Integration of WebQuest in a social studies course and motivation of pre-service teachers.

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The aim of this study was to investigate the effects of designing WebQuests on the pre-service social studies teachers’ motivation in instructional technologies and material design course. There were a total of 108 pre-service social studies teachers, 68 in treatment group and 40 in control group, involved in this study. The researchers used a Likert-type questionnaire consisting of 34 negative and positive statements. This questionnaire was designed to evaluate a situational measure of ones’ motivation. This questionnaire was used as a pre-and-post-test in the study that took place over seven weeks. It was administered to the participants by the researchers before and after the instruction during a single class period. In the analysis of the quantitative data, the paired-samples t-test, the independent-samples t-test, and ANCOVA with $\alpha = .05$ were employed. The study indicated that there was a statistically significant difference found in the participants’ motivation between treatment and control groups favoring the treatment group. In other words, students who designed WebQuest-based applications during the course showed greater motivational performance than students who did not.

In recent years, research has documented that the use of technology has become widespread in all educational areas such as, social studies education, mathematics education, science education, and so on. Most of the educators are enthusiastic about using it in their teaching (e.g., Acun, 2014; Ayers, 2014; Dodge, 2001; Halat & Peker, 2011; Heafner, 2004; Kachina, 2012; Wei & Chen, 2006; Whitworth & Berson, 2003; Yang, Tzuo & Komara, 2011). Besides, the National Council for the Social Studies (NCSS) (2002) and National Educational Technology Standards (NETS) (2000) suggests that new ideas, strategies, and technologies be utilized in teaching social studies classrooms to help students enhance their productivity and creativity.

Furthermore, learning theories and pedagogical approaches, such as constructivism, inquiry-based learning, problem solving, cooperative learning, and so on give teachers and educators a chance to design practices that have a greater possibility of succeeding (e.g., Bates, 2008; Yang et al., 2011). Nowadays, the examination and understanding of the implications of learning theories and approaches on curriculum are goals of the teacher preparation programs at most of the universities all over the world. In addition to knowledge of pedagogical theories and strategies, pre-service teachers are also expected to be competent in the use of technology for teaching and learning (e.g., NETS, 2000). According to several research findings (c.f., Diem, 2000; Halat, 2008b; Schofield, 1995; Yang et al., 2011), using technology in teaching and learning has positive effects on students’ motivation, attitudes and achievements. Moreover, the Internet has become an open resource in which everybody can find and access to a wide range of information in seconds.

Several research studies has pointed out that the Internet has a great impact on both students and teachers (c.f., Halat, 2013; Wei & Chen, 2006). It should be noted that the web contains a vast amount of valuable information but it also includes a great deal of useless information (March, 1998). The misuse of the Internet or websites concerns parents, educators, administrators, teachers and others (Mason, 2000). Dodge (2001) proposed and developed a
WebQuest model, new teaching & learning strategy, which uses the Internet in the classroom and meets the concerns of those expressed above.

WebQuest: Its Structure and Strengths

Lamb and Tclehaimanot (2005) defined WebQuest as a student-centered and project-based method to teaching and learning, supported by a variety of theories that include: constructivist philosophy; critical and creative thinking; situated learning environments; scaffolding; cooperative learning; and engaged learning. In other words, WebQuest is a computer-based learning and teaching approach in which learners are actively involved in an activity or situation, and use the Internet as a resource (i.e., Dodge, 2001; Halat & Jakubowski, 2001; Halat, 2008a). There are two types of WebQuests, short-term and long-term. According to Dodge, the instructional goal of a short-term WebQuest is the acquisition and integration of knowledge. Students who are exposed to short-term WebQuests should have gained a significant amount of new information and made sense of it at the end of the instructional process that takes place in from one to three class periods. The instructional goal of a long-term WebQuest, however, is to extend and refine the knowledge. After completing a long-term WebQuest in from one week to a month in a classroom setting, a learner would have examined a body of knowledge, transformed it in some way, and showed an understanding of the material or gained knowledge by creating something that others can respond to, on- or off-line. There is a great database, http://WebQuest.org/search/, for readers who are not familiar with WebQuests and readers can find many well-designed sample works on this database.

According to Dodge (2001) and March (2000), well-designed WebQuests – either short-term or long-term – consist of the following critical attributes: Introduction – a stage including activity within a scenario or story that is attractive, visually interesting and fun to the learners; Task – well-prepared and well-organized tasks and subtasks that are doable and interesting; Process – clear directions for learners to achieve the complex tasks; Resources – a set of information resources, well-designed, professional and reliable websites, real-time conferencing and searchable databases on the net; Evaluation – a rubric showing that the learners can evaluate by themselves comparing and contrasting what they have learned or accomplished; and Conclusion – a conclusion that provides reflection and closure (Dodge, 1997/2001; Kelly, 2000; March, 1998; Yoder, 1999).

