EFFECTS OF TEACHING A LEARNING PSYCHOLOGY COURSE IN DIFFERENT WAYS ON THE STUDENT’S SUCCESS AND ATTITUDES

ABSTRACT
The aim of this study is to determine the effect of teaching a learning psychology course in different ways on students’ academic success and attitudes towards the course. The experimental research method was used in this research. The participants were students in the second year of a psychological counseling and guidance program in a state university in Turkey. The data were collected by Learning Psychology Course Achievement Test and student letters. ANOVA, Kruskal Wallis and Wilcoxon Signed Rows test were used in the analysis. Student letters were analyzed through content analysis. In the first group, the lecturer taught the class interactively each week with the presentations prepared by the researchers. In the second group, no lectures were made in this group. At the beginning of the lesson each week, students were given the outputs of the presentations and the lesson was carried out with two activities each week. In the third group, the flipped learning model was applied in this group. As a result of the study, it was concluded that the standard deviation was smaller in the group in which the flipped learning model was applied compared to the other two groups.

KEYWORDS
Flipped learning model, learning psychology course, student attitude, student-centered education, student success

INTRODUCTION
Global changes in science and technology have had a significant impact on education as well as many other fields (Benson, 2012). The purpose of education today is to train students who can solve problems, adapt their knowledge to real life, work collaboratively, and engage in lifelong learning (Hains and Smith, 2012). For this reason, educational environments in which the student merely watches on the sidelines and the teacher works as the only actor in the classroom cannot attract the attention of the students. It is not possible to have effective and permanent learning in such environments (Rodriguez-Valls and Ponce, 2013).

The strength of student-centered education comes from the fact that it allows students to learn from their own experience, to structure information, and to reflect on it (Daley, 2003). Scientific research supports student-centered education. Studies show that student-centered education increases...
students’ motivation for learning, increases the level of knowledge with innovative, and has positive effects on creativity, critical thinking, success, student participation, student satisfaction, student self-esteem, and learning motivation (Kılıc and Sahin, 2016; Maden, Durukan and Akbar, 2020; Okmen, 2020; Talbert, 2012). When the results of the research in the literature are examined, it is seen that student-centered strategies, methods, and techniques such as project-based learning, inquiry-based learning, problem-based learning, collaborative learning, and flipped learning are used, which are effective in increasing academic success (Bueppler, Walker and Driessen, 2014; Donovan and Lee, 2015; Green, 2015; Harvey, 2014, Lazorden and Harmesen, 2016; McCallum et al., 2015; Vernon and Blake 1993). Within the scope of this research, it was aimed to conduct a course effectively while using different teaching methods to make the students active. For this reason, three different lesson designs of different styles and levels were prepared, each aiming to bring the students to the center and make them active. By comparing these lesson designs, it was aimed to reveal the advantages and disadvantages of each and thus guide teachers who want to use different methods and techniques in their classrooms.

One of the student-centered strategies used in this research is the flipped learning model. The flipped learning model is a model that includes traditional learning in the classroom and online learning, which is also described as a blended learning approach and has become quite popular recently (Bergmann and Sams, 2012; Tucker, 2012). Flipped learning is one of the models used by integrating technology into student-centered education. With the introduction of technology into educational environments, it enabled efficient learning, inquiry-based learning, problem-based learning, and to make comparisons between these three models used in the research.

In this study, it was aimed to conduct lessons effectively by using different teaching methods to make the students active and to make comparisons between these three models used in the course. In this context, the aim of this study is to determine the effect of teaching a learning psychology course in different ways on students’ academic success and attitudes towards the course. This basic purpose has been applied to answer the following questions in the research framework:

1. What is the effect of teaching a learning psychology course in different ways on students’ academic success?
2. What are the opinions of the students about the lessons?

MATERIALS AND METHODS

This section includes information on the research model, working group, application process, data collection, data analysis, and validity and reliability.

Research Model

Experimental research method was used in this research. Experimental research is used to study the effect of different variables in the research field. It is generally used in scientific research. In this research, the effect of different methods was examined and the students were asked to describe the effects of this method compared with the other methods.

In this study, it was aimed to conduct lessons effectively by using different teaching methods to make the students active and to make comparisons between these three models used in the course. In this context, the aim of this study is to determine the effect of teaching a learning psychology course in different ways on students’ academic success and attitudes towards the course. This basic purpose has been applied to answer the following questions in the research framework:

1. What is the effect of teaching a learning psychology course in different ways on students’ academic success?
2. What are the opinions of the students about the lessons?

