the study. Therefore, for the aim of this article, Creswell and Plano Clark's (2006) definition is used:

Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative approaches in many phases in the research process. As a method, it focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone. (p.18)

This approach enables the researcher to do an extensive analysis of the data while also guarantying that each learner participating in the study was understood in his or her own words.

### ***Quantitative Analysis***

The quantitative analysis began with finding and counting means and standard deviations in two classes. Next, "t- test" was used to see whether there was significant difference between the performance of the students in the two classes or not. Considering the items in the questionnaire, the data for each of the 16 questions were presented in a bar graph and the percentage of students selecting each response was also presented.

### ***Qualitative Analysis***

Data analysis with qualitative data usually includes various phases that can happen at the same time. These phases include organizing the data, generating categories and themes (through coding) and writing the report. In this study, on the one hand, each student response was coded into common and repeated topics and themes that revealed through the interview questions. Themes could be drawn from important similar repeated answers to an open-ended question. Responses that had more than one answer in a similar way were also described as a percentage regarding the number of students who answered in this way. If a response was unrepeated, it was coded as miscellaneous, and if relevant, included in the qualitative analysis. On the other hand, considering items in the classroom observation sheet, the researcher analyzed each category separately to see how the items in classes were treated and then put them together to draw the final conclusion.

## **RESULTS**

### **Learning outcomes of a flip classroom compared with a traditional classroom**

Based upon the first research question i.e., whether the performance of flipped classroom outperformed the traditional one, Independent Sample T-Test was run through SPSS Software.

**Table1.** Means and Standard deviation obtained in the final test of English classes

	N	Mean	Standard Deviation
Flipped Class	20	17.5	2.80
Traditional Class	20	13	2

Due to the findings illustrated in Table 1, learners in the experimental group could perform more significantly than the learners in the control group considering the post-test results. The obtained value for  $t$  was 3.75. Row 40 was found for the degree of freedom intersects with the column labeled two-tailed .05. It was found that at least a value of 2.02 is needed before rejecting the null-hypothesis at the .05 level of significance. So the null-hypothesis is rejected because the  $t$ -value is greater than 2.02. As a result, a significant difference was observed regarding the participants' mean scores in the post-stage which was done after the treatment. These results concerning learners' accomplishment implied that the flipped classroom better accelerated learners learning during the term compared with the traditional classroom.

### **Learners' understanding of and attitudes toward the flipped classroom**

The second question of the study surveyed the learners' understanding and opinion toward flip teaching and learning, as measured by the class survey questionnaire along with the interview responses. Therefore, the learners' responses to the questionnaire (items 1\_16) were examined to illustrate their learning engagement and cooperation, and their contentment accompanied with their learning experience.

Regarding learning satisfaction of both groups, the results showed that the participants from the experimental group (flipped classroom) showed meaningfully higher levels of fulfillment and satisfaction than those from the traditional classroom. Fifteen out of twenty participants (75%) expressed various positive aspects of their experiences being in a flipped classroom, as the materials were structured and organized on a WebQuest and a website, therefore, before coming to the class they could learn the materials at their own pace as some mentioned in the interview. Increased cooperation and interaction with the teacher and other classmates was another most rewarding aspect of the flipped classroom which was reported by 14 out of 20 participants (70%). Some other students expressed that being in a flipped classroom helped them to make their own questions before the class so it helped to be more active and get more feedback, in contrast to traditional class. About 50% of the participants (10 out of 20) expressed that materials presented on the WebQuest and ed.ted helped them to do more self-study prior to class and improved their level of participation in the class. Generally, the participants gave a priority to flip teaching over traditional classroom teaching.

The findings showed that flip teaching was very well welcomed by the participants. Almost all participants from the flipped classroom were pleased with the topics, content and design of the materials presented in the form of WebQuest and ed.ted website. Therefore, this indirectly suggests the positive side of presenting materials on WebQuests along with the integration of various kinds of technology and multimedia resources.