Several research studies done on WebQuests has showed that WebQuests can be an alternative assessment tool in the assessment of student's learning; promote dependable instructional practices, enhance teachers' creativity in thinking and writing; help teachers to get an idea about the students' degree of acquisition of knowledge; enhance teachers' higher-order-thinking skills; make efficient use of necessary Internet resources; promote students' use of technology; combine educational theories and give an opportunity for teachers to implement these theories; motivate the students; support group works and support students to be active learner (e.g., Halat, 2008a; March, 1998; Vanguri, Sunal, Wilson & Wright, 2004). For instance, Vanguri et al. (2004) claimed that WebQuests give opportunities for educators to combine technology with educational theories, ideas, or insights and to practice inquiry-based learning. WebQuests also provide the opportunities to integrate on-line resources with student-centered, activity-based learning. These are the possible strengths of the WebQuests, which encourages the researchers and educators to work on this approach.

Teacher Training and WebQuest-Based Applications in Social Studies Education

According to several research findings (e.g., Acun, 2014; Ayers, 2014; Ezell, Klein, Hines & Hall, 2003; Halat, 2008a; Summerville, 2000; Tsai, 2006; Yang, Tzuo, Higgings & Tan, 2012), the WebQuests can be used for different subject areas such as, social studies education, literacy, language education, mathematics education, science education, early childhood education, health and so forth across age levels, from young children to adult learners. For instance, Acun (2014) examined the effect of web-based teaching environment including WebQuests on the
pre-service teachers’ achievement in social studies education. He stated that there were no statistically differences found between experimental and control groups. In other words, web-based teaching environment did not have positive influence on pre-service teachers’ achievement in Human Rights, Democracy and Citizenship Education.

Yang et al. (2011) conducted a research study with pre-service special education teachers regarding WebQuest development in Singapore. They claimed that both in-service and pre-service teachers were not familiar with the use of WebQuest in their teaching. In addition, they stated that most of the participants hold strongly positive views about WebQuest activities. They also said that the participants found the WebQuest useful for addressing different individuals and learning styles, and that they used more critical thinking and problem solving abilities when they were dealing with WebQuest activities. Besides, they added that the participants learned more about ways to include technology for teaching and learning after experiencing WebQuests in the course.

Yang et al. (2011) expressed that designing WebQuest activities taught the pre-service teachers to find more ways to incorporate technology for teaching and learning. The majority of the participants stated that after dealing with WebQuests, they were keen to employ more technology and web resources in teaching in the future. Furthermore, Yang et al. (2012) claimed that the pre-service early childhood and special education teachers found WebQuest helpful in enhancing their critical thinking, motivation and engagement, and creativity after learning the design of a WebQuest.

The research of Halat (2008b) with pre-service elementary school teachers demonstrated that the ones who developed WebQuests in a method course showed greater motivational performance than their counterparts who did not. Moreover, the study of Peker and Halat (2009) demonstrated that there was a statistically significant difference detected with regard to teaching anxiety between these two groups favoring the one who designed WebQuests. According to them, developing WebQuest based applications reduced the teaching anxiety levels of the pre-service elementary school teachers more than doing spreadsheet activities in mathematics teaching method course. Moreover, Halat and Peker (2011) claimed that developing WebQuest based activities had more positive impacts on the motivation of the pre-service elementary school teachers than doing spreadsheet activities in mathematics teaching method course.

Altstaedter and Jones (2009) working with undergraduate students in a foreign language course stated, "WebQuests can be an effective way to motivate students in a foreign language course by increasing their ability perceptions and values related to the Spanish language and Hispanic culture" (p. 652). Likewise, Tsai (2006) investigating the relationship between WebQuest and motivation in EFL course concluded that though there was a statistically significant positive liner relationship between student motivation and perception on vocabulary acquisition and on learning reading abilities, there was a low correlation between student motivation and perception on grammar learning.

In addition, research has documented that WebQuest has potential to improve critical and logical thinking, motivation, creativity, higher-order thinking and learning, problem solving skills and active learning (i.e., Abu-Elwan, 2007; Allan & Street, 2007; Halat, 2008b; Lim & Hernandez, 2007; Whitworth & Berson, 2002; Yang et al., 2012; Zheng et al., 2008) and to provide an environment in which teacher educators could implement the educational theories and approaches to practice (Halat & Jakubowski, 2001; Halat, 2008a; Lim & Hernandez, 2007).

