THE EFFECT OF LAYERED CURRICULUM MODEL ON STUDENTS' ACADEMIC ACHIEVEMENT AND ATTITUDES IN ENGLISH COURSE

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ABSTRACT

The aim of this study is to examine the LCM (layered curriculum model) on students' achievements, and attitudes in English course and to determine their opinions about the LCM. In order to achieve these aims, mixed method was employed. The study lasted for five weeks and was conducted in one of the Anatolian High Schools in Ankara, Turkey in 2016-2017's academic year. The study was conducted on an experimental group composed of 31 ninth grade students and control group composed of 32 ninth grade students. The experimental group was lectured with the LCM whereas the control group was lectured with a teaching process in which current curriculum prescribed by Ministry of National Education (MoNE) was followed. Research data were gathered through the academic achievement test, the scale of attitude towards English lesson and semi-structured interview form. The study results revealed that the LCM implementation in the experimental group increased students' academic achievement and attitude more significantly than the experimental group. The students interviewed in the experimental group expressed that the LCM promoted their cognitive and affective developments, their language skills, facilitated their learning process, made their learning permanent, developed their motivation, self-confidence, responsibility, decision making skills and abilities. They also stated that the activities in the LCM were fun, interesting, and instructional.

Keywords: *layered curriculum model, English course, academic achievement, attitude.*

INTRODUCTION

Today, as the needs of language learning change, the understanding of language teaching should change and the aim of language teaching should enable learners to use the language communicatively in real life situations by using different teaching methods that consider individual differences. Within this context, it is seen that language teaching methods need to be differentiated and adapted with regard to student needs (Naka, 2018). Therefore, the LCM that is composed of three layers model that requires students to work in layers hierarchically and to use higher level thinking skills can be said to be a fully student-centered approach which takes into account to individual differences such as interests, needs, learning styles, learning levels, and abilities.

The LCM that emerged as a result of Nunley's (2006) class experiences with high school students is based on the understanding that each student is different from one another in terms of learning styles, learning levels, abilities, and way of thinking. Students have different characteristics in all aspects (Nunley, 2006). The learning process is organized in three layers, taking into account these characteristics among students. The LCM is a flexible model designed to allow students who have various skills and learning styles to work with different means to the same learning goal. It allows for the development of mixed-talented classes, which can be used to prevent students from feeling distressed and frustrated. It consists of three layers that entail employing high-level thinking skills while students work in steps. Layer C is a layer of core competence and reflects what students need to do. The activities in the layer C entail remembering and understanding information based on facts. Layer B entails analysing and applying the information students have acquired while completing the activities in Layer C and processing this information. Generally, Layer B requires students to practice, discover, hypothesize, prove the hypothesis they have founded, or to solve problems. The top layer called Layer A requires students to think critically about a problem. Nunley (2006) underlines that the A layer aims to teach students critical thinking skills and requires them to transfer their learning in the classroom to their daily lives. Layer A is composed of questions asking students to evaluate a topic. In this layer, there is often no right or wrong answer.

In fact, the LCM also depends on Bloom's Taxonomy composed of six layers that show the property of principle of progressivity including the process from the least complex thinking process to the highest thinking process. In the LCM that is updated in accordance with Bloom's revised taxonomy model, the level of knowledge and comprehension corresponds to Layer C, the level of application corresponds to Layer B where students are expected to use what they have learned for something new, and the level of synthesis and evaluation corresponds to Layer A (Latesky, 2008; Vyborny & Trowbridge, 2005).

As a result of literature review, the LCM was found effective in an increase in academic achievement that means the attainment of the goals, achievements and characteristics predetermined in the education and training programs, and attitude that is defined as a summary of behaviors (Oskamp & Schultz, 2005) and having positive thoughts, taking pleasure in the course or having positive affective entry characteristics about it, and vice versa (Bloom, 1976, p.123) in studies for English course (Colding, 2015; Field, Himsl, Arsenault, Bedard, & Singh, 2010; Üzüm, 2017) as well as for other courses. As a result of review of literature related to the LCM in English course, it is seen that there are not many studies. Therefore, it is thought that the present study will make contribution to the literature, which increases the importance of this study more. When domestic and foreign researches were investigated in general, it was seen that the effects of the LCM on the students' academic achievements and attitudes towards different courses such as science, social sciences, maths, computer, environmental sciences and sociology were examined (Aydoğuş, 2009; Biçer, 2011; Brosnan, May, & Blackwood, 2007; Johnson, 2007; LaSovage, 2006; Maurer, 2009; Overstreet & Straquadine, 2002; Öner, 2012; Yıldırım, 2016; Yılmaz, 2010; Zeybek, 2016). Koç (2013) examined the effects of the LCM on students' metacognitive awareness and problem solving skills. Başbay (2005), Durusoy (2012) and Gün (2012) investigated the effect of the LCM on students' academic achievement and the permanence of the knowledge by integrating it with different teaching methods. Gencel and Saracaloglu (2018) examined effects of the LCM on pre-service teachers' reflective thinking level and self-directed learning readiness. Taking into account the lack of studies with regard to the LCM in language teaching, this study aimed to contribute to the literature by examining the LCM on students' academic achievements, and attitudes in English course and determining their opinions about the LCM. With regard to these aims, the answers for the questions below were studied.