The numbers of females and males in the working groups were given in Table 2:

Table 2: Number of Working Group Students

| Group   | Female | Male | Total |
|---------|--------|------|-------|
| 1st Group | 25     | 12   | 37    |
| 2nd Group | 19     | 9    | 28    |
| 3rd Group | 28     | 12   | 40    |
| Total   | 72     | 33   | 105   |

In order to determine the equivalence of the groups in terms of information related to the course, “learning psychology course pre-test” was applied before the research. ANOVA test results related to the differences between the pretest scores of the groups were given in Table 4:

Table 4: ANOVA Test Results Regarding the Pretest Scores of the Groups

| Group   | N   | Mean | Standard Deviation | df | F  | p-value |
|---------|-----|------|--------------------|----|----|---------|
| 1st Group | 31  | 46.65| 6.68               | 2  | 0.35| 0.71    |
| 2nd Group | 21  | 47.43| 7.06               | 2  | 0.35| 0.71    |
| 3rd Group | 34  | 45.41| 6.86               |    |    |         |

As can be seen in Table 4, ANOVA test did not show any significant difference between the pretest scores of the groups (F = 0.35, p > 0.05). In this case, it can be said that the information of each group was equivalent to each other before the applications.

Application Process

The application process of the research was carried out by the lecturer and two doctoral students who are responsible for conducting the course at the university. Before this application, a term plan was prepared for each group by the researchers. The learning psychology course, which lasts 14 weeks in total, was held every Wednesday each week in three groups. In the first three weeks, basic information was given in all groups and pretesting was applied. Experimental application started on 4th week and lasted for a total of 11 weeks. The evaluation of the course was done with the final exam and portfolio. At the end of 14 weeks, the final test that replaced the final exam was applied and student portfolios were evaluated.

First Group

In this group, the lecturer taught lesson interactively each week through the presentation prepared by the researchers. During the lesson, the examples in the presentation were given and students were asked to create various examples. In addition, the lecturer enriched the presentation of the lesson with various stories, jokes and memories. The output of the presentation was distributed to the students at the beginning of each lesson and the students took notes on these outputs while listening to the lesson. At the end of the lesson, students were given homework and asked to put this homework in their portfolios. As homework, tasks such as preparing questions, writing examples, finding similarities and differences, preparing concept maps, preparing puzzles, writing acoustic or poetry, writing slogans, writing the reflection of theories on education were given.
No lecture was made in this group. At the beginning of the lesson each week, students were given the outputs of the presentations and the reflections of theories on education, and the students were asked to read and discuss these in the first 20% of the test weeks groups. For this, students were given 20-30 minutes. After that, the lesson was carried out with two activities each week, which made it necessary to use the information on the subjects. In this process, students, thinking with six hats, fishtise, butter-bread, aquarium, drama techniques; writing poetry, completing stories, preparing puzzles, writing letters, matching cards, drawing questions from the jar, finding similarity-difference, preparing a concept map, structured grid activities were used. In this group, no assignment was given for the pre-class and post-class learning period. The students were asked to put their studies in their portfolios. Students were given compensatory duties for weeks when they couldn’t attend classes.

In order to determine their attitude towards the lesson, the students were asked to write a letter about their feelings and thoughts about the process at the end of the semester. Letters were received from 93 of 105 students (Group-1 = 31, Group-2 = 21, Group-3 = 34) and participated in all of the tests in the study group.

Data Analysis

The analysis of quantitative and qualitative data collected in the research was explained under separate headings.

Quantitative Data Analysis

Data were analyzed by using a statistic program to determine the effect of the flipped learning model on academic achievement. First of all, normality tests were carried out. If the sample size is greater than 35, the Kolmogorov-Smirnov (K-S) test can be used and it if it is small, the Shapiro-Wilk test can be used (Demir, Sarıçoğlu and Imamü, 2016). Since the sample size in all the groups in this study is less than 35, Shapiro-Wilk test results are taken as the basis. According to the normality test results, it was observed that the students’ GPA (Grade Point Average) and pre-test scores were normally distributed in each group, and the post-test scores did not show the normal distribution in any group.

ANOVA, one of the parametric tests, and Kruskal Wallis test, which is one of the non-parametric tests, and Wilcoxon Signed Rows test were used in the analysis.

R esults

In this research work, after the analysis of quantitative and qualitative data, the findings of each data type were presented separately. Results were gathered under the titles of “academic success” and “opinions about the conduction of the course.”

Academic Achievements

Academic success was examined under the titles which are “comparison of the pretest-posttest scores of the groups” and “comparison of the posttest scores of the groups.”

