



VIEWS OF MIDDLE SCHOOL STUDENTS ABOUT CLASS DOJO EDUCATION TECHNOLOGY

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Abstract: The present study aimed to determine views the middle school students' located a province of Turkey towards the Class Dojo education technology used in mathematic courses. A questionnaire based on expert opinions was used for the collection of research data. The participants of the study consisted of 206 students; 5th, 6th, 7th and 8th grade students who have used Class Dojo Education technology. The study is conducted survey model. Descriptive statistical methods, independent samples t test, one way analysis of variance were used for the analysis of research data. Findings of the research revealed that middle school students generally had a positive opinion on the application of Class Dojo training and that the opinions of the students did not vary according to the gender factor and that the students in the lower grades expressed more positive opinions than the students in the upper grades. As a conclusion that suggestions have been made to teacher and teacher candidates, how to use this education technology that enables classroom management to continue outside the school and pros of application.

Key words: Class Dojo, classroom management, education technology, mathematic courses.

1. Introduction

The three factors required for effective classroom management are considered as communication, classroom dominance, and behavioral management (Atici, 2001). Classroom management includes the establishment of an environment suitable for classroom learning, physical arrangements, the flow of teaching and time management, the determination of relationships within the classroom context, the organization of communication and motivation (Karip, 2002; p.2). According to another classification, classroom management skills can be grouped under four main titles. These are; the management of instruction, the class procedure and routine tasks, the organization of the physical order of the class, and the management of student behaviors (Sanford & Emmer, 1988; cited in: Akın & Koçak, 2007). The most important of these factors is undoubtedly behavioral management. In the studies conducted, it seems that the most difficult situation for teachers in classroom management is behavior management. According to the study by Atici (2001), it is seen that the teachers with low competence level refer to situations such as shouting, scolding, criticism, relocation in behavior management. According to the study by Cetin (2013); in the classrooms with 21-30 students, the unwanted behaviors faced by the teachers are hyperactivity and attention deficit, speaking without permission, teachers' solution suggestions are ignoring, punishing and warning. In the classes with 31-40 students, the unwanted behaviors faced by the teachers are giving guidance services, playing games and doing activities, talking about current topics.

Chance (1993) defended the use of an external reward system as an effective teaching and classroom management strategy. He claimed that a reward system based on Skinner's theories of reinforcement is ultimately effective for getting students to learn (cited in: Maclean-Blevins & Muilenburg, 2013). Skinner suggests that before starting to teach, the goals should be determined; and behavioral definitions of these goals should be identified. In other words, the behaviors which a student shows after reaching the goal should be clearly determined. (Senemoglu, 2007; p.169) According to Skinner, these occur as a reaction or naturally if it doesn't show up naturally it can be created by formatting. The task of the teacher is to shape behaviors. Shaping behavior requires knowing the tariffs of the basic principles of reinforcement and their results. First of all, there should not be a delay between the teacher, student's reaction and the reinforcement (Senemoglu, 2007; p.170). Skinner emphasizes that

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punishment should be avoided in education. The appropriate behaviors of the student should be reinforced, and inappropriate behaviors should be ignored. According to Skinner, the disciplinary problems in the school are mostly because of poor planning of education (Senemoglu, 2007; p. 172).

In order to prevent these unwanted behaviors from happening, we need to always have an organized behavior management system in place. Keeping students safe and happy are key to having a classroom run smoothly. Conflict and misbehaviors create an atmosphere of negativity and chaos, but through teaching and encouraging positive behavior habits with positive reinforcement; only then can the optimum amount of learning take place (Garcia, Hoang & Brown, 2015). In addition to this, the establishment of the classroom as a safe, cooperative environment is another major consideration in the creation of a classroom management system. Grubaugh and Houston (1990) argued that the best-managed classrooms often are governed by a set of rules that both the teacher and the students have agreed are fair, desirable, and workable (cited in: Maclean-Blevins & Muilenburg, 2013).