1. Does a meaningful difference between the mean academic achievements of the experimental and control groups exist?
2. Does a meaningful difference between the mean attitude scores of experimental and control groups exist?
3. What are the opinions of 9th class students about the LCM implementation?

METHOD

In the study, the experimental embedded design, which is one of the mixed method designs, was employed. Accordingly, quantitative and qualitative data were obtained sequentially in the direction of the study purposes (Creswell, 2014). In this study, experimental embedded design was utilized to determine the efficiency of the LCM implementation in the experimental group and explain the students' academic achievement and attitudes in the experimental group in a better way. Both qualitative and quantitative data were explained together in the final stage of research process.

Study Group

The study consisted of a total of 63 ninth grade students in two classes at a high school in Altındağ, a district in Ankara province, Turkey. The classes were randomly assigned to the control and experimental groups. A homogeneous distribution was also considered in terms of English course arithmetic mean and genders of 8th class students.

Equivalence of groups before experimental procedure

Before the experimental procedure was applied, students' academic achievement scores in English course and their attitude towards English course in both groups were tested to see whether they were approximately equal.

Table 1 below, with regard to taking place in the experiment and control groups, the t-test results reveal that there is no meaningful difference between academic achievement scores of both groups ($t_{(61)}$=0,31; p>.05).

Table 1
t Test Results with regard to the achievement pretests means

Pretest	N	$\overline{X}$	SS	t	p
Experimental	31	14.81	3.72	0.31	0,82
Control	32	14.72	3.78		

In Table 2 below, with regard to taking place in the experimental and control groups, the t-test results reveal that there is no meaningful difference between attitude scores of both groups ($t_{(61)}$=0,27, p>.05).

Table 2
t Test Results with regard to the attitude pretests means

Pretest	N	$\overline{X}$	SS	t	p
Experimental	31	70.97	3.68	0.27	0,75
Control	32	70.08	3.55		

It is seen that the control and experimental groups had similar characteristics in terms of their academic achievement scores of English course and their attitude scores towards English course.

Research Process in Experimental and Control Groups

This study was conducted within a period of 5 weeks in the beginning of the 2016-2017 academic year. Based on Bloom's taxonomy, activities for C, B and A layers were designed to give students in the experimental group the opportunity to choose. In the preparation of the activities for the units "Wild Life" and "Celebrities", three experts from the English teaching department were consulted and the activities were finalized. During the study, 5 activities were prepared for each week and 25 activities for 5 weeks. Students were given an activity list consisting of 5 tasks and students were asked to choose a suitable activity for their interests and needs each week. Provided that they completed the required

number of activities in Layer C and got the required score, he/she was allowed to do the activities in Layer B. In addition, he/she was allowed to do the activities in Layer A provided that the activities of Layer B were completed successfully. As for the control group not intervened in any way, it was lectured with a teaching process in which current curriculum prescribed by MoNE.

Data Collection Tools

English Course Achievement Test

For the development of the achievement test, the targeted acquisitions of the English curriculum were examined first. The items were prepared by considering the cognitive domain classification of Bloom's Taxonomy. The achievement test consists of multiple-choice test items related to knowledge, comprehension, application domains. The expert opinions were considered to provide evidence of the validity of the prepared achievement test. In order to obtain evidence of validity of the test in the trial application, difficulties and discriminations of the items were calculated. As a result, it was found that item discrimination indice in the test ranged from .24 to .57 and the item difficulty indices ranged from .21 to.75. The mean difficulty of the test was determined as 0.51. The reliability of the final test composed of 35 items was found to be .83 for the KR-20 coefficient. It can be said that these values are acceptable to develop an achievement test.