Comparison of the Pretest-Posttest Scores of the Groups

Descriptive statistics related to the pretest and posttest scores of the groups were given in Table 5:

| Group | Pretest | Mean | Standard deviation |
|-------|--------|------|--------------------|
| Group 1 | 31 | 46.65 | 6.68 |
| Group 2 | 21 | 47.43 | 9.06 |
| Group 3 | 34 | 45.41 | 10.86 |

Comparison of the Posttest Scores of the Groups

When Table 6 is examined, it is seen that there is a significant difference between the pre-test and post-test scores of the students who take “learning psychology course success test”. They are (z = -4.86, p < 0.001) in Group 1, (z = -4.02, p < 0.001) in Group 2 and (z = -5.09, p < 0.001) in Group 3. It is seen that the differences are in favor of the posttest in each group. In this case, it can be said that the operations performed in each group positively affected learning.
As seen in Table 7, no significant difference was detected between the posttest scores of the groups ($X^2 = 0.01, p > 0.05$). This shows that the applications done on three different groups do not differ academically.

### Student Opinions

The opinions of the students about the conduction of the course were examined separately for each group.

#### Opinions of the Students in the First Group

Opinions of the students in the first group regarding the design of the course were given in Table 8:

| Categories          | Codes                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------|
| Positive Views      | Giving lecture is useful and efficient.                                                         |
|                     | It was impossible to understand the lecture without listening.                                 |
|                     | This style of learning is better than the ones in other groups.                                 |
|                     | The distributing presentations' printouts was effective in learning.                            |
|                     | Enabled the subject to perceive as a whole.                                                     |
| Course Participation| There was an active lecture giving, student was also effective in giving lecture.               |
| Permanence          | The information was catchy.                                                                     |
|                     | The course was interesting and beautiful.                                                        |
|                     | I came to lecture willingly.                                                                    |
| Attractiveness      | I hung on the course's every word.                                                               |
|                     | I left the class happily.                                                                       |
|                     | I exclusively waited for the next course.                                                        |
|                     | I liked the course and enjoyed it.                                                               |
| Learning            | I would understand better with the station technique.                                            |
|                     | Slides were read in the course, and the students could not participate.                         |
|                     | I did not attend the course, and I do not like to attend anyway.                                |
|                     | It should have been interactive.                                                                |
| Permanence          | Subject teaching is not permanent.                                                               |
|                     | I noticed that I forgot the information right after the course.                                  |
| Negative Views      | It wasn't fun like the other group. I would love to try it.                                     |
|                     | Using the same method every week caused fading.                                                  |
|                     | Plain lecturing was not nice.                                                                   |
| Attractiveness      | The course was boring.                                                                          |
|                     | I was tired at the end of the course.                                                            |
|                     | Sometimes I was sleepy in the course.                                                            |
|                     | The content caused students to lose attention.                                                   |
|                     | The course time was long.                                                                        |
| Diversity           | It would have been nice to done some activities during the course.                              |
|                     | Different materials should have been used.                                                       |
|                     | There should have been different methods and techniques.                                        |
|                     | It was upsetting that the station techniques was not used.                                      |

As can be seen in Table 9, students’ opinions about examples, stories and memories were categorized under two categories as “positive opinions” and “negative opinions”. It is seen that students have positive and negative opinions about the examples given by the teacher, the stories and memories he tells are interesting and beautiful, are effective in learning, and are useful in terms of permanence and strengthening. It is also seen that students find it effective and beneficial to be asked for samples and thus they feel active in the course. However, it is observed that students have both positive and negative views towards homework. Some of the students think that homework offers the opportunity to repeat topics, strengthen the course and contribute positively to their learning. It is seen that some students think that homework such as acrostic, poetry, writing slogans are unnecessary and useless, they should be done during the course instead of being given as homework, and homework should be checked daily.

#### Opinions about Homework

The opinions of the students in the first group regarding the design of the course were given in Table 10. As can be seen in Table 10, students’ views on homework are categorized under two categories as “positive opinions” and “negative opinions”. It is observed that students that homework requires skills, takes a lot of time, is tiring and causes stress. Some direct quotes from students’ opinions under these categories are given below:

S8: “I think it is more beneficial to carry out the course in the form of a station technique. Because plain lecturing and giving homework is not interesting.”

S19: “I think just giving examples in the course, which rarely happened, was not enough. I was trying to participate more in the course and digest the content but unfortunately this was not always happening.”

#### Table 7: Kruskal Wallis Test Results Regarding Posttest Scores

| Group 1 | N  | Mean rank | Standard deviation | X²    | p-value |
|--------|----|-----------|--------------------|-------|---------|
| Group 1 | 31 | 43.08     |                    | 2     | 0.01    |
| Group 2 | 21 | 43.64     |                    |       | 0.99    |
| Group 3 | 34 | 43.79     |                    |       |         |

#### Table 8: Opinions on the Design of the Course

As can be seen in Table 8, the students’ views on the design of the course were categorized under two categories as “positive opinions” and “negative opinions”.

