



STATION TECHNIQUE: A SAMPLE LESSON ACTIVITY ON CELLS

^aRamazan DEMİR, ^bTezcan KARTAL, ^cGülay EKİCİ, ^aNurhan ÖZTÜRK & ^aEsra BOZKURT

^aPhD student, Gazi University, Institute of Educational Sciences, e-mail ramazandemir70@hotmail.com

^bResearch Assistant, Ahi Evran University, Faculty of Education, e-mail tezcankartal@hotmail.com

^cAssociate Professor, Gazi University, Faculty of Technical Education, e-mail gulayekici@yahoo.com

Abstract

Purpose of this study is, evaluating products of students which were formed as a result of the activity prepared with station technique and their views which are related to this activity. This study was carried out with 20 sixth grade students who educated in Konya's Selçuklu Town in 2010-2011 education year. They were used as data gathering tool that semi-structured interview forms which prepared for determining activity products and views about this activity. NVivo 8 qualitative data analyzing program and descriptive analysis method was used for data analyzing. According to results of the study; cell and its parts were used correctly and impressive in activity products. Also, students expressed, they liked the activity, found it entertaining and regard it as an independent environment for telling their thoughts. But it is seen that some of the students didn't like the activity because of the reasons as can't generating ideas, not being taken into discussion and group.

Keywords: Station technique, Cell, Science and technology course

INTRODUCTION

Current educational approaches require educators to find and employ those instructional methods and techniques that maximize learning. However, it is commonly known that teachers usually use those instructional methods and techniques based on passive student roles. Nevertheless, students need to express, discuss their own views and to listen to the others' views so that those instructional method and instructions as well as learning-teaching activities that provide opportunities for these acts are required (Gercek, 2010; Braun and Müller, 2006; Leppin, Hurrelmann and Petermann, 2000; Hickmann, 1996; Meier, 1996). So, station technique is one of the method/technique which both affects students' attitudes positively and can be used for increasing their academic achievement in science and technology course.

Learning in stations is a student-centered method that teaches bringing forward what previous group did by whole class's contributing to each stage-station (Gözütok, 2007). Station model is prepared for bringing in structural and conceptual thought, difficult subjects and high level skills

and in this context compulsory or selectable stations are formed in station technique. Students visit these stations simultaneously in a particular period of time and they can join activities by using all of sensorial organs with interaction and communication (Morgil, Yılmaz and Yörük, 2002).

One of the most beneficial features of learning stations is that it offers groups based on students with distinct ability levels, needs and learning styles. Each student in the group is provided with opportunity to interact with other students and to share equipment, knowledge and skills. Moreover, while group members are responsible for a certain part of the topic, they all contribute to the work at hand. Learning stations have basic characteristics such as shared responsibility among group members, learning the interpersonal communication, shared leadership, feedback provided by teachers and students' evaluation of group effectiveness (Gercek, 2010; Duvinage, 2006; Berck, 1999; Bauer, 1997; Faust-Siehl, 1989). Purpose of this study is, evaluating products of students which were formed as a result of the activity prepared with station technique and their views about this activity.

METHOD

The study designed by qualitative research method. Case study which is one of the qualitative research designs was used for evaluating 6th grade primary school students' products that they formed during the activity and determining their views about the activity. According to Creswell (1998), case study is used for investigating deeply and analyzing one or more special situation.

Study Group

This study's sample was selected by convenience sampling which is a purposeful sampling method. Accelerating the study and bringing it practicability is the reason of selecting purposeful sampling method in this study (Yıldırım and Şimşek, 2006). Study's sample consists of 20 sixth grade students who are being educated in Konya's Selçuklu Town. %40 of students were male and %60 of them were female.

Application of Lesson Activity

First, students were separated to 5 groups in the study that was done with 6th grade 20 students. A lesson activity was prepared according to station technique, about cell topic in Life and Living Beings learning area.

First station was defined as "Story", second was "Newspaper", third was "Poem", fourth was "Song" and fifth was "Scenario". 10 minutes was given for each station. Students were told to do task in the station where they were, in 10 minutes and go to the next station when time ended. It was said that products would be read by one after the activity. This sample lesson and evaluating activity lasted 2 lessons of 80 minutes.

Data Collection Tool

As the first stage of data collection, semi-structured interview forms, which consist of three questions, were used for getting students' views related to the activity. Semi-structured interview questions were prepared by researchers and opinions was gotten from 4 experts who are doing Ph. D in science education field, for checking if questions are available for the aim. Semi-structured interviews take part between structured interviews and unstructured interviews. In this research,

the reason of selecting interview method is; it enables explaining the interviewed person's views more detailed and deeply than other methods, also it provides to see the issue in the interviewed person's point of view (Yıldırım and Şimşek, 2006).

Data Analysis

While forming coding key for analyzing data, NVivo 8 qualitative data analyzing program and data analyzed with "descriptive analysis". While doing descriptive analysis, stages of forming a frame for descriptive analysis, processing data according to thematic frame, defining and interpreting findings were taken into consideration in this study.

FINDINGS

In this part, the place is given to findings according to students' views about activity and evaluating product that they formed in stations. Some of the expressions of the students, which participated to study, were given as example. At the end of their statements which students example it is, stated as S1, S2,.....S20.

1. Findings according to students' views about the activity that they would join for the first time

When it was asked students that if they joined a lesson activity prepared with station technique, they explained that they didn't join. Then, it was asked students that how could be an activity which they never joined and gathered data have been showed in Table 1.