### **Learners' participation levels in the flipped classroom**

Examining the learners' participation levels was the third research question of the study. The researchers analyzed learners' average study time and the number of times that the related videos watched for each lesson by the learners. By analyzing the results of both quantitative and qualitative data supported it was found that on average, outside of the class, learners from the flipped classroom spent nearly 50 minutes studying and reviewing the assigned material for each lesson. The participants' average number of watching the related videos for each lesson was 2.30 times in the flipped classroom. Sixteen out of 20 (over 80%) of the participants in the interviews revealed that they spent quite more time on their lessons than traditional homework courses, because the educational design triggered them to review and preview the materials in order to have a better and more participation inside the class, and helped them them to review the lessons if they wanted. Both qualitative and quantitative results were in line with the previous findings that learners in the flipped classroom were more probably to reconsider and re-examine the assigned materials compared with those in traditional classrooms.

Moreover, findings showed that the learners from the flipped classroom were encouraged to become more active and energetic learners because of flip teaching. Based on the interviews, the learners with different proficiency levels and learning styles seemed to be thankful and take advantage of flip teaching. Totally, flip teaching seems to present more adaptable learning opportunities for replaying and reviewing the materials, and therefore better satisfy the learners' individual needs and goals.

### **The improvement of flipped classroom**

The fourth question of the study was concerned with finding ways of improvement and enhancement of the flipped classroom based on learners' comments, suggestions and recommendations. A great number of responses involved development and design more and varied in-class activities, evaluation strategies, and construction more challenging questions related to the videos. Expanding the number and diversity of in-class activities were the most shared suggestions for increasing the efficiency of the Flipped Classroom. Some suggested that the timer on the tests and quizzes made them stressed so it was better to remove it. Some learners also suggested that enhancement could be made to the videos if we added subtitle to the videos because they believed that some parts of the videos were really difficult to understand and it made them somehow angry and hopeless. Some suggested that if the teacher set a specific time for all to connect the internet at the same time and had online discussion was more effective and fascinating. Three learners recommended that creating a report and summary of the videos could be helpful.

The following items are extra suggestions and comments that learners gave in order to enhance the Flipped Classroom:

- My own biggest problem was that at the beginning I was moving at a slower pace than the designed units.
- It was a really good experience compared to traditional classes in Iran. It was one of the best English classes I have ever had.
- More fun and challenging activities.
- Using English Lab every session.
- Writing a summary of the videos and submitting online in order to improve our writing.
- Having some online discussion at a specific time.

## DISCUSSION AND CONCLUSION

Since its beginning, educators, teachers and administrators have been asking whether, or not, the flipped model works. The purpose and interest for studying the effects of a flipped learning model originated from claims found in various literature about how this pedagogical method has been shown to increase learning engagement, to improve learners' attitudes toward learning, and the training independent learners who are in charge of their learning with the ability to learn at their own pace. Further claims are the model increases learners' engagement, since lectures become homework, allowing class time to for collaboration between learners as well as labs and activities. Data collected from the study support these claims. Specifically, the qualitative data support a flipped learning model using varied technologies, showing it had positive effects on learners' attitudes; it increased learners' interest, motivation, and engagement, and better prepared learners for in-class activities.

The researchers concluded that using these learning methods in a flipped class can increase both learning and motivation. Flipped learning is especially important since it enables the learning session to go beyond its context the four walls of the classroom. Teachers should take learners interest in Flipped Learning very seriously. As Cockrum (2014) says the basic goal of flipped learning is to provide a student-centered learning environment. This gives teachers the ability to practice project-based learning, mastery, inquiry, peer instruction, constructivism, and more. A flipped class is one that reverses the common regular of content and materials in order that learners get background and requires knowledge before going to class, and teachers lead learners to interactively and actively define, search, elaborate and use that knowledge during the class time. Reasons to invert classroom is; because in flipped classroom the learner can have control over the pace and rate of Instruction by pausing, re-listening and re-watching to film or video. Class time is then allocated to application. The flipped classroom puts the learning responsibility on the learners and it is the learner that should start learning the materials. In flipped classroom students don't seat passively and silently in a class, because the role teacher is completely changed, s/he is not there to present the content, but to assist and support their task. Flipped class is a means to improve interaction between students and teachers.