It is seen that students have positive and negative opinions about the way the course is taught. Although it is stated that this method has a positive effect on attendance, it is seen that the method is negative in terms of student participation. The students think that the course is not interactive and they cannot participate in the course with this method. There are two different opinions that the course provides permanence and not. When positive opinions are examined in terms of attractiveness, it is seen that some of the students love the course, attend it intentionally and leave it happily.

It is striking that some of them dislike the course and think it is long, tiring and boring. In the Diversity subgroup, it is observed that students generally think that they understand the course better in this way. It is noticed that students think that good learning is provided through lecture giving, it is not possible to understand the course without listening, and they are able to perceive the subject as a whole very well in this way. Some direct quotes from students’ opinions under these categories are given below:

S10: “I think it is more beneficial to carry out the course in the form of a station technique. Because plain lecturing and giving homework is not interesting.”

S19: “I think just giving examples in the course, which rarely happened, was not enough. I was trying to participate more in the course and digest the content but unfortunately this was not always happening.”

#### Table 9: Opinions on Examples, Stories and Memories

| Categories          | Codes                                                                                           |
|---------------------|-------------------------------------------------------------------------------------------------|
| Positive Opinions   | Sudden rises and reactions attracted attention.                                                  |
|                     | It was stunning, diverse, interesting and beautiful.                                            |
|                     | I would like to listen to it more.                                                               |
| Given by the teacher| It provided permanence.                                                                         |
|                     | It was effective in learning.                                                                   |
|                     | It provided reinforcement.                                                                      |
|                     | It was nice to listen to the past experiences.                                                   |
| Requested from student| It was effective, useful and efficient.                                                          |
|                     | It made me feel my ideas were valuable.                                                          |
|                     | He made the student active.                                                                     |
|                     | He established a connection between the student and the course.                                 |
|                     | Made the student stay awake during the course.                                                   |
| Negative Opinions   | Examples are similar, different examples should be given.                                      |
|                     | We were able to give examples rarely.                                                            |
|                     | Sometimes not giving examples made it difficult for me to understand.                           |

#### Table 10: Opinions about Homework

The opinions of students in the first group regarding homework were given in Table 10.

As can be seen in Table 10, students’ views on homework are categorized under two categories as “positive opinions” and “negative opinions”. It is observed that students that homework requires skills, takes a lot of time, is tiring and causes stress. Some direct quotes from students’ opinions under these categories are given below:

S30: “Some homework’s contents such as slogan and acrostic push me very hard. These make me say ‘What is it about?’.”

S33: “It was nice that you make us write questions. Even though it sounded very simple, it was a homework that at least measure if we really understand the subject.”
Some direct quotes from students’ opinions under these participation and free self-expression in the course.

While, in the first group, the opposite was true. It was seen that the students generally did not find the course interesting, but it was fun and enjoyable. This situation shows that students find the way the course is taught is fun and interesting, but they are worried about not learning.

As can be seen in Table 11, students’ opinions on homework were categorized under three categories which are “opinions about the design of the course”, “opinions about the reading task” and “opinions about the activities”.

### Opinions on the Design of the Course

The opinions of the students in the second group regarding the design of the course were given in Table 11:

As can be seen in Table 11, students’ opinions on homework without any lecture, are gathered under three categories which are “positive opinions” and “negative opinions”. It is seen that students have positive and negative opinions about the design of the course. When sub-categories are examined, it is observed that students have mostly negative opinions about this method in terms of education, but they have mostly positive opinions about attractiveness.

### Opinions on Reading Assignment

The opinions of the students in the second group regarding the reading assignment given to them to understand the subject at the beginning of the course were given in Table 12.

As can be seen in Table 12, students’ opinions about the reading task consist of only one category, “negative opinions”. It is seen that the students do not have a positive opinion about asking them to learn the subject by reading the documents given to them at the beginning of the course.

