

# Effects of the Flipped Classroom Model on Students' Self-Directed Learning Readiness and Attitudes Towards the English Course

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## Abstract

This study aims to investigate the effects of the flipped classroom model on ninth grade students' self-directed learning readiness and attitudes towards the English course and identify how the flipped classroom method affects students' self-directed learning readiness and attitudes towards the English course as well as the potential reasons for these. The study adopted an explanatory sequential design, one of the mixed method research designs. In line with the mixed method approach, quantitative phase of this study utilized pretest-posttest control group quasi experimental design, and the qualitative phase included focus group interviews to collect data. Quantitative data were collected using the "Self-directed Learning Readiness Scale" and "Attitudes towards the English Course Scale". The study was conducted with 46 ninth grade students who were enrolled in Vocational and Technical Anatolian high school in a city located in the southern part of Turkey in the 2015-2016 education year. Results showed a significant difference between the experimental and control group in terms of self-directed learning readiness and attitudes towards the English course in favor of the experimental group students.

According to qualitative findings, the flipped classroom method had positive contributions to students' self-directed learning readiness and attitudes towards the English course. Quantitative and qualitative findings were found to be parallel with each other.

**Keywords:** Flipped Classroom Model, self-directed learning readiness, attitudes towards the English course

## 1. Introduction

In today's world of rapid and continuous changes and developments in the field of technology, children adapt to these changes better than adults do. Kula and Erdem (2004) claim that the generation that is born and raised in the technology age has different cognitive constructs, interest areas and habits than the previous generation. Prensky (2001) used the concepts of "digital natives" and "digital immigrants" to describe the generation differences between today's children and their teachers in terms of technology. Now, the most important problem experienced in education is the efforts of digital immigrant teachers who try to teach something through old-fashioned methods and materials to digital natives, who speak a completely different language. Digital natives are used to accessing information rapidly; they can do more than one thing at a time; they prefer visual materials to written texts; they perform better when they are in groups; they want to receive instant feedback; and they prefer games to serious study (Prensky, 2001).

With the effects of the developments in technology, a more favorable structure in educational processes is the one in which students can get access to content, interfere with it, and follow according to their own pace (Bishop & Verleger, 2013). Some of the main reasons for this transformation may include the facts that new ideas and higher-order skills cannot be improved by listening, watching or reading, namely by passive participation and that relevant solutions to problems cannot be developed by going through complicated cognitive processes by simply watching the teacher's presentation. In this case, students' struggles against the problems on their own will not create the desired effect, either. Educationalists generally recommend that while facing with problems, students should be with their peers and with their guiding teacher in a classroom environment (Reich, 2012).

Learning environments change completely in the construction of views and learning processes in education. In light of these recommendations, "flipped classroom" understanding has emerged. The flipped classroom model

is defined as a model that enables students to learn theoretical information at home on their own and apply what they learn at school (Zownorega, 2013). According to Verleger and Bishop (2013), this education system is a learning and teaching model which enables students to conduct mainly individual or group problem solving activities and to focus on the problems experienced by most of them and which gives the teacher the opportunity to deal with the learner individually (Seamen & Gaines, 2013). On the other hand, this model also supports individual learning by enabling students to access the information they want in the place and time they want through the video records they have (Talbert, 2012). With reference to these definitions, the flipped classroom model, is defined as the model in which students learn theoretical information with the help of various teaching materials out of school and participate in the activities based on higher-order cognitive strategies for problem-solving, group work, and individual guidance provided by the teacher at school.

According to Talbert (2012), in the traditional teaching method, students do the tasks that challenge them on their own, when their teacher is not with them. Gençer, Gürbulak and Adıgüzel (2014), therefore, see the flipped classroom method necessary for students' improvement because, the flipped classroom method enables students to acquire fundamental information from out-of-class activities, readings and other materials and work on challenging and higher-order cognitive activities in the classroom.