Attitude Scale towards English Course

A scale of attitude developed by Kazazoğlu (2013) towards English course was applied to determine the students' attitude towards English lesson in both groups. Trial was realized to determine whether it was suitable for 9th grade students. The scale, composed of 27 items provided a three factor structure. With regard to its exploratory factor analysis computations, factor load values in the scale range from .69 to .91 for factor 1,.48 −.61 for factor 2 and.58 − .68 for factor 3. The "Cronbach Alpha reliability coefficient" of the first factor of the scale which was found as .79, the second factor was found as .82, the third factor was found as .71 and all of them was found as .81. The variance explained is 79,68%. The values of Chi-square and degree of freedom got from Confirmatory Factor Analysis are $\chi2 = 445,32$, (df=205, p<.01), and the ratio of $\chi2/sd = 2,11$ is obtained. That the ratio got from the chosen samples is less than 3 indicates an excellent consistency. Therefore, it can be asserted that there was an excellent consistency between the data set and the model determined in CFA.

Semi-Structured Interview Form

With the aim of finding out the students' views about the LCM implementation with regard to cognitive and affective developments, and language skills as well as the activities, the researcher developed "Semi-structured Interview Form". Based on the feedbacks got from two qualitative research experts, the number questions were determined as three. Then, pilot interviews were applied to three students in order to ensure the comprehensibility of the questions. In the form, 3 open-ended questions were asked about the LCM. These are as follows:

1) How did the LCM implementation contribute to your cognitive and affective developments?
2) What language skills did the LCM implementation contribute to the improvement of?
3) How did you like the activities within the scope of the LCM?
Finally, each interview on the basis of students' voluntariness lasted 35 minutes.

Data Analysis

The data collected from the tests were computed in the statistics program. "Kolmogorov-Smirnov" test was performed separately for both pretest and posttest to find out whether or not the data showed a normal distribution before data analysis. With regard to the computations, tha data of pretest (N=63, Kolmogorov-Smirnov Z=.89, p =.32>.05) and the data of posttest (N=63, Kolmogorov-Smirnov Z=.71,

p=.53>.05) showed a normal distribution. Therefore, parametric tests were employed because the data showed normal distribution.

The data were computed with the "t-test for independent samples" in order to examine pretest, and posttest scores of the experimental and control groups.

"Descriptive analysis" was employed in the analysis and interpretation of the qualitative aspect of the research. Descriptive analysis is a technique of analysis based on the processing of data that does not require in-depth analysis, in which the obtained data are summed up and commented with regard to a determined theme before, mostly direct quotations are employed to show the interviewed individuals' opinions, and the results are commented in the context of causal relationships (Yıldırım & Şimşek, 2013).

Validity and Reliability for Qualitative Data

In qualitative study, the concept of credibility is employed for internal validity. According to Merriam (2009) and Patton (2015), "triangulation", "long-term interaction", "expert examination" and "participant confirmation" are methods utilized to increase credibility in qualitative research. In this research, multiple data collection tools such as academic achievement test for English course, attitude scale and semi-structured interview form for the application were utilized a requirement of "triangulation" method in collecting qualitative data. Therefore, it was tried to provide credibility of the research by ensuring that the findings obtained confirm each other. As a requirement of "long-term interaction", the researcher worked with the students for 5 weeks and was able to spend more time with the participants in the role of implementer. As a requirement of "expert examination", two experts who are trained in qualitative research methods were requested to examine the process from the design of the research to the gathered data, to analyse it and report the results. The report was put into final form considering feedback from both experts (Holloway & Wheeler, 1996; Streubert & Carpenter, 2011; Houser, 2015). To make the consistency of the research possible, another researcher was asked for help in the analysis of the data as pointed out by LeCompte and Goetz (1982) and the results were ensured to be confirmed (as cited in Yıldırım & Şimşek, 2013). Following the implementation, students' responses to open-ended questions were investigated separately with a coding key by both two experts working on qualitative research methods and researcher. The themes and sub-themes formed were discussed and according to "Miles and Huberman's reliability formula" (Miles & Huberman, 1994), an agreement of 78 % was reached, which is considered reliable for research.

FINDINGS

Findings on Academic Achievement

To find out whether there is a meaningful difference between pre-test and post-test academic achievement scores of the control group, the "t-test for dependent samples" was utilized and the computations were summed up in Table 3.