At the same time, as educators, we can become so engrossed in addressing problem behaviors and problematic students that we forget to reward the students that are behaving. The students who display problem behaviors usually demand most of our attention and our attention towards the students that are behaving eventually dissipates. Why else do educators tend to always remember the names of the students who had the roughest behavior but forget the names of the students who were well-behaved? This is a dangerous and slippery slope because in forgetting to reward those students who are behaving, we may cause those students to stop doing those good behaviors (Garcia, Hoang & Brown, 2015).

In the 21st century, it is not surprising that technology can also be used to get students active, motivated, and engaged in creating and following their classroom discipline plan. “Technology nowadays makes everything easy and effective. It helps teachers in managing their classroom efficiently” (Colao, 2012; cited in Chiarelli, Szabo & Williams, 2015).

Having grown up immersed in technology, the students of today are digital natives, but many of their teachers are often playing catch-up because they are digital immigrants. Furthermore, although new teachers enter the profession comfortable with technology for personal use, they must still be thoughtful regarding the application of technology for instructional purposes. For the paradigm to shift in how technology is used in the classroom, teachers must become more comfortable with its usage and grow in understanding of its value within the classroom (Hammonds, Matherson, Wilson & Vivian, 2013).

Class Dojo for student behavior management (<http://www.classdojo.com/>) is a free classroom behavior management tool that allows teachers to provide on-time feedback to students regarding individual and group behavior. The program, which can be operated from a computer or mobile device, makes it simple to keep a class motivated and focused by providing students with instant feedback (positive or negative) in class by awarding or subtracting points for specific behaviors. Teachers can customize the program with badges, avatars, and behavioral characteristics specific to their courses. Because students receive feedback immediately, this tool helps maintain student engagement and aids teachers in developing a positive and productive classroom-learning environment. Additionally, Class Dojo can serve as a system for tracking positive behavior intervention and support and can be used for communicating student behavior to parents and administrators (Hammonds, Matherson, Wilson & Vivian, 2013). Each student has a unique username and password; with these credentials, students and their parents can access the log of that student's behaviors. The teacher has the authority to see all individual student scores as well as whole-class records. Through this system, teachers can identify specific desirable behaviors and commend students for the exhibition of those behaviors consistently as well as record and track less desirable behaviors (Maclean-Blevins & Muilenburg, 2013). Class Dojo- points are added or deducted according to achievements in lessons like participation or punctuality. Teachers and parents can take correcting actions on the students' behavior that way (Schulten, 2014; cited in Friedemann, Baumbach & Jantke 2015). Probably more than 35 million teachers, parents, and students are currently using the application (Friedemann, Baumbach & Jantke, 2015). Also, in the study by Saeger (2017), students

took a survey about their opinion on Class Dojo and its use in their classroom. Overall, a majority of students had positive responses in favor of the application.

If there are skills that are positive and should be developed are expected from students, these can be determined with students using software and teacher's target behaviors are defined. This is one of the most important elements in classroom management. Defining positive and negative behaviors shown in Figure 1.

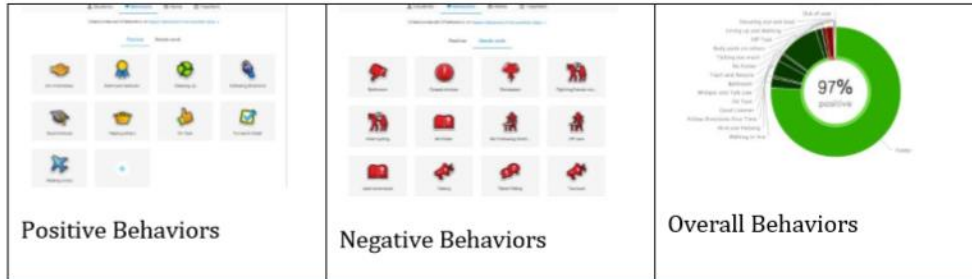


Figure 1. Defining positive-negative behaviors (Chiarelli, Szabo & Williams,2015)

Figure 1 demonstrated all behaviors determined with teacher and students before the term. It is crucial that defining rules in term of classroom management and discipline of lesson.