Effective use of the flipped classroom model requires the development of students' several skills. One of these skills is self-directed learning. Self-directed learning is defined as a personal feature that focuses on learner's autonomy in the learning process and as a process that focuses on the learner's ability in regulating the learning process (Song & Hill, 2007). Knowles (1975) defines self-directed learning as the process of being able to attempt for learning, defining one's own learning needs with or without getting help from others, setting learning goals, identifying sources for learning, choosing and applying the right learning strategy about the information to be learned, and assessing the learning outcomes. Pintrich (2000) defines self-directed learning as an active and constructive process in that after they form their goals, learners try to observe, direct and monitor cognition, motivations, and behaviours; they are guided and limited by the goals they set and the learning environments they are in. Despite the fact that self-directed learning is defined in literature as a process, the performances to be demonstrated by students seem to be skills-based. Related literature indicates that self-directed learning is a skill that can be learned, and this skill could be instructed to learners by teachers through various strategies (Azevedo & Cromley, 2004; Dabbagh & Kitsantas, 2012; Pintrich, 2004). On the other hand, Fisher, King and Tague (2001) define self-directed learning readiness as the level of having the tendencies, abilities, and personal features required for a person's acquiring self-directed learning skills. Guglielmino (1977) defines the situations and variables that affect readiness and that are associated with readiness as having wide learning opportunities, attempting for learning, consciously accepting the responsibility for learning, loving to learn, being productive, and looking to the future. On the other hand, there are various cognitive, affective and independent variables necessary and required for both self-directed learning process and self-directed learning readiness (Clardy, 2000; Merriam & Caffarella, 1999). Based on the above-mentioned views, beside the constructs to be owned by an individual for self-directed learning readiness, some skills owned by the cognitive, affective and kinesthetic skills are important. In addition, these features are known to be the features required for applying the flipped classroom model effectively. Given that the flipped classroom method could have effects on self-directed learning, this study aims to investigate this effect.

On the other hand, another important concept about learning and behaviours is attitude. An analysis of the definitions about attitudes shows that attitude is a psychological and neurological readiness that has directive or dynamic effects on the individual's related behaviours to all objects and cases and that is formed with experiences (Allport, 1935), tendency to give positive and negative reactions to an object, a person, a tradition or event, and a complicated tendency that prepares the individual to a behavior (Kağıtçıbaşı, 2016). Besides, attitude is accepted as tendencies that lead to some behaviours. İnal, Evin, Saracaloğlu (2005), by defining attitudes as emotions, emphasizes that student attitude is a complementary component of the teacher, shapes behaviours about learning, and thus needs to be a part of second language learning. According to Kaballa and Crowley (1985), attitudes towards learning are believed to affect behaviours.

Applications based on technology are favored in education. Use of these practices started later than other fields for the foreign language learning. In fact, the flipped classroom model is structurally quite appropriate to language learning. Communicative approach, which proposes that language is not only formed with structures and grammar and its functions need to be integrated, also emphasizes the importance of tasks and meaningfulness principles.

Task principle requires the tasks to be meaningful, to create feelings of value in students and to use the target language in fulfilling the tasks (Richards & Rodgers, 1986). On the other hand, the model that is practiced

according to processes based on technology and learners gives importance to the effects of the model on learners' self-directed learning readiness and attitudes towards the lesson.

An analysis of the studies conducted in other countries shows that Pierce and Fox (2012) reported that 80% of the students were satisfied with the model and their final scores increased; Strayer (2012) reported that the model was popular because it enabled group work, but it was not found very appropriate for introduction courses; Frydenberg (2012) found that students favored flipped classroom model more than the other classroom model in electronic table applications; Missildine, Fountain, Summers and Gosselin (2013) found in the assessment they performed that the number of successful students were 47 students more in comparison to the previous exam; Mason, Schuman and Cook (2013) detected an increase in students' academic success; Albert and Beatty (2014) found that experimental group students received higher scores in the three exams applied; Yeung and O'Malley (2014) reported that students found the flipped classroom model better because it was more flexible; Butt (2014) reported that only 25% of the students indicated no differences in their success; Hung (2014) reported an increase in students' achievement mean scores; McLaughlin, Gharkholonarehe and Davidson (2014) reported that students were inclined more to active participation than a teacher-centered structure, and extracurricular activities provided them with more benefits; and Jungioon, Hyoseon and Snagho (2017) concluded that students' readiness for learning affected their learning outcomes significantly. Studies conducted in other countries mainly focused on university level and generally on the effects of the method on academic success.

As for our country, studies on the flipped classroom model were about the design of learning applications (Basal, 2012; Sever, 2014, Üstünel and Abi, 2013) and the schools and projects that utilized flipped classroom model (Muharremoğlu, 2012; İKUZEM, 2014; MEF, 2014; Göksu, 2014; Kapçık, 2014). Students' views and course achievements were evaluated in the courses prepared according to the flipped classroom model (Balıkcı, 2015); the flipped classroom method was evaluated in the English course (Boyraz, 2014); the effect of the flipped classroom model on academic success, self-directed learning, readiness and motivation was investigated (Alsancak, 2015); the effects of the method on learners who learn English as a foreign language was examined (Çalışkan, 2016); the effects of the model on students' academic success and attitudes towards the English course was investigated (Sağlam, 2016); its effects on attitudes and self-efficacy beliefs were analyzed (İyitoğlu & Erişen, 2017); and some studies on the flipped classroom in foreign language instruction was conducted (Özkurkudis & Bümen, 2017). Studies on the flipped classroom model seem to have increased in recent years, but they are still limited in number.