Table 3
t Test results with regard to the Scores of the Control Group

Control Group	N	$\overline{X}$	SS	T	p
Pre-test	32	14.72	3.79		
				7.15	0.00
Post-test	32	18.83	3.89		

*p<0,05

In Table 3, it revealed that the control group's pre-test score means was 14.72, the post-test score means was 18.83. As a result of these findings, it was revealed that a statistically meaningful difference between students' achievement pretest and posttest scores in the control group existed (t $_{(31)}$ =7,15; p<0,05).

The "t-test for dependent samples" was used for determining whether or not a meaningful difference between pretest and posttest scores of the students in the experimental group existed and the computations were summed up in Table 4.

Table 4
t Test results for the Pretest and Posttest Scores of the Experimental Group

Groups	N	$\overline{X}$	SS	T	p
Pretest	31	14.81	3.73		
				8.17	0.00
Posttest	31	24.61	3.93		

*p<0,05

In Table 4, it revealed that the experimental group's pretest score means was 14.81, the posttest score means was 24.61. Based on these findings, it was determined that a statistically meaningful difference between students' English course achievement pretest and posttest scores in the experimental group existed (t $_{(30)}$ =8.17; p<0,05). Based on this finding, it can be commented that the LCM implementation helped to increase students' academic achievement.

The "t-test for independent samples" was utilized for finding out whether or not a meaningful difference between English course achievement scores of both groups existed and the results were given in Table 5.

Table 5
t Test results with regard to experimental and control groups' achievement means

Achievement	N	$\overline{X}$	SS	t	p
Experimental	31	13.87	3.71	9.56	0.00
Control	32	9.12	3.03		

*p<0,05

In Table 5 above, it was found out that a statistically meaningful difference between achievement scores of students in both groups existed (t $_{(61)}$ =9.56; p<0,05). When Table 5 analyzed, it revealed that the experimental group's mean score was 13.87, the control group's was 9.12. As a result, it can be said that a significant difference found was on behalf of post-test scores and the LCM implementation increased the achievement in the experimental group more than the application of the curriculum prescribed by MoNE in the control group.

Findings on Attitude towards English Course

To find out whether there is a meaningful difference between pre-test and post-test attitude scores of the control group, the "t-test for dependent samples" was utilized and the results were summed up in Table 6.

Table 6
t Test results with regard to the Pretest and Posttest Attitude Scores of the Control Group

Groups	N	$\overline{X}$	SS	T	p
Pre-test	32	70.08	3.91		
				10.18	0.00
Post-test	32	95.12	3.97		

*p<0,05

As seen in Table 6, it revealed that the control group's pretest attitude score means was 70.08, its posttest attitude score means was 95.12. Based on these findings, it revealed that a statistically

meaningful difference between students' pretest and posttest attitude scores in the control group existed ($t_{(31)}$=10.18; p<0,05).

The "t-test for dependent samples" was used for finding out whether or not a meaningful difference between students' English course pretest and posttest attitude scores in the experimental group existed and the computations were summed up in Table 7.

Table 7
t Test results with regard to the Pretest and Posttest Attitude Scores of the Experimental Group

	N	$\overline{X}$	SS	T	p
Pretest	31	70.97	3.78	11.29	0.00
Posttest	31	114.51	3.89		

*p<0,05

In Table 7, it revealed that the experimental group's pretest attitude score means was 70.97, its posttest attitude score was 114.51. As a result of these findings, it revealed that a statistically meaningful difference between students' pretest and posttest attitude scores in the experimental group ($t_{(30)}$=11.29; p<0,05) existed. According to this finding, it can be commented that the LCM implementation helped to increase students' attitudes.

The "t-test for independent samples" was utilized for determining whether or not a meaningful difference between both groups' English course attitude scores existed and the computations were given in Table 8.

Table 8
t Test results for experimental and control groups' attitude means

Attitude	N	$\overline{X}$	SS	t	p
Experimental	31	62.87	3.61	8.89	0.00
Control	32	43.73	3.59		

*p<0,05

In Table 8 above, it was found out that a statistically meaningful difference between students' English course attitude scores in both groups existed ($t_{(61)}$=8.89; p<0,05). According to Table 8, it was found that the experimental group's mean attitude score was 62.87, the control group's mean attitude score was 43.73. As a result, it can be commented that the meaningful difference was in favor of post-test attitude scores and the LCM implementation increased students' attitudes in the experimental group more than the application of the curriculum prescribed by MoNE in the control group.

