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TRADITIONAL OR TECHNOLOGY-BASED CLASSROOMS: STUDENTS’ VIEWS ON TECHNOLOGICAL TOOLS WITHIN THE CONTEXT OF ACADEMIC MOTIVATION

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ABSTRACT

In our age, technology is becoming widespread in schools. Using technological tools in the lessons is very important in terms of academic success motivation of students. This research aims to investigate the students’ views on modern technological tools used by the teachers and these tools’ roles in academic motivation. This is a descriptive study and quantitative and qualitative research methods were used together. 101 elementary school students participated in the quantitative research and 2 students participated in the qualitative research. The research results indicate that the students have moderate attitude level towards the technology use in the class and most of the students are in favor of both technology-based classrooms and traditional classrooms. Teachers and educational administrators should not ignore students who can also learn in traditional classrooms. Therefore, teachers should be trained about how to employ technology successfully so that all of the students can become academically motivated and learn in a positive classroom environment. The results of this study will positively contribute to social sciences, educational sciences and educational organizations.

Keywords: Technology-based Classrooms, Academic Motivation, Students

1. INTRODUCTION

Teaching is a process which involves activities in a formal or non-formal educational environment. Education is configured via technologies used. Providing flexible occasions for students is very crucial. However, this cannot be so easy since it entails a smooth coordination and collaboration among the educational organizations and sectors (Laurillard, 2012). Information and Communication Technology (ICT) has become very common in teaching nowadays. As a result of this, many computer programs and software have been employed in educational environments since 1980s. With the help of Information and Communication Technology (ICT), students can solve real-life problems even in educational environments. In order to realize this goal, several simulations or multimedia software are produced by which images, sounds, texts or videos are combined together (Volman & van Eck, 2001). Employing technology in the classrooms requires educators to learn how to promote learning with technological tools. Teachers should adapt to the changes brought to the classroom with the digital technologies. In this way, learners can comprehend when the technological tools are used effectively. Teachers should really find ways which are instrumental in integrating technological tools in classrooms (Hamilton, 2015).

Motivation is a kind of situation driven by the internal or external factors which encourage or discourage people to do something. External motivation defines the situation in which the person obtains separable results. Moreover, internal motivation defines the situation which results in inherent satisfaction of the person (Cullen & Greene, 2011; Ryan & Deci, 2000). In positive classrooms atmosphere, there is a learning environment in which students can get benefit from the shared success, friendly communication and comfort. In such supportive classrooms learners become active in myriad activities. The students who are isolated can find places and become socially accepted by their peers (Pagliaro, 2014). When novel ideas or tasks are provided in the classrooms, students’ brains will be motivated. In this way, they can be physically active and realize success in the academic environment (Williams, 2009).

The importance of motivation in educational organizations is rising gradually. Consequently, technological tools employed in educational environments can be the best components that drive the students’ internal or external motivation which help the students realize academic motivation. Within this context, the purpose of this research study is to investigate the students’ views on modern technological tools used by the teachers and these tools’ roles in academic motivation. The research questions of this study are as follows:
1. What are the students’ perceptions of technology use in the class?
2. Is there a significant difference between gender and technology use in the class?
3. Is there a significant difference between grade and technology use in the class?

2. METHOD

In this part, the research design, research sample and data analysis will be explained.

2.1 Research Design

Both quantitative and qualitative research methods were used in this research. This research is a descriptive study and examines the perceptions of students on modern technological tools used in the class.

2.2 Research Sample

Demographic variables of quantitative research are presented in Table 1.