Limited number of studies on the issue in our country is the rationale of the present study. Results to be obtained from this study, which investigates reflections of the model on secondary level students through all these components, are believed to guide instructors about the use of strategies and tools to improve learners' self-directed learning processes and attitudes about language learning in course designs. In addition, the study is of importance due to its potential to create a source for program development studies, teacher education and in-service programs, and studies and practices in English instruction through the flipped classroom model in our country.

The purpose of this study is to investigate the effects of the flipped classroom method on ninth grade students' self-directed learning readiness and attitudes towards the English course and identify how the flipped classroom method affects students' self-directed learning readiness and attitudes towards the English course as well as the potential reasons for these. In line with this purpose, the study sought answers to the following questions;

- 1). What are the experimental and control groups' self-directed learning readiness before and after the procedure?
- 2). What are the experimental and control groups' attitudes towards the English course before and after the procedure?
- 3). What are the experimental group students' views about the effects of the flipped classroom model on self-directed learning readiness?
- 4). What are the experimental group students' views about the effects of the flipped classroom model on their attitudes towards the English course?
- 5). Do qualitative and quantitative findings support each other?

## **2. Method**

### *2.1 Study Design*

The present study adopted a complementary approach, which is based on the elaboration, enhancement,

illustration and clarification of the results from one method with the results from another method (Greene, Caracelli, & Garaham, 1989). The study made use of “explanatory sequential design”, which is one of the mixed method research designs.

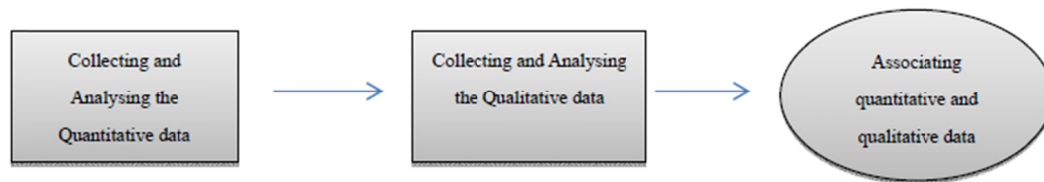


Figure 1. Explanatory sequential design model (Creswell & Plano, 2015, p. 77)

## 2.2 Experimental Procedures

Required permissions were obtained for the practice that formed base for the study and for the collection of data. Experimental and control groups were identified using selection with equal probability. Number of students, academic achievement, and attendance were taken into consideration for the identification of the experimental and control groups. Before the procedure, the experimental and control groups were administered the Self-directed learning Readiness Scale and Attitudes towards the English Course Scale. The eight-week units were instructed in the experimental group according to the flipped classroom model as planned. The materials used in the flipped classroom model included videos recorded by the teachers and videos from the internet, and voice records related to the content of the course.

## 2.3 Study Group

The study was conducted with 46 (23 experimental, 23 control) ninth grade students who were enrolled in the Vocational and Technical Anatolian high school in one of the cities in the southern part of our country in the 2015-2016 education year. Sampling was performed using purposeful sampling method based on convenience sampling.

## 2.4 Data Collection Tools

The study utilized Self-Directed Learning Readiness Scale developed by Fisher, King and Tague (2001) and adapted to Turkish by Şahin and Erden (2009) with a view to identifying the students' self-directed learning readiness. The scale has 52 items responded on a 5-point Likert scale, and it has three subscales called self-management, the desire for learning and self-control. Second-level DFA results for the self-directed readiness showed the following results:  $\chi^2=2637.47$ ;  $sd=737$ ;  $\chi^2/sd = 3.57$ ;  $p=0.00$ ;  $AGFI=.85$ ,  $GFI=.81$ ,  $NNFI=.93$ ,  $CFI=.93$ ,  $S-RMR=.071$  and  $RMSEA=.070$ . The measurement model was found to be acceptable according to the compatibility values. This goodness-of fit index shows that the model-data compatibility could be achieved for the model tested.

Students' attitudes towards the English course were identified through the “Attitudes towards the English Course Scale”, which is an adaptation of the “Attitudes about Geography Course” developed by Güven and Uzman (2006) with the notion that the scale was developed for secondary school students. As the 20<sup>th</sup> item of the scale which had 21 items had lower total correlation, it was eliminated and the scale had 20 items. The scale is responded on a 5-point Likert scale. In this research, Cronbach's alpha coefficient was .93, and it had three factors. Factor loads belonging to 20 items ranged between .34 and .71. The scale explains 50.33% of the total variance. As for the factor loads, the first factor explains 25.70% of the total variance, second factor explains 13.90%, and the third factor explains 10.73%.