It is noteworthy that all of the students’ opinions on this issue are negative. The thing that the students complained the most is that the duration is not enough. In addition, it is observed that they were bothered since they had to read the documents within a certain period of time. Moreover, also observed that they think that they did not understand and did not learn the subject only through the document. Some direct quotes from students’ opinions under these categories were given below:

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**Table 10: Opinions about Homework**

| Positive Opinions | Codes |
|-------------------|-------|
| Attractiveness    | It provided learning with fun. |
|                    | It was interesting and fun.    |
|                    | It was done with love.         |

| Negative Opinions | Codes |
|-------------------|-------|
| Attractiveness    | Homework such as acrostic, poetry and slogan required creativity. |
|                    | Some homework was difficult.  |
|                    | Homework took a lot of time.  |
|                    | Homework was a burden.        |

**Table 11: Opinions on the Design of the Course**

| Categories                  | Codes                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------------|
| Limited Time                | We could not finish reading the handed papers.                                           |
|                             | The time given to read was insufficient.                                                   |
|                             | We had no motivation.                                                                     |
| Designated Time             | Reading a slide in a period of time put me in stress.                                     |
|                             | Information should have been given before the course.                                     |
|                             | Course notes should have been given in advance.                                           |

**Table 12: Opinions on Reading Assignment**

| Categories                  | Codes                                                                                     |
|-----------------------------|-------------------------------------------------------------------------------------------|
| Limited Time                | We could not finish reading the handed papers.                                           |
|                             | The time given to read was insufficient.                                                   |
|                             | We had no motivation.                                                                     |
| Inability to Understand the Subject | I read without understanding.                                                            |
|                             | I have read just enough to do the activities.                                              |
|                             | I could not understand the subject by reading.                                             |
|                             | Without understanding the subject, we moved on to the activity.                           |
|                             | We couldn’t get the necessary information just by reading the presentations.               |

S2: “I had fun in some activities, I got bored in others, I did not understand why. This system did not contribute to the teaching of the course to me. I am a kind of person who understands better when teacher explains.”

S4: “Overall, it was a fun course. But my expectation was a little more homework-based curriculum. Nevertheless, I think I have reached a certain level of knowledge during this semester.”
Opinions About Activities

The opinions of the students in the second group regarding the activities were given in Table 13.

| Categories          | Codes                                                                 |
|---------------------|----------------------------------------------------------------------|
| Learning            | The activities were useful, provided learning.                      |
|                     | I learned the subject in class with activities.                     |
|                     | We learned how to use of methods and techniques.                    |
| Participation       | Even the student who never participated was actively involved.      |
|                     | During the finals week, I realized that the activities were permanent.|
| Group Interaction   | Group interaction was nice.                                          |
|                     | I spoke / communicated with people I never spoke to.                 |
|                     | I united with my classmates.                                         |
| Attractiveness      | The activities were fun.                                             |
|                     | The activities were varied and beautiful.                            |
| Learning            | Activities were like games, not like learning activities.           |
|                     | The activities were not instructive / useful.                        |
|                     | There were no warnings or corrections in the activities.            |
|                     | The activities were not instructive since the subject was not        |
|                     | understood.                                                         |
|                     | The methods could not be used for learning purposes.                |
| Limited Time        | The time was short.                                                  |
|                     | The time could not be used properly / time was wasted.              |
| Attractiveness      | Some activities were boring.                                         |
|                     | We did not do the tasks willingly.                                   |
| Group Interaction   | There was no respect for someone else’s ideas.                      |
|                     | There were some problems in group works.                            |
|                     | Working as a group was not good.                                    |
|                     | Everyone in the group did not fulfill their responsibilities.       |
|                     | Some people in the group assumed the duties.                        |
| Other               | There was a lot of noise during the events.                         |
|                     | I felt uncomfortable reading the activities from the blackboard.    |
|                     | Photocopying the activities was a problem.                          |

Table 13: Opinions About Activities

It is observed that students have positive and negative opinions about the activities. There are two different opinions that activities affect learning positively and they do not contribute to learning. It is seen that the students think that the activities are not instructive before the subject is understood adequately. One of the reasons for the students’ opinions about the activities is that they were done in a limited time. Both giving reading assignment at the beginning of the course and having timing problem in the activities indicate that course time is not adequate for both course subject to be understood and activities to be completed.

Although there are positive opinions that it provides interaction for group work and provides an opportunity to socialize with classmates, it is striking that there are also some negative opinions. Some direct quotes from students’ opinions under these categories were given below:

**S7:** “Yes, doing homework or activities as a group can be nice, but it is nice as long as everyone is aware of their responsibilities and respects the others ideas. I can say that I sometimes had minor problems in this regard.”

**S10:** “The activities were very fun... However, having limited course time caused some activities to be done in a hury. So, it made me think we couldn’t fully understand the subject.”

Opinions of the Students in the Third Group

It is observed that opinions of students in the third group, where the flipped learning model was applied and the activities were done in groups are gathered under three categories which are “Opinions about the design of the course”, “Opinions about pre-course studies” and “opinions about activities”.

