



ELEMENTARY SCHOOL MATHEMATICS TEACHERS' VIEWS ON THE SMART BREAK APPLICATION

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Abstract:

The purpose of this study is to examine mathematics teachers' views on the smart break application in distance education. In the study, the case study method, one of the qualitative research approaches, was adopted. 12 primary school mathematics teachers working in public schools participated in the study. A semi-structured interview form that included 8 questions was used to evaluate smart break application and to obtain data. The data was analyzed using content analysis. The results indicated that the teachers had positive opinions about the application, the duration and content of the application was sufficient, it could be used in schools, it could make positive contributions to effective learning, the schools had sufficient infrastructure to use it, teachers and students were eager to participate in the use of the application. In parallel with the results obtained, it is suggested that not only students' ideas but also the ideas of teachers at different branches and the parents can be asked about smart break application.

Keywords: breath, smart break, elementary school math teacher

1. Introduction

Recess is a period of time when students rest between classes at school, meet their nutritional needs, play games, have fun with recreational activities and relax psychologically (Aktay, Arat, & Atalay, 2019). Recess is a period of time during which students meet their basic needs and socialize with their peers (Yurdakul, 2019). In TDK

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(2020), it is explained as break time for students and teachers' breathing fresh air, and relaxation.

Although there exist various definitions related to 'break', the existing definitions basically focus on 'break time', the time that students meet their needs and the time given between classes. There are many physical, mental and social benefits of breathing to students. During the break time, students create cognitive understanding with their mutual experiences (National Association of Early Childhood Specialists at State Departments of Education, 2002). According to the needs hierarchy mentioned by Maslow (1943), one cannot move to a higher level unless a lower level need is met. Accordingly, the student cannot be expected to be motivated for the lesson without meeting his most basic need for nutrition. In this respect, recess is the most basic need for students. Studies have shown that inadequate physical activities cause weight problems (Reilly, 2008). In this respect, breathing does not satisfy only the need for eating and drinking. The game etc. in which students spend their energy allows him to do better activities. Breaks are important for students to protect their physical health (Verstraete, et al. 2006). Thus, the physical activity required for the physical health of students can be done not only in physical education classes but also during breaks. Robinson (2018) thinks that students' ability to socialize and do as much physical activity as necessary will eliminate students' problems. Students become more motivated and productive towards the lesson in the classroom thanks to breaks. (Jarrett et al., 1998; Pellegrini, Huberty and Jones, 1995). Some studies show that even teachers encounter problems such as being introverted and not being able to rest when they cannot take breaks in case of need (Can & Serencelik, 2017).

Most of the teachers stated that the starting phase of the lesson after recess was very difficult. It is difficult for students to focus on the lesson as their energies reach the upper levels during breaks. Teachers stated that they used different techniques to calm the students (Egitimpedia, 2016).

While breaks are important and necessary for students and teachers, it is one of the research topics of how long breaks should take. One of the factors affecting the length of this period is the age of students. Students in secondary and higher education can meet their needs in a shorter period of time than middle school or primary school students. Another factor that is effective in determining break times is the number of students at school. In a school with a crowded number of students, it may take more time for students to meet their canteen and toilet needs. Another factor that affects the break time is the physical condition of the school. There should be enough toilets and canteens to meet the needs of students. The interior and garden of the school should be arranged so that students can run and have fun and chat with their friends (Genc, 2003). Another variable that affects the break time is whether the school offers dual education or not. In case of dual education in the school, the arrival and return of the students from school creates negativities during the breaks (ERG, 2015). Recess should be perceived not only as a time period when needs are met, but as a "lesson" (Yurdakul, 2018).

According to studies on break times, the ideal current time is sufficient according to 71.2% of the teachers participating in the study (Gokce, 2012), and the existing break times are sufficient according to 64% of the teachers participating in the study (Yurdakul, 2018). Osmanoglu and Yasa (2018) stated in their interview with secondary school students that the recess time should be increased. Ozdemir (2017) mentions that breaks in education in Finland are in the form of two 30-minute breaks and that there are short breaks depending on the initiative of the teachers. Training environments are completely evacuated during long breaks. Breathing is mandatory down to -20C.