Data in the qualitative phase of the study were collected through focus group interviews. The questions were based on the literature on self-directed learning readiness and attitudes towards the English course and experimental procedures; the questions aimed to explore how the flipped classroom model affected the above-mentioned skills and structures as well as the potential reasons of these effects.

## 3. Results

### 3.1 Quantitative Results

“Self-directed Learning Readiness Scale” (SDLRD) and “Attitudes towards the English Course Scale” (ATEC) were administered in order to identify high school students' self-directed learning readiness and attitudes towards

the English course. Descriptive analyses of the data obtained from these studies are presented below.

### 3.1.1 Results About the Self-Directed Learning Readiness Scale Before and After the Experimental Procedure

#### 3.1.1.1 Results About the Self-Directed Learning Readiness Scale Before the Experimental Procedure

“Are there any differences between experimental and control groups’ self-directed learning readiness before the experimental t procedure?” question was answered through independent groups t-test for the experimental and control groups according to the pretest scores obtained from the Self-directed Learning Readiness Scale, and the scores are presented in Table 1.

Table 1. Independent groups T-test results in relation to the pretest scores of students’ self-directed learning readiness scale

Groups	N	X	SS	Sd	T	p
Control <i>Pretest</i>	23	3,076	,406			
Experimental <i>Posttest</i>	23	2,990	,368	22	-,690	,497

Table 1 shows that there were no statistically significant differences between the experimental ( $\bar{X}=3,076$ ;  $S=,406$ ) and control ( $\bar{X}=3,076$ ;  $SS=,406$ ) groups in terms of the self-directed learning readiness score distributions ( $t=-,690$ ;  $p>0,05$ ). The result that indicates no significant differences about students’ self-directed learning readiness before the experimental procedure is in line with the purpose of the study.

#### 3.1.1.2 Results About the Self-Directed Learning Readiness Scale After the Experimental Procedure

“What are the experimental and control groups’ self-directed learning readiness before and after the procedure question” involved the analysis of independent groups t-test posttest results which are presented in Table 2.

Table 2. Independent groups T-test posttest results belonging to the experimental and control group students’ self-directed learning readiness

Groups	N	X	S	Sd	T	p
Control <i>Posttest</i>	23	2,895	,275			
Experimental <i>Posttest</i>	23	3,475	,319	22	6,766	,000

Table 2 shows that between the control group students’ posttest scores ( $\bar{X}=2,895$ ;  $SS=,275$ ) and experimental group students’ posttest scores ( $\bar{X}=3,475$ ;  $SS=,319$ ), there was a statistically significant difference in favor of the experimental group posttest self-directed learning readiness scores ( $t= 6,766$ ;  $p<0,05$ ). This result indicated that the experimental process based on the flipped classroom model increased experimental group students’ self-directed learning skills. The effect size of the procedure was calculated as 1,948. This effect size is at large level effective according to the Cohen (1988) classification.

### 3.1.2 Results Obtained from the Attitudes Towards the English Course Scale Before and After the Experimental Procedure

#### 3.1.2.1 Results Obtained from the Attitudes Towards the English Course Scale Before the Experimental Procedure

Table 3 presents the independent groups t-test pretest results about the experimental and control groups’ attitudes towards the English course; the analysis aimed to find answers to the “What are the experimental and control groups’ attitudes towards the English course before and after the experimental procedure?” question.

Table 3. Independent groups pre-test scores about experimental and control group students' attitudes towards the English course scale

Groups	N	X	S	Sd	T	p
Control	23	3,058	,417			
<i>Pretest</i>				22	-2,969	,467
Experimental	23	3,065	,318			
<i>Pretest</i>						

Table 3 shows that there are no significant differences between the score distributions of the control group ( $\bar{X}=3,058$ ;  $,417$ ) and experimental group ( $\bar{X}=3,065$ ;  $SS=,318$ ) in terms of their attitudes towards the English course ( $t=-2,058$ ;  $p>0,05$ ). No significant differences were found in students' attitudes towards the English course before the procedure, which is in line with the purpose of the study.

### 3.1.2.2 Results Obtained from the Attitudes Towards the English Course After the Experimental Procedure

Table 4 presents the independent groups t-test posttest results about experimental and control groups' attitudes towards the English course; the analysis aimed to find answers to the "Do the experimental and control group students' attitudes towards the English course differ after the experimental t procedure?" question.

