THE EFFECT OF PRACTICING SIMULATION TEACHING METHOD IN TEACHING REVOLUTION HISTORY AND KEMALISM LESSON ON STUDENT SUCCESS

Yrd. Doc. Dr. Servet Hali
Mustafa Kemal University, Faculty of Education, Hatay (TURKEY)
s.hali@hotmail.com

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ABSTRACT

Simulated teaching technique is one of the teaching methods that use the artificially created situation instead of there alone. This technique enables the teacher of creating a real like environment in the classroom and performing functions of the lesson accordingly the stimulated event. This study aims stop promote teaching of our great battle (campaign) of our recent history by visual sing with this teaching method. In the textbook, it is proposed to make teaching easier by visualising. In this study 8th grade students are taught the subject of Fronts During The Independence War by performing simulation technique. The study was carried out at Cubuk Secondary School in Ankara. Thirty-two students in Class 8/C were separated in to two equal groups. First of all a pretest was applied to the students to assess their readiness. Then students are separated into control and working groups. With the control group, classical teaching methods are carried out. On the other hand, with the working group the campaign on the West, South and East Fronts are shown and stimulated on the maps and models. After that, a post test was applied to the groups and the results were evaluated.

Key words: Revolution History, Stimulation Teaching Method, Independence War, The Fronts

1. INTRODUCTION

Fidan (2012), indicates that education involves changing people's behaviors in line with certain purposes. Education is the behavioral change in the most general sense. Teaching strategy is the overall path or paths selected to achieve the goal in education and training. As for the instructional techniques, it is defined as the helpful ways to apply the chosen method to achieve the goal.

What the curriculum wants to achieve is the development of student behavior. Program planning sets goals for this task and suggests teaching processes that will ensure that these goals are achieved. In the learning-teaching process, the necessary arrangements must be made to transform this plan into practice (Fidan, 2012).

Demirel defines the method as the shortest route to achieve the goals or as a regular way that is chosen to learn a topic while he defines technique as a way of putting the teaching method into practice (Demirel & Seferoglu, et al., 2003).

Simulation is the imitation of a real world process or system operation upon the concept of time. It is a model of systems or processes that contain defined relationships among the system objects.

The simulation technique is most effective way to educate students on a model of the truth, especially in such situations where it is difficult, dangerous and costly to educate students with real tools in a real environment. Depending on the subject to be worked on, sometimes the artificial environment may be a virtual environment with technology support, and sometimes it may be a model, non-living version of a model or a similar substance. The targets must be at least at the application level to apply this technique. The simulation technique is not a thought, but a movement.

The students will join an event and shape it. In other words, it is used in the teaching skills. Students have roles, functions and responsibilities in simulation technique. In order for the simulation technique to be used effectively, the main aim must be clearly stated to students. Otherwise, working on models in an artificial environment may seem like a game to students. The teacher should be a guiding spirit in the educational setting and intervene in the event only when the aim is deviated. The teacher should ensure that the students are free to work, make their own decisions, and are encouraged to think creatively (Instructional Methods and Techniques, 108-109).

*This study was organized and developed with the same name presented in the 6th international history education symposium(1-3 September 2016)
1.1. Simulation Technique in Teaching

Objectives in teaching can only be achieved by choosing appropriate teaching methods. It is not possible for each student to learn in the same way, and not every method may attract the attention of every student, and therefore teachers should make use of different techniques. It is also not possible to teach all subjects with a single method. Different ways of teaching should be applied to acquire the objectives at different levels to students. When deciding on the teaching strategies and methods to be applied to a course, along with its objectives, the situations in which the teaching technique is applied, and benefits, limitations, process and course availability of the teaching technique should be taken into consideration.

Studies show that students have some alternative understandings and prefer to use simple mental models (Pekdag, 2010). As an effective way of expression based on this understanding, simulation corresponds to terms like imitation and reproduction (Sarigoz, 2016). In Western languages; It comes from the root of 'similis' and means 'similar' and is derived from the word 'simulare', which has been used Latin since the 14th century. In a non-technical sense, it is used in the meaning of similar / counterfeit of something. It has acquired a technical meaning in the 20th century (Oren, Elci & Koksal, 1985). Simulation is a teaching technique and can be integrated in different disciplines. It can be integrated in activities in any field (Tok, 2008: 192). The use of information and communication technologies is considered as an alternative and effective tool (Pekdag, 2010). The best way to transfer information technologies into the classroom environment is to apply different methods and techniques. Simulation is the teaching technique that allows learners to take an educational action on the assumption that an event in the class is real. It can also be called the teaching approach upon the concept of the model developed in order to support learning and increase the success (Demirel, 2008: 110).