According to researches, short breaks cause problems in terms of not meeting the needs of students, but a long break may also cause some problems. Gunay and Ozbilen (2014) stated that the on-duty teachers who were assigned during the breaks left their duty places due to insufficient time during lunch and afternoon breaks.

Turan (2007) stated that teachers are not sufficient to ensure school safety during the breaks and especially lunch breaks. However, the long break time can make it difficult for the problematic teacher to control the shift in crowded schools. Risk of accident may increase during inhalation.

For this reason, the break time in schools depends on the age level of the student, the physical facilities of the school, the number of teachers on duty, the size of the school, whether it conducts dual education, etc. With careful attention, each school can determine its own ideal break time because these situations create a difference between schools.

Within the framework of the vision of 2023 in our country, a change was made with the Official Gazette numbered 30827 in 2019 as "*At least 15 minutes is allocated by the school administration for breaks in schools with regular education and at least 10 minutes in schools with double education*" (Official Gazette, 2019). The break time for training was 15 minutes.

Covid-19, which started to be seen in China in the last days of 2019, affected our country and the whole world in a short time. As a result of this situation, schools in our country became a holiday on March 16, 2019. With the prolongation of this holiday, a new period of distance education started in education. Distance education was planned by the Ministry of Education (Ministry of National Education) and its infrastructure was established in a short time. While students at all levels had distance education via EBA TV, live lessons were created with the EBA infrastructure, and each student with the appropriate conditions had the opportunity to do lessons with their EBA infrastructure with their teachers at their schools. In this new education system, the breaks, which are indispensable for meeting the needs of students and relaxing in distance education, have not been forgotten. A new breathing application has been created under the name of "smart breathing".

This is the break that usually takes 4-5 minutes between two lessons when students receive distance education on EBA TV. In the content of the break, an exemplary judgment is given by an education expert and the correctness or wrongness of this judgment is explained on scientific grounds.

If we mention some of these judgments, "If I fail to achieve something, I just hold myself responsible", "Sometimes I even remember the place of knowledge in the book, but the content of the information does not come to my mind from stress", "I learn the lesson in the lesson, I do not need to repeat that subject again", "Our brain is in order. It works better with habits and repetition ", " I am preparing for the exam only by solving questions "... the correctness of these judgments is explained to the students together with the justifications and even the parents who are watching together with the students are guided.

In the literature review, there is no study about the smart breathing application in distance education. Therefore, in this study, it was aimed to get the opinions of mathematics teachers about the smart breathing application in distance education.

With this study, it can help experts to complete the missing parts by drawing attention to the positive and negative situations in the smart breathing practice in distance education. In line with this goal, the following sub-problems have been identified:

- 1) What are the teachers' opinions about the smart breathing practice?
- 2) What are the teachers' thoughts on the smart break time?
- 3) What are the teachers' opinions about the content of smart breathing practices?
- 4) What are the teachers' opinions about the applicability of smart breathing in schools?
- 5) What are the teachers' opinions about the contribution of smart breathing to effective learning?
- 6) What are the teachers' opinions about the applicability of smart breathing in terms of physical space in school?
- 7) What are the teachers' opinions about the applicability of smart breathing for teachers in school?
- 8) How do you think students participate in smart break in school?

2. Method

2.1 Research Model

In this study, one of the qualitative research approaches, the case study method was adopted. The case study method, also known as the case study method, enables in-depth analysis of the research subject and aims to explain the theories (Merriam, 1998; Yildirim & Simsek, 2016; Cepni, 2018). Content analysis technique, one of the qualitative research techniques, was used in the collection, analysis and interpretation of the data obtained in the study.