Table 4. Independent T-test results in relation to experimental and control group students' attitudes towards the English course scale posttest scores

Groups	N	X	S	sd	T	p
Control	23	3,088	,102			
<i>Posttest</i>				22	-6,590	,000
Experimental	23	3,143	,117			
<i>Posttest</i>						

Table 4 demonstrates that there is a statistically significant difference between the posttest scores of attitudes towards the English course in the control ( $\bar{X}=3,088$ ;  $SS=,102$ ) and experimental groups ( $\bar{X}=3,143$ ;  $SS=,117$ ) in favour of the experimental group ( $t=-6,590$ ;  $p<0,05$ ). This finding indicates that the experimental procedure based on the flipped classroom model increased experimental group students' attitudes scores towards the English course. The effect size of the procedure was calculated as 0,501. This effect size is at medium level effective according to the Cohen (1988) classification.

## 3.2 Qualitative Results

This section presents findings in relation to the analysis of the qualitative questions.

### 3.2.1 Experimental Group Students' Views About the Effects of the Flipped Classroom Model on Their Self-Directed Learning Readiness

Content analysis of students' responses in the focus group interviews are presented in Table 5 in order to find answers to the "What are the experimental group students' views about the effects of the flipped classroom model on self-directed learning readiness?" question.

Table 5. Experimental Group students' views about the effects of the flipped classroom model on their self-directed learning readiness

Sub-themes	Codes	f
Time Management	Effectiveness	10
	Limitlessness of time	10
	Repetition	9
	Freedom	9
	Unpreparedness	3
	<b>Total</b>	<b>41</b>
Role of the Teacher	Easily reached	18
	Teacher's assistant role	11
	<b>Total</b>	<b>29</b>
Student Centeredness	Freedom	10
	Activeness	9
	Ability to choose the activities	5
	Individual differences	5
	<b>Total</b>	<b>29</b>
Access to the Materials	Easy access	11
	Creativity	10
	Instant Feedback	6
	<b>Total</b>	<b>27</b>
Need for Learning	Curiosity	10
	Sense of Achievement	8
	Desire for research	7
	<b>Total</b>	<b>25</b>
Sense of responsibility	Control of the course	9
	Preparedness	8
	Unpreparedness	3
	<b>Total</b>	<b>20</b>
Interest in the new methods	Working groups	6
	Freedom	5
	Collaboration	5
	<b>Total</b>	<b>16</b>
Exploration of Abilities	Individual Differences	8
	Creativity	5
	<b>Total</b>	<b>13</b>

An analysis of Table 5 shows that experimental group students' views about the effects of the flipped classroom model on their self-directed learning readiness are collected under eight themes. The table shows that time management was the most frequently cited theme (f=41). This theme was followed by the role of the teacher (29) and student centeredness (29), access to the materials (27), need for learning (25), sense of responsibility (20), interest in the new methods (16), and exploration of abilities (13).

### 3.2.2 Students' Views About the Effects of the Flipped Classroom Model on Their Attitudes Towards the English Course

Table 6 presents the content analysis findings in relation to the answers to the “What are the experimental students' views about the effects of the flipped classroom method on their attitudes towards the English course?” question through the focus group interviews conducted with the experimental group students.

Table 6. Experimental group students' views about the effects of the flipped classroom model on their attitudes towards the English course

Sub-themes	Codes	f
Fun	Method	21
	Materials	13
	Process	8
	<b>Total</b>	<b>52</b>
Students' Interaction with Friends and the teacher	Reaching to the teacher	12
	Limitlessness of the Environment	10
	Cooperation	9
	Group Works	9
	Communication	7
	<b>Total</b>	<b>47</b>
Method	Flexibility	12
	Individuality	11
	Repetition	9
	<b>Total</b>	<b>29</b>
Motivation	Interesting	13
	Unpreparedness	7
	Technology	5
	<b>Total</b>	<b>25</b>
Comprehensibility of the Course	Achievement	9
	Repetition	8
	Instant Feedback	3
	<b>Total</b>	<b>20</b>

An analysis of Table 6 shows that experimental group students' views about the effects of the flipped classroom model on their attitudes towards the English course are collected under 5 themes. According to the table, the distribution of the themes from the highest to the lowest is being fun (52), which was followed by students' interaction with friends and the teacher (47), method (29), motivation (25), and comprehensibility of the course (20) themes.

### 3.3 Comparison of the Quantitative and Qualitative Results

Table 7 presents quantitative and qualitative findings about the students' self-directed learning readiness and attitudes towards the English course.