Opinions of the Students in the Third Group

The opinions of the students in the third group regarding the design of the course were given in Table 14:

| Categories          | Codes                                                                 |
|---------------------|----------------------------------------------------------------------|
| Learning            | These subjects could not be taught any better than this.            |
|                     | The course was very efficient.                                      |
|                     | We learned different methods and techniques.                        |
|                     | I discovered myself.                                                 |
|                     | We will collect the outcomes.                                        |
|                     | It was more effective than normal course.                           |
|                     | A verbal course could be taught with application.                    |
|                     | When I studied for the exam, I saw that I already knew / learned well.|
|                     | My brain slowed during the course, and it used all its functions.    |
|                     | We learned without stress.                                           |
| Course Participation| We provided active learning.                                         |
|                     | The course was interactive.                                          |
|                     | The course was in the hands of the student.                         |
|                     | Everyone participated in the course effectively.                    |
|                     | Whether we wanted it or not, we attended the course.                |
|                     | I was able to express myself.                                        |
|                     | Information was permanent.                                           |
|                     | It remained in my mind when applied.                                 |
|                     | I saw that I remembered all of them while I was working on the final.|
|                     | I still remember them all.                                          |
| Responsibility      | For the first time, I took notes in a course, and I kept a file.     |
|                     | For the first time, I felt responsible.                              |
|                     | I was like going to a meet my friends and have fun.                 |
|                     | I saw what could I do in a few hours.                               |
|                     | This course raised my expectation for the other courses.            |
|                     | It was the most enjoyable, fun and beautiful course this semester.  |
|                     | I have never seen such a course execution before.                   |
|                     | The lesson satisfied me, I enjoyed it, I liked it.                  |
|                     | I am happy that I attended the course.                               |
|                     | There was no deficiency in the course.                              |
|                     | Other courses began to be boring.                                   |
|                     | I saw that education can be loved.                                  |
|                     | It was the most diverse, different and creative course I have ever seen. |
|                     | I feel myself lucky.                                                |
|                     | I saw that you can have fun while learning.                         |
|                     | We did not realized how time passed.                                 |
| Diversity           | Each course we used different methods and techniques.               |
|                     | Using technology was an advantage.                                  |
|                     | I was responsible to learn better individually.                     |
|                     | I have doubts about its benefit.                                    |
|                     | I think we will get low score from the final exam.                 |
|                     | It could be learned better with the classical style.               |
|                     | I couldn’t learn very well.                                        |
|                     | The technique did not work on us.                                   |
| Negative Opinions   | It was not permanent.                                               |
| Fatigue             | It was the most troubling course.                                   |
|                     | It was difficult both materially and spiritually.                   |
|                     | Learning was up to us.                                              |
|                     | Sometimes, I’m tired in the process.                                |
| Other               | There had to be a midterm and final exam.                          |
|                     | It was a course not suitable for absenteeism.                       |
|                     | Keeping fies is a waste of paper.                                   |
|                     | If there were weekly quizzes.                                       |
|                     | Assigning homework in midterm week was not good.                   |

Table 14: Opinions of the Design of the Course

As can be seen in Table 14, students’ opinions on activities consist of two categories which are “positive opinions” and “negative opinions”. It is seen that students have positive and negative opinions about the design of the course. It is observed that about the learning, the students find the course efficient, they learn the subjects well, and they learn without stress. In addition, it is also seen that some students prefer individual learning, classical learning, plain lecturing and taking notes. It is seen that the students find the course to be very positive in...
Students have both positive and negative opinions about the pre-course tasks. The students think that the videos given to take home were useful for learning. They also think that the videos allowed them to watch them anytime, wherever they want, and watch them over and over again. It is observed that some of the students prefer presentations instead of videos to be given. They have some difficulties while watching the videos in the dormitory. It is seen that in general, students find homework efficient and useful in terms of preparation and learning, but it is also seen that some students get tired, struggled and bored while doing homework. Some direct quotes from students’ opinions under these categories were given below:

S1: “Good thing, I learned this way. I discovered many areas where I was successful. Most importantly, we learned what group work is. Do you know that we worked together with many of our friends that we did not communicate, and learned all together?”

S3: “I am one of the most delighted with these activities. Because, I think the course should be in the student’s hands and the course should be conducted by the student. And this course made me very satisfied in this sense.”