2.2 Working Group

Twelve primary school mathematics teachers working in public schools participated in the study. During the data collection phase, the study was limited to 12 people, as there was repetition in the data obtained with the answers from the teachers. While

determining the study group, an easily accessible situation sampling was chosen. The reason for choosing it in this way is that this method provides the researcher with a close and accessible sample (Yildirim & Simsek, 2016).

Teachers participating in the study were coded as P1, P2.... The demographic characteristics of the teachers are shown in Table 1.

Table 1: Teachers' Demographic Characteristics

	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12
Female	x				x	x		x	x			
Male		x	x	x			x			x	x	x
Professional Year	5	7	6	4	10	15	11	6	7	10	5	8
Age	27	30	28	26	32	37	35	28	29	32	26	33

2.3 Data Collection Tool

In this study, a semi-structured interview form was prepared to get the opinions of primary school mathematics teachers about the smart break application on EBA TV. The interview, which aims to reveal the opinions, experiences and emotional states of the participants, is a data collection tool generally preferred in qualitative research (Yildirim & Simsek, 2016). In a semi-structured interview, the interviewer can direct other questions to the participant if he / she deems it necessary, even if they have already prepared questions for a situation or topic on which he wants to collect information (Guler, Hacıoglu, & Taskin, 2015).

2.4 Validity and Reliability of Data Collection Tools

A Turkish teacher was asked to review the questions in the interview in terms of language use, vocabulary, semantics and punctuation. After that, a faculty member's opinion was referred about the interview form to reach the final form in parallel with the opinion received.

It is also important in terms of validity and reliability that the names of the teachers participating in the study will be kept confidential so that they can volunteer and sincerely answer questions. Yildirim & Simsek (2016) stated that the volunteering of the participants in the study is important in terms of ensuring the validity and reliability of the study.

The findings obtained, as well as some participants' opinions, are also important for the reliability of this study. Care was taken to ensure that the questions were clear and precise. Based on the information obtained in this way, the validity and reliability of the study was intended to be ensured (Yildirim & Simsek, 2016).

It increases the validity of the study that the data obtained from the study conducted with the qualitative method are reported and that how the information obtained was found is also indicated (Yildirim & Simsek, 2016).

2.5 Data Collection and Analysis

The data of the research were collected through an interview form consisting of 8 semi-structured questions. The questions in the form, which are open-ended, were created in accordance with the purpose of the research. A face to face interviews were made with 7 teachers and 5 teachers were interviewed by phone because they refused a face to face interview due to the pandemic, and recorded with the teachers' permission. Face-to-face interviews, which lasted for twenty minutes, were held in a place where teachers could easily express their views.

Before starting the interview, a number of questions about their demographic characteristics were directed to the participants and the purpose of the study was mentioned.

It has been stated that the answers will remain confidential. For the participants to answer the questions which they find difficult to understand, alternative questions were created.

The data in the study were obtained through content analysis. Content analysis consists of coding given, finding themes, organizing and defining data according to codes and themes, and interpreting the findings (Yildirim & Simsek, 2016). In the analysis, firstly the data were read and then the coding process was done and thus a code list was created. After the researcher examined the code list, the first categorization was carried out. The categorization that was created was re-examined and rearranged and themes were created at last stage.

3. Results

The data obtained at the end of the interviews with the teachers who participated in the study were analyzed and themes were formed accordingly.

3.1 What are the Teachers' Thoughts on the Smart Breathing Practice?

Such a question as "What are your thoughts on the smart breathing application?" was posed to the teachers. Considering the answers of the teachers, all the teachers but one stated that the new application was positive. One teacher stated that he was unstable in terms of the efficiency of the application. Therefore, two codes as "positive" and "unstable" were created and shown in Table 2.