Table 7. Comparison of the quantitative and qualitative findings about the effect of the flipped classroom model on self-directed learning readiness and attitudes towards the English course

Effect of the Flipped Classroom Model	Quantitative Findings	Qualitative Findings	Compatibility of the Quantitative and Qualitative Findings
<b>Self-directed learning readiness</b>	P=.000 P<.05 Cohen's d=1.948	Time Management (41) Role of the Teacher (29) Student Centeredness (29) Access to the Materials (27) Need for learning (25) Sense of Responsibility (16) Interest in the new methods (16) Exploration of abilities (13) Fun (52)	Qualitative findings support quantitative findings.
	Significant effect		
<b>Attitudes towards the English course</b>	P=.000 P<.05 Cohen's d=0.501	Students' Interaction with friends and the teacher (47) Method (29) Motivation (25) Comprehensibility of the course (20)	Qualitative findings support quantitative findings.
	Significant effect		

As it is seen in Table 7, the flipped classroom model had significant effects on students' self-directed learning readiness ( $t=6.766$ ,  $P=.000$   $P<.05$ ). Findings indicated Cohen's  $d=1.948$ . This value has a wide effect size according to Cohen's classification (1988). Qualitative findings showed that students thought the flipped classroom model had positive contribution to their self-directed learning readiness in the aspects of time management (41), role of the teacher (29), student centeredness (29), access to the materials (27), need for learning (25), sense of responsibility (16), interest in the new methods (16), and exploration of abilities (13). Similarly, the flipped classroom model seems to have effects on students' attitudes towards the English course ( $t=6.59$ ,  $P=.000$   $P<.05$ ). Findings indicated Cohen's  $d=0.501$ . This value has a medium level effect size according to Cohen's classification. An analysis of qualitative findings showed that the students thought that the flipped classroom model had positive effects on the students' attitudes towards the English course in terms of being fun, student's interaction with friends and the teacher, method, motivation, and comprehensibility of the course.

Quantitative findings indicated that the flipped classroom model had significant effects on students' self-directed learning readiness and attitudes towards the English course in a way that would cause significant differences in the results of the experimental procedures. Qualitative data suggest that the students indicated the points shown in the table regarding the issues that contributed to their attitudes towards the English course. This finding suggested that quantitative and qualitative data support each other.

#### 4. Discussion

The present study, which aimed to identify the effects of the flipped classroom model on ninth grade students' self-directed learning readiness and attitudes towards the English course, found that the model was a factor that had positive effects on both cases. Results of the pretest, which aimed to identify students' self-directed learning readiness, showed that the mean scores of both groups were close to each other (Control  $\bar{X}=3,076$  – Experimental  $\bar{X}=2,990$ ). The posttest results indicated a decrease in students' self-directed learning readiness in the control group and an increase in the experimental group (Control  $\bar{X}=2,895$  – Experimental  $\bar{X}=3,475$ ).

As the data obtained showed, while there was a decrease in students' self-directed learning readiness levels in the group where the traditional model was applied, an increase was found in the experimental group where the flipped classroom model was applied. Experimental practices based on the flipped classroom model could be considered among the factors that cause significant differences in self-directed learning readiness. Based on

these results, it could be claimed that the flipped classroom model increased students' skills about self-directed learning. This result is in line with the findings of Rutkowski and Moscinska (2013) indicating that the flipped classroom environments could have positive effects on self-directed learning. On the other hand, it contradicts with the results in the study conducted by Alsancak Sarıkaya (2015) in higher education, which reported that the flipped classroom model had no significant effects on students' self-directed learning readiness. Pretests applied to both groups in order to identify their attitudes towards the English course showed that the mean scores of the groups were close to each other (Control  $\bar{X}=3,058$ , Experimental  $\bar{X}= 3,065$ ). Posttests administered after the experimental procedure showed an increase in the experimental group students' attitudes scores towards the English course (Control  $\bar{X}=3,088$ , Experimental  $\bar{X}=3,143$ ). Based on these results, experimental practices based on the flipped classroom model could be considered among factors that cause significant differences in students' attitudes towards the English course.

As to the significant differences of the flipped classroom model in students' self-directed learning readiness, an analysis of students' views about time management theme showed that the students mentioned many important points about the time factor. Students learned on their own learning pace and found the opportunity to study the content materials wherever and whenever they wanted. The students stated that watching the videos used in the flipped classroom model out of class took less time in comparison to the traditional homework. In terms of time management, the students seemed to be happy about knowing how much time their out of classroom tasks will take. Based on these views, the flipped classroom model seems to make students gain awareness and skills about time management in the personal learning process and learning and teaching processes. Yavuz (2016) investigated secondary school students' flipped classroom practices on academic success and student experiences and reported that students stated positive views about finding the opportunity to watch the videos wherever and whenever they wanted.