<table>
<thead>
<tr>
<th>Variables</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>47</td>
<td>46,53</td>
</tr>
<tr>
<td>Male</td>
<td>54</td>
<td>53,47</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>100</td>
</tr>
</tbody>
</table>

According to Table 1, the research sample consists of 47 female (46,53 %) and 54 male (53,47 %) elementary school students, and there are 54 students of 3rd grade (53,47%) and 47 students of 4th grade (46,53%) participants in the research study. In total, there are 101 participants in this quantitative research study. Demographic variables of qualitative research are presented in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3rd Grade</td>
<td>54</td>
<td>53,47</td>
</tr>
<tr>
<td>4th Grade</td>
<td>47</td>
<td>46,53</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>100</td>
</tr>
</tbody>
</table>

According to Table 2, the research sample of qualitative research study involves 20 females (62,5%) and 12 males (37,5%) elementary school students, and there are 17 students of 3rd grade (53,1%) and 15 students of 4th grade (46,9%) in the research study.
2.3 Data Analysis

The quantitative data collection tool is “Awareness Scale for the Technology Use in the Lessons” which was developed by Dagtekin (2016). The scale has 22 items. It is a 5-point Likert scale and has five parts: “Not at all”, “To a slight degree”, “To a moderate degree”, “To a great degree” and “Completely agree”. The qualitative data collection tool is a semi-structured interview form and has only one question: “Are you highly motivated when technological tools or traditional teaching methods are used in the lesson, why?”. Quantitative data of the research were analyzed with PSPP (v. 0.10.4) statistical tool and qualitative data were analyzed with QDA Miner (version 4).

3. RESULTS

In this part, the results of the quantitative research and qualitative research will be explained.

3.1 Results of Quantitative Data

In this part, the results of quantitative data will be presented in terms of research questions. The research questions are: (1) What are the students’ perceptions of technology use in the class? (2) Is there a significant difference between gender and technology use in the class? (3) Is there a significant difference between grade and technology use in the class?

3.2 What are the students’ perceptions of technology use in the class?

Students’ perception level of technology use in the class and the mean of perception are presented in Table 3.

| Table 3. Students’ Perceptions of Technology Use in the Class (n=101) |
|-------------------|---|-----|-----|-------|
| Variable                      | n | M   | SD  | Level |
| Students’ Perception of Technology Use in the Class | 101 | 3,25 | .64 | Moderate |

According to Table 3, the students’ perception level of technology use in the class is moderate (μ=3,25). This shows that students support the technology use in the class moderately in terms of academic motivation.

3.3 Is there a significant difference between gender and technology use in the class?

Students’ perceptions of technology use in the class according to gender variable are presented in Table 4.

| Table 4. Students’ Perceptions of Technology Use in the Class according to Gender Variable (n=101) |
|-------------------|---|-----|-----|-----|-------|
| Variable                      | Gender | n | M   | SD  | df | t    | p     |
| Students’ Perception of Technology Use in the Class | Female | 47 | 3,11 | .77 | 76 | -1.96 | .054 |
|                              | Male   | 54 | 3,37 | .49 |    |      |      |

According to Table 4, there isn’t any significant difference among students’ perceptions of technology use in the class according to gender variable [t(76)= -1.96, p>.05].

3.4 Is there a significant difference between grade and technology use in the class?
Students’ perceptions of technology use in the class according to grade variable are presented in Table 5.

Table 5. Students’ Perceptions of Technology Use in the Class according to Grade Variable (n=101)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Grade</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>df</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students' Perception of Technology Use in the Class</td>
<td>3rd Grade</td>
<td>54</td>
<td>3.17</td>
<td>.80</td>
<td>79</td>
<td>-1.42</td>
<td>.160</td>
</tr>
<tr>
<td></td>
<td>4th Grade</td>
<td>47</td>
<td>3.34</td>
<td>.39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to Table 5, there isn’t any significant difference among students’ perceptions of technology use in the class according to grade variable \[t(79)= -1.42, p>.05\].

3.5 Results of Quantitative Data

32 students were interviewed to find an answer to “Are you highly motivated when technological tools or traditional teaching methods are used in the lesson, why?”. The results are categorized into three codes. These codes are “Supporting technology-based classrooms, supporting traditional classrooms and supporting both of them”. The results of the qualitative data are presented in Table 6.