**Opinions about the Pre-Course Tasks**

The opinions of the students in the third group regarding the pre-course tasks were given in Table 15:

| Categories | Codes |
|------------|-------|
| **Videos** | I watched the places I don’t understand again. Watching videos before coming to the class provided learning. The videos increased the efficiency. The videos enabled regular studying. Learning at home with videos was good in every respect. The learning environment at home was comfortable with videos. I watched the video as much as I wanted whenever I wanted. |
| **Homework** | Homework was too much. Homework has contributed a lot to me. Homework made us come to course ready. Homework was useful. Homework was efficient. It was useful to give feedback on homework. Very good feedback was given to our homework. Reading the articles was enjoyable. It was difficult to watch the videos in unfavorable dormitory conditions. Although it was good at first, it later became unbearable. |
| **Negative Opinions** | Regular homework made me confused, and I was not accustomed to. Homework sometimes seemed like cruelty. Homework was too much and boring. Homework was done at the last moment / last day. |
| **Homework** | Homework was tiring. I was yelling while doing homework. I felt lazy to do homework. I sometimes had trouble creating examples. I didn’t like to summarise subjects. We said "homework again!". |

Table 15: Opinions about the Pre-Course tasks

As can be seen in Table 15, students’ opinions on activities consist of two categories which are “positive opinions” and “negative opinions”. Students have both positive and negative opinions about pre-course tasks. The students think that the videos given to take home were useful for learning. They also think that the videos allowed them to watch them anytime, wherever they want, and watch them over and over again. It is observed that some of the students prefer presentations instead of videos to be given. They have some difficulties while watching the videos in the dormitory. It is seen that in general, students find homework efficient and useful in terms of preparation and learning, but it is also seen that some students get tired, struggled and bored while doing homework.

**Opinions About Activities**

The opinions of the students in the third group regarding the activities were given in Table 16:

| Categories      | Codes                                                                 |
|-----------------|----------------------------------------------------------------------|
| **Activities**  | It was a great contribution to learning. The activities were instructive. The activities were efficient. |
| **Learning**    | I learned easily through activities. The subject was strengthened well with the activities. I understood the subject better with the activities. What was learned at home was reinforced. |
| **Participation**| Even when I came to the course feeling tired, I loved the activities. I am very happy to attend different activities. |
| **Positive Opinions** | It was fun to listen to friends’ activities. The course became entertaining with activity. It increased my interest in the course. We exchanged ideas with friends. We strengthened friendship. We learned unity and solidarity with group work. We learned from each other with group work. |
| **Attractiveness** | The high number of activities prevented satisfaction. The activities were done very fast, it was a rush of breeding. We completed each other’s weak sides as a group. It was easy to do activities as a group. I have established relationships with people I have never contacted. People with no relationship worked together. The communication of the class was very good. |
| **Limited Time** | The time given at the activities was very short. The activities were done very fast, it was a rush of breeding. |
| **Workload**    | The high number of activities prevented satisfaction. We were very tired with the activities. |
| **Negative Opinions** | The activities were not instructive. The activities were not very enjoyable. We were very tired with the activities. |
| **Group Interaction** | The activities were not very enjoyable. We were very tired with the activities. |

Table 16: Opinions About Activities

As can be seen in Table 16, students’ opinions on the activities belonged to one of two categories, which are “positive opinions” and “negative opinions”. The students have both positive and negative views about the activities, but the positive views are distinctly high. Students generally think that the activities affected learning positively and strengthened what they learned at home. However, some students think that they could not learn through activities. It is observed that the students participated in the course through the activities and found the activities very attractive. Students think that the course became fun with the activities, that their interest in the course increased, and that they did not understand how the class ended while they were busy enjoying the activities. It is seen that the most intense subcategory of activities is group interaction subcategory. The students think that the activities contributed to their exchanges of ideas, to mingling, to learning from each other, to unity and togetherness, and to socialization.
Lee (2018) also reached the conclusion that this model has been implemented. Although memories and stories were told and different examples were given, it was concluded that some of the students were satisfied with the instruction method used. In addition, some of them thought that the activities they found were too long, tiring, and boring in terms of student participation and wanting to learn with activities. This shows that the shared interests and memories are not enough for students to find the lesson very interesting and they might find the lesson less interesting. A new study has shown that the use of various activities in the educational environment increases student motivation (Okmen, 2020; Sirakaya, 2017; Su and Cheng, 2016; Vol. V). For the same reason, it can be suggested that students are not able to complete their projects because the speed of the students to fulfill the tasks is not equal. For the same reason, some students may finish their projects early, and because they then have to wait in the classroom, they become bored (Danisman et al., 2017; Thoms, 2012).

Based on the results obtained in this particular study, various suggestions can be presented. Some of them are as follows: the same research design could be repeated in different schools (private or government), with different participants and by different researchers. In-class practices should be prepared to improve the students' success levels and to attract students' attention. Group activities should be included in the teaching process. Lectures should be enriched with different examples and stories. Teachers should enrich their general teaching styles with regard to their own subject areas. Homework should be assigned in a way that gives students the opportunity to repeat and reinforce their learning. Home tasks should be prepared to be completed within half an hour. Class tasks should be prepared while ensuring that they can be completed within the allotted period.