The findings of this survey suggested that the structuring of learning materials accompanied by the use of WebQuests is enhanced and had a positive effect on how

learners understood and viewed learning situation and motivated in the learning procedure in line with previous studies (e.g., Lage, Platt, & Treglia, 2000; Marrs & Novak, 2004) but measuring the amount and extent of the effect still needs further studies and research. While such studies and the present research differ in some aspects such as the content and the design of the materials, they all share the same opinion that additional and supplementary contents for flipped classrooms should be formulated in order to link learners in-class activities and out of- class attempts in a united and integrated manner with the help and use of technology. Based on the findings of this study, it can be discussed that designing the materials according to the five needed elements of every WebQuest (i.e., Introduction, Process, Task, Evaluation, and Conclusion) is an efficient and productive learning strategy for flipping the classes. Therefore, Language teachers could take advantage of a WebQuest mode to conduct their flip teaching performances and the plan of the collaborated learning and teaching materials contents.

In the current century, instructors and educators are continuously adopting and adapting new modes of technologies and education. Both Fulton (2012) and Millard (2012) argue that Flip teaching is one of the most encouraging approaches to convey learning experiences through merging technology and active learning strategies. Future research can be done on the findings of this study and further investigation in needed to find the effects of well-structured flipped classes versus ill-structured on learners' learning, using various educational designs and strategies. All in all and as a concluding remark, it should be disclosed that the positive results of this research are limited to the specific research context and the specific technological tools used in this work. As the main goal of this study was to conduct the experiment with a small sample of English language learners, the findings from this study are not meant to be generalized caused by limited sample size.

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## APPENDICES

### Appendix A. Interview Questions

1. Do you prefer the traditional classroom model or the flipped classroom model?
2. Tell me your thoughts about the flipped classroom model? What did you like and dislike about this model?
3. For this class, do you enjoy the type of homework assigned during the traditional model or flipped model best? Explain.
4. Do you prefer coming to class and taking notes or participating in an activity?
5. What activities did you most enjoy in this unit?
6. During which model do you feel you were able to learn most from your peers?
7. During which model were you most excited about coming to class?
8. During which model were you most motivated to complete homework?
9. During which model do you feel you learned the most and understood what you were learning?
10. What were some specific concerns or difficulties that you had during this learning experience?
11. Did you observe any changes in your or others' attitudes toward this learning experience? What are some specific examples? How did they happen, and why?

### Appendix B. Classroom Observation Sheet

1. Are students paying attention?
2. Are students engaged?
3. Are any students off task?
4. Are students actively participating?
5. Are students asking questions?
6. What level of questions are students asking?
7. Are students working collaboratively?
8. Do students appear interested in the activity?
9. Are students enjoying the activity?
10. Do students appear to be learning from the activity?
11. Do students appear in control of their learning?

### Appendix C. Classroom survey Questionnaire

Dear Students,

We thank you for the time and effort that you give us to complete this questionnaire.

**\*\*PLEASE NOTE: 1-Strongly disagree 2-disagree 3-Undecided 4-agree 5-Strongly agree** (Please circle your responses).

1. The flipped classroom is more engaging than traditional classroom instruction.  
1      2      3      4      5
2. I would not recommend the Flipped Classroom to a friend.  
1      2      3      4      5
3. The Flipped Classroom gives me greater opportunities to communicate with other students.

1      2      3      4      5

4. I am spending less time working on traditional classes.

1      2      3      4      5

5. I regularly watch the video assignment.

1      2      3      4      5

6. I would rather watch a traditional teacher led lesson than a lesson video.

1      2      3      4      5

7. I dislike self-pace through the course.

1      2      3      4      5

8. I find it easy to pace myself successfully through the course.

1      2      3      4      5

9. I am motivated to learn in the Flipped Classroom.

1      2      3      4      5

10. The Flipped has not improved my learning of the English course.

1      2      3      4      5

11. I find that at times studying gives me a feeling of deep personal satisfaction.

1      2      3      4      5

12. I find that studying academic topics can at times be very enjoyable.

1      2      3      4      5

13. I work hard at my studies because I find the material interesting and worth the effort.

1      2      3      4      5

14. I come to most classes with questions in mind that I want answering.

1      2      3      4      5

15. I am satisfied with the content and topics of the learning material.

1      2      3      4      5

16. I am satisfied with the integration of technology and multimedia resources.

1      2      3      4      5