Table 6. Results of the Qualitative Data (n=32)

<table>
<thead>
<tr>
<th>Codes</th>
<th>Gender</th>
<th>Grade</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Female</td>
<td>Male</td>
<td>3rd Grade</td>
<td>4th Grade</td>
</tr>
<tr>
<td>Supporting Technology-Based Classrooms</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Supporting Classrooms</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Supporting Both of Them</td>
<td>14</td>
<td>5</td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

According to Table 6, 19 students (59.4%) support both technology-based classrooms and traditional classrooms. 7 students (21.9%) support only traditional classrooms and 6 students (18.7%) support only technology-based classrooms. Some of the students’ answers under the code “supporting technology-based classrooms” are as follows:

“I’m highly motivated when modern technological tools are used. I can understand the lesson with technological tools.”

“I find the technology beneficial because it is entertaining.”

“My motivation is very high with technological tools because I enjoy its music.”

Some of the students’ answers under the code “supporting traditional classrooms” are as follows:

“I’m motivated when traditional teaching methods are used. We can ask the teacher about the things we cannot understand. We must use the technology only after the school.”

“My motivation is really high when traditional teaching methods are used in the class because the lesson does not mean only the projector, phone or computer.”

“I’m highly motivated with traditional teaching methods in the class. We should focus on what the teacher lecture in the class.”

Some of the students’ answers under the code “supporting both of them” are as follows:

“I’m motivated when technological tools and traditional teaching methods are used in the lesson. Modern
technological tools make the lesson amusing and we can ask questions during the traditional classrooms.”

“I like interacting with blackboard in a traditional classroom. With technological tools, I can complete general revision tests.”

“I can understand the lesson in both technology-based classrooms and traditional classrooms.”

’I’m very motivated in both of them because I can learn best by writing and reading in a traditional classroom, and I can understand clearly with technological tools since they have pictures and photos.”

“I can understand the lesson with the teacher. Technological tools offer songs and games, and they help me understand the lesson better. My suggestion is that both technology-based teaching and traditional teaching should be employed during the lesson.”

CONCLUSION, DISCUSSION AND RECOMMENDATIONS

According to this study, the elementary students neither support nor oppose the technology use in the class. Students’ perceptions of technology use do not have any statistically significant difference according to gender and grade. In other words, their views do not change significantly according to gender and grade. What is more, students support both modern technology-based classrooms and traditional classrooms in terms of academic motivation.

In association with the results, Lohnes and Kinzer (2007) pointed out in their study that students are generally in favor of both traditional teaching environment and technology-supported classrooms. Papastergiou (2009) revealed that students’ views of technology in the class do not change significantly. Therefore, technology use is equally motivational regardless of gender. Dahlstrom and Bichsel (2014) pointed out in their study that there aren’t large significant differences according to demographic variables. Also, most of the students’ inclination towards technology is medium. Dagtekin (2016) also revealed that there isn’t any significant difference between gender and students’ perceptions of technology. In contrast with this study, Li (2007) found out that students support the use of technology very much in the lesson. Mistler-Jackson and Butler Songer (2000) revealed in their study that students gain high achievement and academic motivation with the technology use provided in the school.

As for the recommendations for the teachers, they can make a research to determine the students’ tendency towards technology. In this way, they can employ technology in their lessons effectively. Furthermore, they can develop lesson programs in accordance with students’ inclination towards blended learning for both technology-based classrooms and traditional classrooms. Teachers should help students learn how to use the technology advantageously in terms of academic success. In addition to this, they should be provided with in-service trainings about how to mix technology with traditional teaching environments.

As for the recommendations for educational science researchers, they can make another research with secondary school or high school students. Also, they can research the teachers’ views about their preferences for technology-based teaching or traditional classrooms. Longitudinal research may introduce different crucial results and conclusion. In addition to this, relationship between students’ perception of technology use in the class and other variables such as classroom management, students’ learning strategies, scientific process skills, etc.

REFERENCES