One of the aspects that contributed to students' self-directed learning readiness most was the role of the teacher in the flipped classroom method. Here, students' views seem to focus on the teacher's presence and assistance. One of the aspects different for students was that they could reach the teacher not only in the classroom but also whenever they wanted. In the flipped classroom model, the teacher provided his/her students with effective experiences in relation to self-directed learning. Alsancak and Sarıkaya (2015) also reported that students thought that the role of the teacher in the flipped classroom model was guidance. Heimstra (1996) claims that in the self-directed learning process, constant dialogues of the teachers with learners enabled them to provide students with guidance, critical thinking, and assessment about what is learned. By providing their students with interesting sources directly related to their lives, teachers improved their students' self-directed learning readiness. Besides, they improved their higher order thinking skills and collaborative learning skills in classroom processes. It could be claimed that the teacher provides with effective guidance both in and outside the school processes.

Another point emphasized by the students was that at the beginning they needed more help from the teacher when they experienced problems in the application, but gradually they needed less help from the teacher. The students completed the process in the last weeks by creating their own digital materials. Kriewaldt (2001) stated that although in the flipped classroom model the teacher has the assistant role for the student, in fact she needs to be a good planner and organizer. According to Kennedy (2000), the teacher is in the position to make learners to be aware of their own thoughts, to behave in a strategic way, and to direct their interests to the right purposes. Findings suggested that students gradually needed less help from their teachers, which indicated that they had the above-mentioned experiences. As stated by Brooks and Brooks (1993), an educational program based on constructivism needs to have a number of features such as providing students with options appropriate to their individual differences, giving directions, helping all students to realize themselves, and creating environments in which students solve the problems themselves.

The students reportedly were free in terms of the learning environments and time, similarly found opportunities to choose activities, participated in decisions, became free, expressed themselves more, and experienced leadership skills. Due to these facts, they stated that the process was student-centered. They also stated that although they were not very active, knowing what to do before, during and after the lessons made them feel more self-confident and manage the process more effectively. As the flipped classroom model is conducted based on student-centered processes, it is claimed to improve students' higher order thinking, communication, leadership, and autonomy skills based on experience. In a similar vein, students' knowing about what to do before, during and after the lesson seems to increase their self-confidence. Above-mentioned skills and confidence are of great importance for self-directed learning readiness and attitudes towards the course. Alsancak Sarıkaya (2015) also reported that students thought the flipped classroom model enabled them to review topics, have the change to get

prepared for the lesson, participate in the lesson actively, access to the course materials whenever they wanted, and experience complete and more permanent learning. Yavuz (2016) reported that students participated in the activities and practices actively and thus they had positive attitudes towards the model.

During the practices, a WhatsApp group was formed to share the materials. Freedom to choose the course book materials could be considered as another opportunity provided by the model. Students, who initially watched the videos sent to them, reportedly began to watch gradually more videos in the internet related to the topic. In addition to the videos sent by the teacher, students' finding the opportunity to watch and share the videos was very appealing and beneficial to them. In the following days, the students were asked to record and share their own videos. Students' recording their own videos and sharing them with their friends in the group provided them with enjoyable and creative processes. According to Field (2007), autonomy becomes stronger in students who produce learning materials and develop the content of learning. The students were given freedom in terms of regulating the environment in the learning process. According to Kluge and Riley (2008), students can form scenarios and learn collaboratively, create their environments, have what they have produced and formed their own information as they want. This way, students can interact with the objects and content they create as well as with other students. In this regard, students become more active and independent in the learning process.

The flipped classroom model seems to be effective in helping students gain a sense of responsibility. Harmer (2001) emphasizes that students should take responsibility in learning and teachers should enhance this. Responsibility is an important skill in self-directed learning readiness. Learners need to fulfill responsibilities at various levels so that they can manage their own learning processes. The flipped classroom model seems to be managed on the basis of developing students' sense of responsibility.

In comparison to traditional learning and teaching process, the flipped classroom model differentiates in many aspects such as enabling to learn at home and improve and deepen it in classroom using technological tools instead of pen and paper, and participating in group work and problem solving, which makes students find this new model very different and appealing. According to Salmon (2009), these kinds of practices make learning individualized; students can become more active in the learning process anonymously; stress and negative anxiety in the learning process decreases; students' ratio of taking risks in the motivation (Chang, 2005; Ushioda, 2011) and learning activities increases, and more participation is enhanced. Activities such as group works, opportunity to watch real videos, exercises from smart boards, and recording their own videos are considered to be the reasons that make the flipped classroom model this much interesting. Other students' wanting to participate during the video recordings caused the activity to be carried out with crowded groups; the students collaborated by working in large groups. It was observed that even the passive students took part in the group works and felt successful because they contributed to the process.