Class Dojo is a software that allows students and their parents follow the activity levels in the classroom using fun avatars. Giving feedbacks and own fun avatars selected by students are shown in Figure 2.



Figure 2. Giving feedback to students

When Figure 2 examined it can be observed that the teacher can dynamically assess his student instantly in an electronic environment. Giving feedback immediately is essential issue for assessment.

The reservation of the evaluation is made possible not only for the teacher but also for the student and the parent. Teachers may send instant messages to the parents in the Class Dojo Messaging section to notify parents about goings-on in class and at school. Chats can be seen only by parents and teachers. Parents can communicate securely and simply with their child's teacher. In addition, classroom events, classroom activities and student products can be shared with parents with classroom stories.

The purpose of this research is to determine the opinions of middle school students towards Class Dojo education technology. For this purpose, the following questions are asked in the research: What are the opinions of middle school students about Class Dojo? Are there any significant differences in the Class Dojo attitude scores of the middle school students in terms of their gender? Is there a significant difference between Class Dojo attitude scores of middle school students according to grade level?

2. Method

2.1. Research Model

The research was conducted on the basis of the descriptive survey model. In such researches, it allows to response the questions such as "what, where, when, how often, in which level, how". The aim of these studies is to draw a picture of the existing situation related to the research topic (Buyukozturk, 2011; p.231).

2.2. Participants

The population was small because of using this application limited. So that, the population couldn't be measured so that there is no knowledge about the population is assumed. In this direction, the study was conducted with 206 students, 76 girls and 130 boys, who used Class Dojo in Mathematics classes at a middle school in 2016-2017 Academic year. 76 of the students are 5th grade students, 53 are 6th grade students, 24 are 7th grade students and 53 are 8th grade students. The distributions of the demographic characteristics of the students constituting the sample of the study are shown in Table 1.

Table 1. Demographic Features

		f	%
Group	5 th	76	36,9
	6 th	53	25.7
	7 th	24	11.7
	8 th	53	25.7
Gender	F	76	36.9
	M	130	63.1
Total		206	100

According to Table 1, 76 participants (36.9%) are female and 130 (63.1%) are male. Also 76 (36.9%) are 5th grade; 53 (25.7%) are 6th grade, 24 (11.7%) are 7th grade and 53 (25.7%) are 8th grade students.

2.3. Data Collection

A 14-item questionnaire consisting of two expert opinions was used for the data collection. There are three inverse items in the questionnaire. The Cronbach alpha coefficient of the five-point Likert-type questionnaire was 0.93. Accordingly, it is assumed that the measuring instrument is reliable. In measurement tool, questions are asked to determine the demographic features of students and their opinions about Class Dojo application.

During 2016-2017 the academic year, Class Dojo education technology in mathematics classes in a middle school was used together with students. Two mathematics teachers created and distributed the group codes to the students and the parents in the form of invitations. With this application, students were able to follow themselves, get instant feedback and evaluate themselves. Parent informing, and follow-up are also provided. The survey was applied to 210 students; however only the data of 206 students were analyzed because 4 students filled out the survey randomly.

2.4. Data Analyses

Descriptive statistical methods were used to present the sample's opinions on the applied Class Dojo. In analyzing the data, firstly the situation of the participants was evaluated according to personal information. For this, frequency representations of variable levels are used.

In addition, it was determined that the sample was normally distributed and the parametric tests were decided. Independent samples t-test was conducted to determine whether there was any significant difference in the Class Dojo attitude scores of the middle school students in terms of their genders. However, one-way variance analysis was also conducted to determine whether there was a significant difference between the Class Dojo attitude scores of the middle school students in terms of their grade level.

3. Findings

This section includes the findings and comments that fit the purpose of the test.

A general evaluation of students' opinions on Class Dojo training technology was made using descriptive statistics and the results are presented in Table 2. The descriptive statistical results obtained using the questionnaire applied to middle school students are given in Table 2.

Table 2. *General Analysis of Student Opinions*

	N	Min	Max	\bar{X}	S.D.
Total Score	206	14.00	70.00	48.14	14.87

According to Table 2, the level of opinions of middle school students towards Class Dojo education technology seem to be higher than average by an average of 48.14 out of 70. That is to say, students generally have no negative opinions on application.