Simulation is considered as the teaching method that allows learners to treat an event as if it were real and to make it possible for learners to do educational work using models developed in accordance with reality in such situations where it is difficult, dangerous and costly to reach real vehicles and events (Guzel, 2010: 147). This technique allows the problem-solving skills to be improved and practiced in a safe environment (Guven & Oren, 2005: 245). It is also referred to similitude in some sources. Learners participate in this event and shape it. As a result, learners take responsibilities, and take on the tasks and roles. In addition, learners need to solve problem and make decision in this technique. The teacher should immediately give feedback to student while the simulation technique is being applied. When this technique is applied, the teacher distributes the roles to the students, introduces the event, and takes on the role of a guide and remains out of the event (Kucukahmet, 1983).

Researches state that simulation increases the participation and motivation of the learners, saves learning from abstraction, and provides concrete and active learning (Koksal, 2015).

Simulation in education is easy and free. Computer-assisted teaching programs have been used frequently in recent years (Cengiz, Sarigoz & Donger, 2015). These programs initiate the active learning process using moving images and graphics in order to attract the attention of the learners (Ozbek, 2003: 11). Simulation technique is used in many different areas in education and training (Tabak, 2013: 10). The simulation technique is used in such situations in which it is necessary to gain experience or the experiment cannot be performed with real systems and the model should be able to do so. In this case, students are actively producing, researching, experimenting and understanding in the learning environments that include information and communication technologies. Students like technological tools such as video demonstrations, computer simulations, and computer animations showing 3D models (Byers, 1997; Pekdag, 2010). Activities in active learning provide a dynamic learning. These activities increase student-student, teacher-student interaction and collaboration (Burke & Greenbowe, 1998).

As a teaching technique to enhance student effectiveness, the simulation technique is used for two different situations:

a) The creation of the real environment is impossible.

b) Even though the creation of a real environment is possible, it is quite costly or dangerous (Koksal, 2015: 213).

Oren (2006), indicates that simulation technique is needed when:

- There is no real system,
- Access to the real system is not easy,
- The experiment in the real system is dangerous,
- The experiment in the real system is irritating
- Analytical solution techniques are not possible or difficult,
- The system is too slow or too fast,
- It is economically costly.

The most important feature that a good simulation needs to have is that it should be able to motivate the student and improve his creative thinking ability. In addition, it should be able to increase the effectiveness of the student and keep their interest alive in lessons (Cagiran, 2008: 21).

Simulation software based on real-life situations and clarifies some points that are abstract and incomprehensible to students to observe events that we cannot actually see (such as the internal structure of animals), control the processes that we normally cannot control, and participate in the activities that are very expensive or dangerous in real life, and allowing students opportunity to participate in such activities (Karaduman, 2008). Virtual environments created by simulation allow students to learn through trial and error. Thus, students are
encouraged to investigate existing solutions when faced with any problem. They get the opportunity to redo as many times as they want with simulation. Apart from this, they have always the opportunity to do an examination time-independently and non-spatially (Bozkurt, 2007).

1.2. Advantages of Simulation Technique

General idea about simulation is that it creates a dynamic learning environment. Students in this environment make use of visual and verbal information to evaluate the observations in the chemical system, ask new questions, and answer these questions (Pekdag, 2010). The effective use of the simulation method allows the opportunity to safe and frequent repetition and use. It can be applied to develop strategy in each area (Sarigoz & Demiralay, 2015). Financially, it is mostly cheaper than the real ones. It enables students to develop problem-solving, inventing and alternative thinking skills. It is an effective method to relate abstract to concrete (Karaduman, 2008). Simulations can freely discover the micro world that the curriculum emphasizes by giving students to change the parameters (variables) and immediately see the results of their operations. Students can interpret scientific information specified by the curriculum and compare their knowledge with this scientific information (Pekdag, 2010).

2. METHOD

2.1. The Aim of the Study

This study aims to teach the topics more effectively to students in the secondary school using the Simulation Technique. In the research, various suggestions related to the simulation technique were tried to be given by referring the opinions and thoughts of the students.