An analysis of the videos recorded by the students showed that the applications, video record environments used, and the music and the montages added were quite creative. Similarly, students were found to be quite creative in some activities such as designing the WhatsApp photographs. It was found that the students raised awareness about the improvement of their individual differences in the flipped classroom model. Similarly, their creativity was also observed to improve in the process. All these experiences are believed to contribute to the increase in the interest, creativity and self-directed learning readiness.

It was found that fun was the most frequently cited theme among the factors that affected students' attitudes towards the English course. Students' views show that they found the flipped classroom model, the tools used in the process, and the process itself fun. Being fun is considered to be an important factor that affects interest, attitudes and motivation about a course. In this study, the students found the flipped classroom model fun, which affected their attitudes towards the course in a positive way. Enjoyable classroom environments and technological contexts keep students interested. Yavuz (2016) found that students found the flipped classroom model enjoyable due to such factors as they did not get bored; they found the lesson like a game; they did not understand how the time passed; and thus their learning became permanent. Yılmaz (2011) claims that sense of humor brings along constant awareness and alertness. As for the theme of fun, students found this model more enjoyable in comparison to other models, and thus they reported to have understood and learned well.

One of the most frequently cited themes in relation to the factors that had positive effects on students' attitudes towards the English course was interaction between friends and teachers. In the flipped classroom model, the teacher-student interaction starts before the student comes to school and continues after s/he leaves the school. With this dimension, the flipped classroom model differs from the traditional methods. According to Hatch (1987), another problem seen in traditional methods is that they give too much importance to child-adult relationship in learning and teaching and fail to consider the power of social dynamic that is formed in the

classroom among the students. Throughout the research process, the students helped each other during the activities conducted in and out of classroom activities. Student-student interaction was performed at utmost level in group works. As the students did the group work distributions themselves, they reported to have completed the activities faster and more easily. This finding suggests that students knew about their individual features more and distributed the group work accordingly.

It is known that students' loving a course, being interested in it, and developing positive attitudes towards that course depend on various factors. Another factor that affects students' attitudes towards the course is the features of the model used in the course. The students reported that with the flexibility, individuality and unlimited repetition opportunity, the flipped classroom model affected their attitudes positively. They also mentioned that although at the beginning they felt anxious about this model, this anxiety decreased and their interest in the lesson increased gradually.

Factors that increase students' motivation include using videos out of classes and interacting in technological environments out of classroom. Students, who felt curious about which video will be sent by the teacher for the content of the following lesson, reportedly felt better when they became familiar with the topic before coming to the class. Using technology in English classrooms increased students' motivation, which affected attitudes towards the lesson positively. Chang (2005) emphasizes that students who used self-directed strategies in virtual learning environments became motivated, had more sense of responsibility, and had more self-confidence.

Comprehensibility is one of the factors that affect positive attitudes towards the course. When students did not understand the topic, they had the chance to watch the videos again, which enabled a very good opportunity to understand the topic and to succeed. Besides, one of the most important opportunities that enhanced comprehension was easily reaching the teacher both in and out of classroom. This study showed that the students' interest and desire increased when they understood the topics, which indicates positive effects on their attitudes.

#### 4.1 Conclusion and Recommendations

This study found that the flipped classroom model was among the factors that had positive effects on students' self-directed learning readiness and attitudes towards the English course. The flipped classroom model had positive effects on students' self-directed learning readiness in terms of the opportunity it brings about time management, role of the teacher, student centeredness, access to the material, need for learning, creating sense of responsibility, interesting feature of the model and exploration of talents. Similarly, enjoyable feature of the flipped classroom model, enhancement of student-student-teacher interaction, opportunities brought by the model, increasing motivation, and making the course comprehensible have positive contributions to the attitudes towards the English course.

In light of these results, following recommendations are made

- 1) In this study, there were limitations about students' coming to the class without first watching the videos. Students could be taught responsibility and preparation skills about learning.
- 2) Encouraging students to use online learning materials out of class hours could contribute to the learning process positively.
- 3) The effect of the model on different variables could be tested; the effect of the model on academic achievement might similarly be measured.
- 4) The model could be tested in different phases and courses.
- 5) Effects of the model in long term practices (1 academic year) could be explored.

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