Furthermore, several studies informed that social studies teachers use technology in curriculum and integrate technology into their lessons less than the other teachers (e.g., Anderson & Becker, 2001; Ravitz, Becker & Wong, 2000; Tally, 2007). Therefore, according to Bennett (2001), it was necessary for pre-service teachers to implement technological knowledge and skills within teacher education programs. Likewise, Bates (2008) and Halat (2008b) claimed that the WebQuest has potential to combine technology and development of content-rich social studies instruction, and that designing WebQuest –based applications would give opportunities for teacher candidates to gain web design abilities and implement pedagogical strategies in a virtual environment. Moreover, Halat (2008b) and Halat and Jakubowski (2001) stated that
WebQuest projects had great influence on pre-service elementary and middle school mathematics teachers' motivation in mathematics education courses. Similarly, Abbit and Ophus (2008) examined the body of research that focused on the influences of the WebQuest instructional approach on teaching and learning. They stated that the results of research pointed out that while this approach might have positive effects on group works and learners motivation when compared with other instructional approaches. Therefore, these positive outputs motivated and guided the researchers to investigate the effects of WebQuest works on the pre-service social studies teachers in an instructional technologies and material design course.

Purpose of the Study

The aim of this current study was to investigate and compare the effects of an instructional technologies and material design course in which the pre-service social studies teachers were required to design WebQuest-based applications appropriate for the level of middle school students and the other one in which the pre-service social studies teachers were required to design concrete educational materials on the motivation of pre-service social studies teachers. In particular, the following question guided the study:

What differences exist with reference to motivation between the pre-service social studies teachers who designed WebQuest-based applications and the pre-service social studies teachers who did not design WebQuest-based applications?

Method

Methods of Inquiry

The researchers followed the tenets of Quasi-experimental statistical design in the study. The researchers used a control group to compare with the experimental group, but participants were not randomly selected and assigned to the groups (Creswell, 1994; McMillan, 2000). According to Creswell (1994), the nonequivalent (pre-test and post-test) control group design model is a popular approach to quasi-experiments. In this study, while the experimental (treatment) group included the pre-service social studies teachers who were required to design their WebQuests, the control group comprised the pre-service social studies teachers who were required to design educational materials rather than WebQuest-based applications.

The researchers chose the experimental research method because “it provides the best approach to investigating cause-and-effect relationships” (McMillan, 2000, p. 207). In the study, pre-test and post-test were given to the participants before and after the instruction as an independent variable. The researchers examined the impacts of designing WebQuests on students’ attitudes towards the social science course. The pre-service social studies teachers’ motivational levels were compared in this study. Therefore, this experimental approach enabled the researchers to evaluate the effectiveness of designing WebQuest-based applications in an educational course.

Participants

In this current study the researchers followed the “convenience” sampling procedure defined by McMillan (2000), where a group of participants is selected because of availability. Participants in the study were pre-service social science teachers enrolled to material development course at a university placed in the central part of Turkey. The study took place in the fall semester, 2012. There were a total of 108 pre-service social studies teachers, 68 in experimental group and 40 in control group, involved in this study. The participants from the department of Social Studies Education were juniors.
Instrument

In this study, the data collection processes began with giving the participants a questionnaire called, the course interest survey (CIS) as pre-test and post-test. The questionnaire, *Course Interest Survey (CIS)*, consisted of 34 statements categorized into four parts; Attention, Relevance, Confidence and Satisfaction (Keller, 1999). Using a likert-type rating scale including statements, some positive and some negative, relating to the attitude being measured, this questionnaire was administered to the participants for 20 minutes. The course interest survey is designed to evaluate a situational measure of students’ motivation in a specific classroom setting. The goal of this instrument is to investigate how students are motivated, or expected to be, by a particular setting. In the study, the pre-service social studies teachers in both groups met four hours instruction in a week and the study was completed in seven weeks. The reliability estimate of CIS obtained by using Cronbach’s alpha measure was .89 for the total scale.

Instructional Procedures

The study was conducted in an instructional technologies and material design course in which the pre-service social studies teachers were required to design educational teaching and learning materials based on the Talim Terbiye Kurulu Başkanlığı (TTKB) (2009) curriculum standards for each grade level of middle school students. The aim of designing educational materials was to help students understand the topics easily or comprehend the concepts in difficult topics. This would give pre-service social studies teachers opportunities to refine their knowledge, gain new knowledge, discover students’ difficulties or misconceptions about a topic, try to use technology in social studies, and so on. The researchers chose to use the WebQuest as an opportunity for the pre-service social studies teachers not only to learn how to design a website but, more importantly, to develop engaging, appropriate pedagogical strategies for the use of internet in social studies education. Moreover, they had a chance to implement their pedagogical and content knowledge in a virtual environment with WebQuests before going into the classes. These were the main objectives of the course offered to the pre-service teachers in the study.