Findings on students' views about the LCM implementation

After the LCM implementation, students in the experimental group were interviewed and students' opinions were interpreted.

A code list was formed based on the students' opinions about the implementation process and three main themes about the implementation process were identified. In Table 9 below, a model for the LCM implementation is presented as a result of a descriptive analysis.

Table 9
The model for the LCM implementation

Themes	f
Its contribution to student development	83
Facilitating Learning	15
Making Learning Permanent	14
Developing Motivation	13
Developing Self-Confidence	12
Faciliating Decision Making	10
Developing Responsibility	10
Developing Abilities	9
Its contribution to the language skills	50
Improving Speaking Skills	15
Improving Listening Skills	14
Improving Writing Skills	14
Improving Reading Skills	7
Positive Features of Activities	38
Being fun	11
Being interesting	11
Helping participation to course	9
Being instructional	7

When Table 9 is examined, it is clear that students' views on the LCM implementation were positive. The students in the experimental group expressed that the LCM implementation contributed to their cognitive and affective developments and their learning process. The opinions of the students on the "Its contribution to student development" theme, are mostly about "Facilitating Learning" (f=15), "Making Learning Permanent" (f=14), "Developing Motivation" (f=13), "Developing Self-Confidence" (f=12), "Faciliating Decision Making" (f=10), "Developing Responsibility" (f=10), and "Developing Abilities" (f=9) respectively. Students' opinions about these findings are presented below:

S1: "I can say that activities made us learn easier. The more active we were, the easier the activities became."
S7: "The fact that I myself chose the activities amused me".
S9: "As activities were entertaining, learning became more permanent. We learned more in the lesson. There was not much work left at home."
S11: "It was great to choose my favorite activity. I could do what I wanted to do."
S12: "I liked this course, improving my mental abilities. I liked role play activity most because I wanted to prove my abilities to my friends and also I had self-confidence about that. It was great to choose my favorite activities. I had a right to choose what I wanted to do."
S14: "I enjoyed myself very much in English courses and especially English course activities were fascinating. This implementation should be the same with the other courses; some of the activities should be hard and some of them easy."

It has been seen that the category, "Its contribution to the language skills" (f=50) is also composed of sub-dimensions. These are: "Improving Speaking Skills" (f=15), "Improving Listening Skills (f=14)", "Improving Writing Skills" (f=14) and "Improving Reading Skills" (f=7). Students' opinions about these findings are presented below:

S2: "Some of the activities developed my speaking and reading skills. In fact, both my listening and speaking skills improved because the activities were based on question and answer teaching technique. My writing skills also improved as I had to take notes during the activities"

It has been seen that the other theme formed from the opinions of the students is, "Positive Features of Activities". It is composed of four sub-dimensions. These are: "Being fun" (f=11), "Being interesting"

(f=11), "Helping participation to course" (f=9), and "Being instructional" (7). Students' opinions relating to these findings are given below:

S2: "The activities were very fun. I had really great time during role play and drawing activities."
S3: "It was interesting because we used a method we had never used before. It was more fun for us to try to understand the subject together. In the past, sitting on the desks and listening to someone made us bored."
S7: "With this implementation, the students were more involved in activities in the classroom. These activities increased my participation to the course."
S17: "In my opinion, the activities were very instructional because we were trying to be creative all the time. At every turn, we were doing different instructional activities."

When the quantitative and qualitative findings are evaluated together, it can be said that the LCM implementation in the experimental group was found to be significantly more effective in enhancing students' academic achievement, their attitudes towards English lesson and contributing to their cognitive and affective developments compared to the implementation of the curriculum prescribed by MoNE in the control group.

DISCUSSION

In comparison with the control group, the LCM implementation in the experimental group increased students' achievement more significantly in the experimental group. Consequently, it can be commented that the LCM implementation applied to the experimental group was more effective in increasing academic achievement than the application of the current curriculum prescribed by MoNE. The findings of this research coincide with the findings of the study by Durusoy (2012) and the results of the study by Gün (2012) where the LCM was supported by Multiple Intelligences. Similarly, Aydoğuş (2009), LaSovage (2006), Noe (2008), Öner (2012), Yıldırım (2016) and Zeybek (2016) reached the conclusion that the LCM increased the students' academic achievement. Üzüm's (2017) study carried out with 9th grade students found that the LCM implementation enabled them to experience higher English success than the control group. According to them, it can be connected with the fact that individual differences such as abilities, interests, and needs are prioritized in the LCM. According to Biçer (2011) and Koç (2013), the increase in students' achievement in the LCM implementation results from the fact that students' mental process is always active since students in the LCM are always required to do researches to reach information. Baş (2014) also emphasized that students learn more effectively when they have chosen their own way of learning in English course and this leads to academic achievement positively. All these findings support the the results of the present study. On the other hand, this finding of the study does not overlap with the finding of the studies by Demirel, Şahan, Ekinci, Özbay, and Begimgil (2006) in which the LCM did not make a statistically meaningful difference.