Table 2: Teachers' Views on Smart Breathing

Codes	f	%
Positive	11	92
Unstable	1	8
Total	12	100

Some of the teachers' views:

"I think it is meaningful for children to take an instructive break between the lessons on EBA". (P3)

"I think it will be a good work. Choosing remarkable topics will be good for applicability and continuity". (P5)

"I think that the process carried out by a speaker can be made more attractive and impressive with applications such as videos. Otherwise, I think students might feel like they are attending the lesson". (P7)

"I couldn't help thinking about how efficient it would be." (P8)

When the answers of the teachers are examined, it is seen that the number of positive thinkers is high.

3.2 What Are the Teachers' Thoughts on the Smart Break Time?

Such a question as "What are your thoughts on the smart break time?" was directed to the teachers to get the participants' views on the smart break time. According to the answers, contrary to other teachers, only one teacher stated that the time was not enough. Accordingly, the codes as "sufficient" and "insufficient" were created and indicated in Table 3.

Table 3: Teachers' Opinions on the Break Time

Codes	f	%
Enough	11	92
Insufficient	1	8
Total	12	100

The opinion of some of the teachers:

"I think 4-5 minutes is sufficient in order not to bore the students too much". (P5)

"It usually lasts for 4-5 minutes, but sometimes 2-3 minutes. I think it should be at least 7 minutes, not enough". (P8)

The teacher, who thought that it was an insufficient practice in terms of time, was asked how much time should be sufficient and he/she stated that it should be 7 minutes, while other teachers stated that 4-5 minutes is enough for the application.

3.3 What Are the Teachers' Opinions about the Content of Smart Breathing Practices?

Such a question as "What are your thoughts on the content of smart breathing applications?" was directed to teachers to get the participants' views on the smart break time.

According to the answers given, some teachers stated that the content was sufficient while some other teachers said the content was insufficient. One teacher said that the content should be grouped in accordance with the students at primary, secondary school and high school. Accordingly, it is divided into three codes as "adequate", "unsatisfactory" and "should be grouped" as indicated in Table 4.

Table 4: Teachers' Opinions about the Content of the Application

Codes	f	%
Enough	8	66
Insufficient	3	25
Should be grouped	1	9
Total	12	100

Some of the teachers' views:

"I think that the content of smart breathing applications is determined in a way that students need an up-to-date and scientific basis in every subject they need". (P10)

"I think the smart breathing contents I watched are not very impressive and noticeable. More interesting content can be prepared". (P7)

"A different content should be planned according to primary, secondary and secondary education". (P11)

When Table 3 is examined, it is seen that there are many teachers who stated that the content of smart break is sufficient, but it is not underestimated that the teachers who stated that they were insufficient were a quarter of the group participating in the study.

3.4 What Are the Teachers' Opinions on the Applicability of Smart Breathing in Schools?

Such a question as "What are your thoughts about the applicability of smart breathing in schools?" was directed to the teachers to get the teachers' opinions on smart breathing application. According to most teachers, smart breathing can be applied, and according to a few, it cannot be applied in all schools, schools should meet some physical conditions, and some say that this situation may change according to education level.

Accordingly, three codes were created as "applicable", "according to the conditions" and "according to the stages" as specified in Table 5.

Table 5: Teachers' Opinions on the Applicability of Smart Breathing in Schools

Codes	f	%
Applicable	7	58
According to the terms	3	25
By grade	2	17
Total	12	100

Some of the teachers' views:

"Smart breathing application is an easy application that can be applied in all schools". (P1)

"If necessary infrastructure is prepared in schools, it can be applied if break times are arranged." (P3)

"Obviously, especially younger age groups at school will not watch informative videos or listen to their teachers when they are playing with their friends. So I think it depends on the level". (P8)

The statements obtained from the interviews indicated that almost all of the teachers who participated in the study stated that this new application could be implemented in schools. What should be known is that the codes were created in accordance with the conditions and the grade. Some of them put forward conditions for this, while others mentioned that this could be achieved without any change or correction.