2.2. Participants

The study was conducted at Ankara-Cubuk Middle School in 2015-16 academic year. A section from 8th grade at Cubuk Elementary School was selected randomly and 32 students in the selected section were randomly divided into two groups: treatment group (16 people) and control group (16 people).

2.3. Design

In this study, experimental design with pretest-posttest control group was carried out. It aimed to teach the topic Fronts during the Independence War in an effective way in the period of discussing the topic. During the six-week teaching period, the treatment group was taught the topics of The Preparatory Period of the Independence War and the Fronts during the Independence War (West, East, South) in the name of the War of Independence Panorama by animating with the simulation technique. As for the control group, the same subjects were shown by classical method or straight expression method. The duration of the study lasted six weeks. In the study, 20 multiple-choice questions prepared by the researcher related to the topic of the Preparatory Period and Fronts during the Independence War were implemented as pretest and posttest.

The answers given to the multiple choice items by the students participating in the research were calculated by using the F test and t-test with the help of SPSS 20 statistical package program. Experimental design with pre-test and post-test control group was used in the research. Experimental design is an area of research in which the data required to be observed are produced to discover cause-and-effect relationships between variables under the control of researchers (Buyukozturk, 2000; Karasar, 2006). There are absolutely comparisons in the studies conducted within the scope of the experimental design (Karasar, 2006). The Simulation Technique is a teaching approach based on a model developed in accordance with reality in order to support learning (Demirel, 2008: 110).

3. RESULTS

The following part of this paper moves on to describe the results of the application of the simulation method and the straight expression method of the teacher candidates in the faculty of education. In line with the aim of the study, the target topics were taught to students using the Simulation Method (Experiment group) and the Direct Expression method (Control group) for 6 weeks. The level of success of the students before and after the application has been tabled and interpreted.

<table>
<thead>
<tr>
<th>The simulation method</th>
<th>Student Group</th>
<th>N</th>
<th>$\overline{x}$</th>
<th>Ss</th>
<th>Sd</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Pretest of the treatment group</td>
<td>16</td>
<td>57.19</td>
<td>19.91</td>
<td></td>
<td></td>
<td>30</td>
<td>.000</td>
</tr>
<tr>
<td>2. Pretest of the control group</td>
<td>16</td>
<td>57.19</td>
<td>17.22</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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</tbody>
</table>

Table 1. T test analysis results of the responses to the questions in regard to pretest implemented in treatment group and control group.

p>0.05
Table 1 illustrates that by looking at the results of the answers given to the test questions before the experiment was conducted, it was determined that there was no statistically significant difference (p > .05) between the pre-test data of the experiment group and the pre-test data of the control group and the t test analysis. Based on the results of the analysis, it can be said that the information students of the experiment group students and the control group have before and after the application are close to each other.

Table 2. T test analysis results of the participants’ responses to the questions in regard to pretest ad posttest implemented in treatment group

<table>
<thead>
<tr>
<th>Student Group</th>
<th>N</th>
<th>( \bar{X} )</th>
<th>Ss</th>
<th>Sd</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>The simulation method</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Pretest of the treatment group</td>
<td>16</td>
<td>57.19</td>
<td>19.91</td>
<td>30</td>
<td>.000</td>
<td>.00</td>
</tr>
<tr>
<td>2. Pretest of the treatment group</td>
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<td>81.25</td>
<td>12.45</td>
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<td></td>
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<tr>
<td>Total</td>
<td>32</td>
<td></td>
<td>19.73</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

As shown in Table 2, by looking at the results of the participants’ responses given to the multiple choice test questions which are applied after the teaching in line with the simulation method, it can be said that there was a statistically significant difference (p < .05) between the pre-test and posttest data of the treatment group and the t-test analysis results of the treatment group in favor of posttest treatment group. From the results of the analysis, it can be said that the achievements of the treatment group students at the end of the application have increased significantly.

Table 3. T test analysis results of the students’ responses to the questions in regard to pretest and posttest implemented in control group

<table>
<thead>
<tr>
<th>Student Group</th>
<th>N</th>
<th>( \bar{X} )</th>
<th>Ss</th>
<th>Sd</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Simulation Method</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Pretest of the control group</td>
<td>16</td>
<td>57.19</td>
<td>17.22</td>
<td>30</td>
<td>.743</td>
<td>.463</td>
</tr>
<tr>
<td>2. Posttest of the control group</td>
<td>16</td>
<td>61.88</td>
<td>18.43</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Total</td>
<td>32</td>
<td></td>
<td>18.86</td>
<td></td>
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</tbody>
</table>

As shown in Table 3, by looking at the results of the participants’ responses given to the achievement scale which are applied after the teaching in line with the simulation method, it can be said that there was a statistically significant difference (p < .05) between the pre-test and posttest data of the control group and the t-test analysis results of the treatment group. Based on the analysis results, it can be said that the achievements of the control group students at the end of the application did not change much.