The frequency table of opinions about Class Dojo education technology and the questionnaire survey is shown in Table 3.

Table 3. *The Frequency Distribution of Responses by Students about Class Dojo Application*

	Negative		Positive	
	f	%	f	%
Class Dojo attracted my attention.	62	30.1	144	69.9
Since we started using Class Dojo I make more effort in the course.	74	35.9	132	64.1
Since we started using Class Dojo my attention increased.	73	35.4	133	64.6
With Class Dojo my self-confidence increased.	94	45.6	112	54.4
I liked being instantly evaluated by the teacher.	53	25.7	153	74.3
With Class Dojo, the feeling of competition bothered me.	168	66	38	34
My teacher's sharing in class activities is a good practice.	44	21.4	162	79.6
It is good that my parent is aware of my daily performance.	46	22.3	160	77.7
With Class Dojo my motivation in the class increased.	79	38.3	127	61.7
Class Dojo is an unnecessary application.	167	81.1	39	18.9
It would be good to use Class Dojo in other courses too.	64	31.1	142	69.9
I can follow myself in Class Dojo.	67	32.5	139	67.5
I try to show positive behavior.	42	20.4	164	79.6
I am not interested in Class Dojo.	164	79.6	42	20.4

In Table 3, it is seen that students' affective behaviors are positively affected in a broad sense. In addition, students expresses more positive opinions about trying to show positive behavior (N = 164, 79.6%). This suggests that the practice is effective in terms of developing positive behavior. In general, students opined positive opinion about the Class Dojo application's increasing their motivation (N=127, %61.7) and effort (N=164, %79.6).

The t-test and variance analysis conducted to determine whether the students' opinions on the application differ according to the demographic characteristics are as follows.

The results of the t-test conducted to determine whether the students' opinions on the application differed in terms of gender variable were given in Table 4.

Table 4. *The Difference of Student Opinions about Class Dojo According to Gender*

	Gender	N	\bar{X}	S.D.	t	p
Total Score	F	76	49.14	13.70	.735	.463
	M	130	47.56	15.53		

According to Table 4; there is no difference between male and female students in terms of their opinions on Class Dojo education technology. This can be interpreted as the fact that the gender factor has no effect on students' opinions on Class Dojo ($t = .735$, $p > .05$).

At the end variance (ANOVA) analysis used to determine whether there was any difference in the opinions of students about the application in terms of grade levels, Tukey multiple comparison test is used to determine which group has caused the difference in terms of opinions about the application, and the results are given in Table 5.

Table 5. *The Difference of Student Opinions about Class Dojo According to Grade Level*

	Sum of Squares	df	Average of Square	F	Sig.	Difference
Intergroup	8049.63	3	2683.21	14.53	.000	5-8
In-group	37291.67	202	184.61			6-8
General	45341.302	205				7-8

As a result of variance analysis seen in Table 5, there were significant differences between the grades in terms of their opinions about application ($F = 14.53$, $p < .05$). The average of opinions about application related to grade level are presented in Table 6.

Table 6. *Average Scores of Students' Opinions According to Grade Level*

	N	\bar{X}	Max
5 th grade	76	51.69	70.00
6 th grade	53	53.11	70.00
7 th grade	24	48.95	70.00
8 th grade	53	37.71	70.00
Total	206	48.1478	70.00

When the average scores are taken into consideration, it is revealed that there is a significant difference in favor of the lower grade levels. According to the Tukey multiple comparison test performed, 5th, 6th and 7th grade students have more favorable opinion on Class Dojo than 8th grade students. This may be due to the fact that 8th grade students are involved in a more internalized transition period at the transition to the level and an exams-oriented system, not skill-based. It can be said that the lower grades are better adapted to application, and positive opinions increase.