3.5 What Are the Teachers' Opinions on the Contribution of Smart Breathing to Effective Learning?

In order to get teachers' opinions about the contribution of the smart breathing application to effective learning, the question "What are your thoughts on the contribution of the smart breathing application to effective learning" was asked. According to the opinions of the teachers, some teachers stated that this application had a positive contribution to effective learning and that it would not be correct to comment because the participation rate of the students participating in this application is not known. Accordingly, two codes as "useful" and "unstable" were created as given in Table 6.

Table 6: Teachers' Views on the Contribution of Smart Breathing to Effective Learning

Codes	f	%
Beneficial	10	%83
Unstable	2	%17
Total	12	%100

Some of the teachers' views:

"I think that smart breathing practice has a positive contribution to learning. I think that making presentations about effective working and mentioning the mistakes made during working contributes to the effective learning of students". (P12)

"It would not be appropriate to talk about its impact since the level of participation is unknown". (P11)

The teachers who participated in the study stated that the new application would be beneficial for the students at a high rate. Some teachers stated that they were indecisive. No teacher thinks that this practice will be useless.

3.6. What Are the Teachers' Opinions about the Applicability of Smart Breathing in Terms of Physical Space in School?

Such a question as "What are your thoughts on the applicability of smart breathing in school in terms of physical space?" was directed to the teachers to get their views on whether there is a physical capacity to apply smart breathing in schools. Some of the teachers stated that schools have the physical conditions to perform this practice, and according to a few teachers, some schools are physically extreme compared to each other, and accordingly, they mentioned that some schools can achieve this. Based on the answers given, two codes were created as "applicable" and "partially".

Table 7: Teachers' Opinions about the Applicability of Smart Breathing in Terms of Physical Space in Schools

Codes	f	%
Applicable	7	59
Partially	5	41
Total	12	100

Some teachers' views:

"I don't think that most of the existing schools are ready for this practice in terms of physical space". (P9)

"The first thought that comes to mind is as if the realization of this idea were not physically appropriate when the inequality of opportunity among schools is at its height". (P7)

"There is a need for a new environment outside the classroom for smart recess activities. I think not every school can provide this". (P5)

When Table 6 is evaluated, more than half of the group stated that the schools are physically ready for this practice, but the views that the schools are not physically suitable are also almost half. In other words, the opinions about whether the physical conditions of the schools are suitable for the new application are close to each other.

3.7 What Are the Teachers' Opinions about the Applicability of Smart Breathing for Teachers in School?

For teachers to evaluate the application of smart breathing in terms of the teacher, such a question as "What are your opinions about the applicability of smart breathing in terms of teachers in school?" Based on the teachers' views, it was stated that this application can be applied by the teacher, according to some teachers, teachers should be given in-

service training for this new application, and according to some teachers, this application may impose extra responsibility on teachers and therefore the teacher may experience low productivity, so it should not be applied. Accordingly, the themes of "applicable", "education must" and "not applicable" were created as indicated in Table 8.

Table 8: Teachers' Views on the Applicability of smart Breathing for Teachers at School

Codes	f	%
Applicable	8	66
Education is essential	2	17
Not applicable	2	17
Total	12	100

Some teachers' views:

"I think it will put extra responsibility on the teacher. In addition, if we consider that the breaks are a break for teachers, these rights will be reduced. This can reduce the efficiency". (P6)

"If the teacher is given the necessary time and plan for this, it can be applied very easily". (P8)

"In-service training should be given by the Ministry of Education beforehand about the operation and the way the content is delivered". (P12)

Teachers have mostly stated that the smart breathing application can be easily applied by them in schools. In addition, the implementation of teachers in schools may create some negative situations or plan, time, etc. for this new application. There are concerns as needs must be met.

3.8 How Do You Think Students are Involved in Smart Break in School?

The teachers asked about what could be the participation status of the students in school for smart break, "How do you think students participate in the smart break in school?". There are two different opinions about whether students will agree with the answers received or not. Accordingly, two themes were created as "participate" and "do not" as specified in Table 9.