Table 1: Students views about the activity that they will join for the first time

	f	%
I have no idea.	12	60
I think, we will complete the levels and move to the next level.	8	40

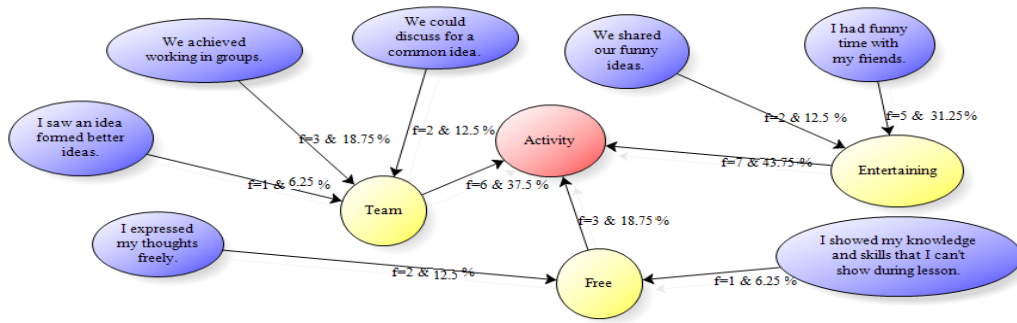
When we look at Table 1, it is seen that most of the students don't have any idea about the activity applied. %60 of the students emphasized that they had no idea, %40 of them said after they completed the levels, they would move to the next level in this technique.

"I have never joined an activity prepared with station technique. But, I think as train when it's called station. There are stops and I think we will move to the next station stop after we complete the stages in these stops." (S12)

2. Findings according to students' positive views about the activity

%80 of the 20 students participated to study, that is to say 16, stated positive views about the activity. Students' positive views after they joined activity and reasons of these views have been shown in Figure 1.

Figure 1: Students' positive views about activity



When we look at Figure 1, it is seen that %43.75 of the students, who stated positive views, emphasized the activity was enjoyable, %18.75 of them thought it provided a free working environment and %37.5 of them expressed that it needed team working.

"We have lots of fun, while we are doing the next station in activity. We put forward the ideas we thought. Put forward idea provided new ideas to be formed. We decided the most appropriate and best ideas together. It was one of the activities I enjoy much." (S20)

3. Findings according to students negative views about the activity

%20 of the 20 students participated to study, that is to say 4 students, stated negative views about the activity. Students' negative views about the activity after application have been shown in Table 2.

Table 2: Students negative views about the activity

	f	%
My friends didn't take me to the team.	1	25
We argued because we disagreed with each other.	1	25
Any ideas didn't come to my mind.	2	50

When we look at Table 2, it is seen that %50 of the students, who indicated negative view, stated they couldn't generate ideas, %25 of them said they had argued with their friends because of dissidence and %25 of them stated negative views because their friends didn't see them as a member of the team.

"They didn't listen any of the ideas I said at the activity. They didn't accept me as a member of team. I waited for the time to end during the activity." (S3)

4. Findings according to evaluating products formed at stations

Findings about evaluating products, which students formed at stations, have given in Table 3.

Table 3: Evaluating station products

	Newspaper Station		Story Station		Scenario Station		Poem Station		Song Station	
	F	%	f	%	f	%	f	%	f	%
Cell membrane	2	12.5	5	38.89	-	-	1	9.09	2	23.08
Organelles	6	50	7	44.44	5	77.78	8	72.73	7	61.54
Nucleus	3	25	2	11.11	1	11.11	1	9.09	1	7.69
Cell Wall	2	12.5	1	5.56	1	11.11	1	9.09	1	7.69

When we look at Table 3, it is seen that cell membrane is used mostly in story station with %38.89 rate, organelles are used mostly in poem station with %72.73 rate, nucleus is used mostly in newspaper station with %25 rate, cell wall is used mostly in newspaper station. Also, while the formed products in stations were evaluated; it is attracting attention that using cell membrane, cell wall, organelles and nucleus's functions and properties impressive and correctly. And it is a conspicuous feature that personalizing organelles by adding vitality features according to their functions. Besides, being current of chosen topics for products is a sign for following current events.

DISCUSSION

Learning stations are a way of teaching which engage students in lessons, provide them with ample opportunities to use materials and aids, and assure better comprehension and permanent knowledge (Köseoğlu, Soran and Storer, 2009). For this reason, it was aimed in this study to evaluate 6th grade primary school students' views about the activity prepared with station technique and the station products.

%43.75 of 16 students, who stated positive views after the activity, emphasized that activity was entertaining because they had funny time with their friends, %18.75 of them said the activity was free because they expressed their thoughts freely, %37.5 of them expressed that this is an activity which requires to be a team because they could achieve working as a group. In Gerçek's (2010) study, students emphasized that they spent good time in the activity done by station technique; it was interesting and different from other studies. And in Demirörs's (2007) study, it was stated that students enjoyed the station technique and they had pleasure working with group. Findings of this study are parallel to other studies' findings. But, it was seen that %50 of the 4 students, who stated negative views after the activity, said they didn't like it because any ideas didn't come to their mind, %25 of them told that their friends didn't take them to the team and they argued while they shared their ideas.

When the students were observed after the activity, it was seen that they always repeated the parts of song, poem and scenario in products. This constituted the thought of this activity provided students to have permanent learning. In Demir's (2008) study it was investigated that the effect of station technique and traditional method on students' high level skill achievement and it emphasized that the lesson, which executed with station technique, affected achievement more. Also, results of Maden and Durukan's (2010) and Morgil, Yılmaz and Yörük's (2002) studies supports these findings.

CONCLUSION

After this study, students' views related to lesson's activity, which is prepared with station technique and semi-structured evaluating report of students, was determined. First of all, students can explain their idea, love the activity and enjoy with other students. However, some of them did not like this activity because they could not think about the activity. They could not join the team. In addition, they have a fight with other friends.

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