Table 4. T test analysis results of the participants’ responses to the questions in regard to posttest implemented in treatment group and control group

<table>
<thead>
<tr>
<th>Student Group</th>
<th>N</th>
<th>( \bar{X} )</th>
<th>Ss</th>
<th>Sd</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Simulation Method</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Posttest of control group</td>
<td>16</td>
<td>61.88</td>
<td>18.43</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td></td>
<td>16.59</td>
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</tbody>
</table>

When the data in Table 4 is examined, by looking at the results of the participants’ responses given to the achievement scale which are applied after the teaching in line with the simulation method, it can be said that there was a significant difference (p < .05) between the posttest data obtained from the control group and the treatment group and the t-test analysis results of the treatment group in favor of posttest treatment group. Based on the analysis results, it can be said that the achievements of the control group students at the end of the application did not change much. Based on the analysis results, it can be said that the achievement of the students in the treatment group at the end of the application is higher than that of the students in the control group.

4. DISCUSSION AND CONCLUSION

At the beginning of the experiment, it was confirmed that there was no statistically significant difference between the groups concerning the results of the t test analysis of the data obtained from pretest implemented
in the treatment group and the control group. Based on this data, it can be said that at the beginning of the experiment, the readiness of treatment and control groups are close or equal to each other.

Panorama of the Independence War was carried out by applying a simulation technique to treatment group in the research. With this technique, using actual data, topics, events, and some cases are animated via various instructional technologies. The results of this research indicates that there as a significant difference in favor of treatment group in which the simulation method was applied. This research showed that; It is difficult to apply the simulation technique but it is an effective technique in terms of effectiveness to the student's success. Especially in history lessons, which are abstract and difficult to keep in mind, and in practice lessons, the simulation technique should be especially preferred in respect to creating an effective, lasting and meaningful learning environment. In addition, the methods and techniques should be used to perform active learning in the history lessons in which verbal expression is mostly applied. The results of the research conducted by Karatekin & Aksoy (2012), shows that the activities that will be conducted in accordance with the aims and objectives increase the success of the students. Studies have shown that teaching with simulated technique shows a statistically significant difference in student achievement (Jaakkola & Nurmi, 2008). Moreover, when the literature is reviewed, it is determined that the use of the simulation technique in social sciences is insufficient. The results of this study have shown that increasing the number of similar studies in this area will have a significant impact on student success in verbal predominant courses.

The results of the study showed that depending on the behavioral methodology, the classes that were processed with classical or lecture technique could not improve student achievement at the desired level. Thus, course contents should be enriched with methods and techniques that will enable effective learning and will increase individual success at history lesson or especially lessons in which verbal narration is used intensively. Many studies using the simulation technique (Baser, 2006; Zacharia, 2005; Taslidere, 2014) demonstrate that the use of such applications in education leads to positive results and this technique and similar methods and techniques are recommended for teaching.

The results of the data obtained from the posttest implemented in the control group in which lecture method was applied and posttest implemented in the treatment group that is provided an effective learning environment with the simulation method indicated that there was statistically significant difference in favor of the treatment group. This reveals the importance of creating an effective learning environment. Ronen & Eliahu (2000), recommended this kind of techniques in their study in which they studied the effects of the simulation technique in teaching science since they make it possible to learn permanently and effectively.

5. SUGGESTIONS

Here, the experts who develop the curriculum can be made suggestion to increase the amount of the activities that can be applied the appropriate techniques to the topics in the activity sections of textbooks. In addition, it can be proposed to be organized in-service training to teachers by Ministry of National Education in an attempt to update their information on teaching technologies and material design during seminars in order to enrich the course content.

It may be suggested that teachers closely follow the innovations in education, they learn by closely following innovations in their fields or in related fields and integrate these to their lessons, and develop themselves by closely monitoring activities such as conferences, congresses, symposiums or in-service training.

Either the subject or subjects required in teaching programs of all courses from primary education to university should be renewed in compliance with the simulation technique or the teaching programs of all courses should be rearranged considering the simulation technique.

REFERENCES