Table 9: Students' Participation in Smart Break According to Teachers

Codes	f	%
They participate	8	67
Do not participate	4	33
Total	12	100

Some teachers' views:

"I think the majority will not participate. Especially primary and secondary school students will want to spend their breaks playing games." (P9)

"I think students will be willing to participate in smart break". (P10)

According to Table 9, teachers think that students will participate in the new practice. According to some teachers, it seems that there will be no participation.

4. Conclusion, Discussion and Suggestions

According to the information obtained from the study carried out, most of the primary school mathematics teachers have a positive opinion about the smart breathing introduced in the distance education process. They stated that there should be a break in which students can rest between lessons, even if they are from distance education. They stated that it is nice that this break is educational. Aktay, Arat, & Atalay (2019) defines break as a break in which students rest and relax psychologically, revealing the necessity of smart breathing in distance education. According to the majority of teachers, break times in the smart break practice are sufficient. They stated that being longer could bore students.

Long breaks can make it difficult for students to be motivated to the next lesson. Egitimpedia (2016) reached similar results about long breaks in a study he conducted.

More than half of the teachers found the content of smart breathing sufficient and found it important to base it on scientific foundations and current issues. Up to 25% of the teachers did not find the content sufficient. They argued that there should be more remarkable issues. About 9% of them argued that the contents should be classified, that is, a different content should be prepared for primary-secondary and secondary education. When the importance of individual differences in education is considered, it may be more beneficial to prepare the contents according to the age group.

According to 58% of the teachers, the smart breathing application is an easy application that can be applied in schools. According to 25%, there is a belief that it is not possible to apply this in every school and that the necessary infrastructure should be established. Genc (2003) stated that an important element in determining the break times is the physical infrastructure of the school. Although Genc (2003) compared the break time and physical condition, this situation supports the opinions of the teachers about the applicability of the smart break practice. 17% of the teachers are of the opinion that this may vary according to age groups, younger age groups will not participate in such an education that includes more fun, but it can be applied to older age groups.

When we asked the teachers about the contribution of smart breathing to effective learning, 87% of them stated that this practice could contribute to effective learning, and according to 13%, it was not possible to comment on how many people participated in the practice, therefore they were hesitant. Erdem (2005) stated that learning learning

strategies contributes to effective learning. When we look at the content of the smart breathing application, we see that learning strategies are mentioned in some sections. This supports the opinion of 87% of the teachers.

According to teachers, most schools do not have the physical space to implement this new practice. For this, they stated that schools need an environment other than classroom, but not every school has the physical potential to meet this. When looking at the opportunities between schools, they stated that there is a lot of difference between some schools. While there are crowded class sizes in some big cities, the school may not be a venue for this practice.

When asked about the applicability in school for teachers, which is the most important factor in the implementation of smart breathing in schools, according to 66% of teachers, teachers can implement this practice. According to 17%, their teacher stated that they should be subjected to in-service training in order to apply this. According to 2%, this practice would bring an extra workload to the teacher, and that he would not be able to do breaks, and that it should not be applied by the teacher, as it would cause low efficiency in the teacher. In the study conducted by Can and Serencelik (2017), it was stated that when teachers could not do the breaks they needed, they faced problems such as being introverted and not being able to rest. In this case, it causes low efficiency in the teacher. This situation should be considered while applying this application in schools.

While students participate in this new practice according to 67% of teachers, students do not participate in this practice according to 33% of teachers. Students think that they will not choose this application to meet the need to have fun during the recess. While applying the smart breathing application in schools, students should rearrange their breathing periods in a way to meet their eating, drinking, toilet and entertainment needs.

According to the study, the following suggestions can be made:

- Students' opinions about the smart break application can be taken.
- Opinions of teachers in different branches can be taken.
- Since smart break takes place at home, parents may have benefited from this application, so parents' opinions can be taken.
- Physical facilities in schools can be investigated for the applicability of smart breathing in schools.
- When schools open and return to their normal course, this new practice can be piloted and evaluated in some schools.

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VIEWS ON THE SMART BREAK APPLICATION

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