3. Conclusion, Discussion and Recommendations

In the survey, it was seen that students generally expressed positive opinions about Class Dojo application. When the literature is examined, there are also conclusions about the fact that the students are positive about the application. In the study by Mac Lean and Blevins (2015), students' responses were overwhelmingly positive about Class Dojo and students presented a variety of favorite things and concerns. In the study by Saeger (2017), students took a survey about their opinion on Class Dojo and its use in their classroom. Overall, a majority of students had positive responses in favor of the application. In the survey, students expressed more positive opinions about trying to show positive

behavior (N = 164, 79.6%). In parallel, there has been an increase in the positive behavior of students with the application as Saeger's (2017) study shows that the application was an effective tool for increasing positive behaviors and decreasing negative behaviors. With the implementation of weekly goal setting, students were able to isolate positive behaviors that they wanted to work on and ultimately earn more points. This showed that the students developed better self-monitoring skills and were better able to control their behavior. In the study by Chiarelli, Szabo & Williams (2015), it is found that Class Dojo had a positive impact on these first grade students' behaviors and helped them to become more aware of their own behavioral choices. The use of Class Dojo allowed students to redirect their behaviors in order to be successful while working in centers and teacher directed guided reading lessons experienced fewer interruptions. In the study by MacLean ve Blevins (2015), the majority of students responded positively about the online system and the majority of students involved had positive experiences with Class Dojo and would like to use it again. In this respect, it can be said that Class Dojo is effective in behavior management as an alternative class management practice.

In the study, it is seen that the gender factor is not a determinant that creates difference in students' attitudes towards Class Dojo application. However, there were significant differences in terms of Class Dojo attitudes among students at different grade levels. It was found that there was a significant difference between attitude scores of 5th, 6th, 7th grade students and attitude scores of 8th grade students. No study is found about whether the attitudes towards Class Dojo application differ according to gender and grade level factors.

Freiberg & Lamb (2009) argued that the behaviorist approach has failed to facilitate student self-direction and self-discipline. Educational psychologists continue to debate over the possible implications, effectiveness, and effects of a behaviorist-based reward system in a classroom. On the other hand, positive, self-regulatory behaviors increased and negative, disruptive behaviors decreased even though only the frequency of positive behaviors were tracked using Class Dojo. Moreover, it is known that the difficulties teachers encounter related to classroom management affect their job satisfaction negatively. A positively meaningful relationship was found between teachers' classroom management skills and job satisfaction (Akin & Kocak, 2007). Class Dojo is seen as an effective and helpful classroom management practice for teachers because it plays an auxiliary role in classroom management (Chiarelli, Szabo & Williams, 2015).

As a conclusion, it can be said that Class Dojo application may have positive impacts in developing class management and course skills of students in the first years of primary education, and it may affect student motivation positively. In addition, it may mobilize the students' affective behaviors and efforts related to lesson.

It is thought that with the integration of technology into education, Class Dojo classroom management application in which the positive side of the behavioral approach is practiced has a positive reflection on students. It is thought that Class Dojo classroom management application is useful in terms of managing negative behaviors, maintaining continuity of positive behaviors, defining skills and behaviors in accordance with classroom management nature with the students, giving instant feedback to students, preserving them, sharing them with students and their parents, motivating students and completing student, parent and teacher trivet.

In the direction of the results obtained from the research, some suggestions can be presented to the educator and practitioner:

Class Dojo, which is an online classroom management application, can be used to develop and reinforce behavior in the first years of primary and middle school today that the use of technology in education is widespread. Students love instant feedback and extant evaluation.

Instead of negative behaviors, positive behaviors should be focused on with Class Dojo.

The in-classroom activities can be shared and discussed with parents and students with Class Dojo.

Students can be involved in classroom management by encouraging skill-based training with this application.

Self-assessment skills of students should be improved.

Students should be infused self-competition feeling not competitive feeling.

Activities that will make students love mathematics, increase their belief in achievement in this course and also raise their interest and attitudes towards this course can be done.

By spreading the application, a study with a wider sampling can be done by increasing the users throughout the country.

A survey study can be conducted in terms of parents' opinions.

An experimental study can be conducted using the application.

The effect of the application on more specific skills related to learning areas can be investigated

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