CONCLUSION

This research has shown us that different methods used according to the student-centered approach have positive effects on students’ achievements. However, in the group for which the flipped learning model was applied, the majority of the students learned at a high level and their success levels were close to each other. These results show that a high quality of education was provided in this group. Although the students found examples, the stories, and the memories shared in the lectures to be interesting and good, these were not sufficient in terms of student participation, and the students preferred to learn via activities. In addition, these results of our research encourage the use of the flipped learning model and the lecture method and this may be a result of the education system that they have grown up in.

It was seen that not enough time could be given to both lectures and activities. Some students were not motivated without understanding the subject sufficiently were not found to be instructive by the students. This reveals the importance of the learning model, which allows the “comprehension” step of the lesson to be carried out at home before the lesson and accordingly allows more time for activities in the lesson.

A flipped learning model positively affected the students’ attitudes towards the course. The students liked the teaching of the lessons very much, had fun in the lessons, and were more motivated about the lessons. The group studies contributed to their exchanges of ideas with their friends and the students found the lesson more interesting, other, gain responsibility, build unity and togetherness, and socialize; the only negative situation related to the activities was the shortage of time. Studies show that methods that require students to work with each other increased students’ success and concept learning and also had a positive effect on students’ attitudes towards the lessons. Numerous studies in the literature have determined that some of the students were satisfied with the flipped learning model and the lecture model. This result also shows that the flipped learning model positively affects students’ attitudes, and motivations (Arısoy, 2011; Okmen, 2020).

First of all, it was observed that there was no significant difference between the highest success scores of the groups, that the students’ levels of learning success were close to each other, and that the students in the whole group learned well. This shows that the findings of different applications arranged according to student-centered approaches had positive effects on success, although their levels were different. Other studies have shown that student-centered education increases students’ academic achievement, increases their motivation to learn, increases the level of knowledge, and provides in-depth understanding (Kılıç and Sahin, 2016; Maden, Kundu, Akgül, and Lühe-Johnson and Vasiljevic, 2008; Smart and Csapo, 2007).

It was also concluded that the standard deviation was smaller in the group in which the flipped learning model was applied compared to the other two groups. Senemoglu (2011) stated that the fact that almost all of the students participated in the teaching showed that the quality of the teaching style was at a very good level, and the degree of students’ participation in the teaching-learning process is the best indicator of the quality of teaching service. Furthermore, when students are able to participate in the teaching-learning process at the highest level, the majority of students learn at the highest level and their learning becomes effective and permanent. This result also shows that the flipped learning model is effective on students’ success. In terms of academic success, the flipped learning model and traditional classes have been the subject of many studies, and the success levels of the students in the flipped learning model in the home environment before the lesson, whenever the students wanted. This can be seen in the fact that the success of the students in the flipped learning model is higher compared to the other two groups. Senemoğlu (2011) stated that the success of the students in the flipped learning model is quite high because the students had the opportunity to actively participate (Di Bitonto et al., 2014; Okmen, 2020; Rowkaya, 2017).

First, it was concluded that the students liked the lessons and the teaching of the lessons very much, found the lessons efficient, had fun in the lessons, and were surprised at how quickly time passed. Group work allowed the students to learn and understand topics in the classroom and contributed positively to learning. Considering that the classroom activities in the other two groups that held the students’ attention were given as homework in Group 1, and that these students did not find this homework purposeful, especially the aero, poetry, and puzzle-style tasks, the importance of doing these activities in groups becomes clear. In addition, some of these homeworks also had a positive effect on students’ success and concept learning and also had a positive effect on students’ attitudes towards the lessons. Similarly, Sargöz (2011) stated that when students did their homework on time, they reinforced the subjects that they studied at school, understood the subjects better, and were more motivated about the lessons.

The results of the opinions of the students in the second group, where the activities were done in groups by reading the premises without any lectures, were as follows: First, it was concluded that they thought the lessons were not very important. However, they were interested in learning anxiety because there was no lecturing. This showed that the students had the idea that they learned better with the traditional method and this also supports the results of the previous studies. It was concluded that giving documents to the students and asking them to learn the subject by reading them in the classroom had negative effects and caused them anxiety about learning. In the flipped learning model in the home environment before the lesson, whenever the students wanted. This could be seen as the students had the opportunity to actively participate (Di Bitonto et al., 2014; Okmen, 2020; Rowkaya, 2017).

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