In regards to attitude scale results, it revealed that a meaningful difference between the post-test attitude means of both groups was found, and this difference was on behalf of the experimental group. Accordingly, it can be commented that the LCM implementation in the experimental group influenced the students' attitudes positively. It can have been resulted from the fact that their needs and interests were taken into account and so they had the opportunity to promote their motivation by chosing the activities what they would like to do. This finding of the study is supported by the findings of the interviews with the students, the qualitative findings of this study and similar studies where the LCM was used (Aydoğuş, 2009, Başbay, 2005; Biçer, 2011; Durusoy, 2012; Overstreet & Straquadine, 2002; Öner, 2012; Yıldırım, 2016; Zeybek, 2016). Başbay (2006) found in his study that the students showed a great interest in the activities, and they enjoyed these acitivities based on their needs and interests, and so their attitude towards the lesson became positive. Similarly, in her study, Koç (2013) concluded that students considered the activities in the LCM as motivating and therefore their attitude towards lesson were more positive. On the other hand, this finding of the study does not overlap with the finding of the studies by Demirel et al. (2006), Maurer (2009) and Yılmaz (2010) in which the LCM did not make a statistically meaningful difference.

The implementation of the curriculum prescribed by MoNE in the control group contributed to students' achievement, and attitudes. This may result from the fact that the activities are based on communicative approach and prepared in an eclectic way as well as giving importance to integrated skills. In short, interactive teaching methods in the curriculum by MoNE may have helped the students increase their academic achievements, and attitudes. This finding of the study is in line with findings of the study by Üzüm (2017) in which they explained that the appropriate methods and techniques in teaching English led to a better achievement in the control group.

To find an answer for the third sub-problem that constitutes the qualitative part of the study, students' opinions were applied to. According to students' opinions, it was determined that the LCM facilitated students' learning, made their learning permanent, developed their motivation, self-confidence, responsibility, decision making skills and abilities. This finding of the study overlaps with the themes formed in the direction of students' views on the LCM used by Aydoğuş (2009), Başbay (2006), Biçer (2011), Durusoy (2012) and Öner (2012). As a result, it can be said that the LCM was effective in terms of developing cognitive and affective skills in the students.

Through the step-by-step teaching model, students expressed that they developed language skills, especially speaking, listening, writing and reading skills. With the LCM implementation, students expressed that they developed language skills. It can be inferred that the LCM played an important role in developing language skills in the present study. Üzüm (2017) also found that the LCM contributed to development of four language skills significantly. In his study, Yılmaz (2010) found that the LCM improved students' writing skills. Durusoy (2012) also reached the conclusion that students improved their speaking skills thanks to presentations in the LCM.

In this study, the students expressed that the activities in the LCM were fun, interesting, and instructional besides the fact that these activities helped their participation to course. This finding of the study coincides with the results of similar studies (Aydoğuş, 2009; Başbay, 2005; Biçer, 2011; Durusoy, 2012; Öner, 2012; Yılmaz, 2010). Üzüm (2017) determined that the LCM made the learning environment fun by promoting learner autonomy, introducing different types of activities, considering individual differences and eliminating monotony. Caughie (2016) also found that the activity options in the LCM positively affected students' involvement in the course.

In short, taking into account both quantitative and qualitative findings of the study, it can be said that the LCM could help in promoting a better educational experience for the students.

CONCLUSIONS

When the findings obtained from the research was taken into account, it was found that the students in the experimental group were much more successful, and had much more positive attitudes than the students in the control group. In addition, the LCM implementation contributed to students' cognitive and affective skills. This result can be thought of as an indicator that the implementation should be used in all levels of education and different lessons. In addition, it can be examined whether or not the LCM implementation will make a meaningful difference in students' academic achievement, and attitudes between different schools or student groups by extending the study group or the experimental period. Current curricula prepared by MoNE do not involve the LCM. Therefore, this model can be included in the curricula and textbooks to achieve attainments determined in the curricula.

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