While the participants in the control group were required to design concrete educational materials except for WebQuests, the participants in treatment group were required to design WebQuest-based applications as a group project including two persons in addition to other course requirements mentioned above.

WebQuest Designing Procedure

None of the participants in the study was familiar with WebQuest and comfortable with the use web-page editors. At the beginning of the study, the researchers introduced a web-page editor, Microsoft FrontPage, explained the components of good WebQuests, and showed the pre-service social studies teachers how to design one. After becoming familiar with the structure and preparation of a WebQuest, two students in each group worked together and chose a topic in social studies such as, culture and tourism, the Lydian, regions and agricultural products, climate and vegetation, trade and the silk road, sultans, technology from past to present, revolutions of Ataturk, earthquake zones in Turkey, natural disasters, cities and population distributions, and so forth. Each group wrote their stories or scenarios adapted from cartoon movies, such as Harry Potter, Smurfs, Keloglan, Tsubasa, Popeye, and so on to a social study topic that they chose.

The pre-service social studies teachers designed their teaching or learning materials that were appropriate for middle school students’ levels. Then, each group member searched on the Internet to find reliable websites in order to fulfill their needs. After the collection of all necessary resources and materials, each group designed their WebQuest portals on which students were supposed to follow the given instructions and complete the assigned tasks to
learn the topic. All group members contributed to the groups’ WebQuest. Each member of a group chose a different task in their project. After the process of designing WebQuests in seven weeks, each group presented their WebQuests in the classrooms and shared their opinions about them.

**Test Scoring Guide**

The Course Interest Survey (CIS) Scoring Guide: The response scale ranges from 1 to 5. According to this scale, the minimum score is 34 on the 34-item survey, and the maximum is 170 with the midpoint of 102. The minimums, maximums, and midpoints vary for each subscale because the numbers of item distributions are not the same as shown below. Keller (1999) also gives an alternative scoring method that is to find the average score for each subscale and the total scale instead of using sums. For each respondent, divide the total score on a given scale by the number of items in that scale. This converts the totals into a score ranging from 1 to 5 and makes it easier to compare performance on each of the subscales. He noted, “Scores are determined by summing the responses for each subscale and the total scale. Please note that the items marked reverse are stated in a negative manner. The responses have to be reversed before they can be added into the response total” (p. A-41).

**Data Analysis**

In the analysis of the data, firstly the researchers used the independent-samples t-test statistical procedure with $\alpha = .05$ on the participants’ pretest scores from Course Interest Survey to find out whether there were any differences between the motivational levels of treatment and control groups. This t-test procedure indicated means score differences in terms of motivational level between the two groups favoring the treatment group. Then, scores from the CIS were compared using one-way analysis of covariance (ANCOVA) with $\alpha = .05$, which is a variation of ANOVA, to adjust for pretest differences that existed between control and treatment groups. In other words, because of the initial differences in regard to students’ motivational levels between the groups, ANCOVA was used to analyze the quantitative data in the study.

In the analysis of the data, the pretest scores from the Course Interest Survey served as the covariates in the analysis of students’ motivation by WebQuests. The statistical procedure, one-way analysis of covariance, enabled the researchers to compare the motivation level of each group. Moreover, the researchers used the paired-samples t-test with $\alpha = .05$ to determine the mean differences between pre-test and post-test scores of pre-service social studies teachers in each group separately based on the CIS. The paired-samples t-test procedure compares the means of two variables for a single group. It computes the differences between values of the two variables for each case. This also helped the researchers see the impacts of instruction on participants’ motivation for each group.

**Result**

What differences exist with reference to motivation between the pre-service social studies teachers who designed WebQuest-based applications and the pre-service social studies teachers who did not design WebQuest-based applications?

Table 1 indicates the descriptive statistics and the paired-samples t-test for the pre-service social studies teachers’ motivation based on the CIS scores, and shows that there is a change in the participants’ motivation between pre- and posttest scores for both groups. In addition, according to the results of the independent-samples t-test, there is a statistically significant difference on the pretest scores between treatment and control groups favoring the treatment group.
Table 1

**Paired-Samples T-Test for Students’ Motivation Based on the CIS Scores**

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Pretest M</th>
<th>Pretest SD</th>
<th>Posttest M</th>
<th>Posttest SD</th>
<th>Posttest Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>68</td>
<td>128.59</td>
<td>16.6</td>
<td>133.91</td>
<td>15.13</td>
<td>133.19a 1.54</td>
</tr>
<tr>
<td>Control</td>
<td>40</td>
<td>124.93</td>
<td>18.5</td>
<td>126.50</td>
<td>19.07</td>
<td>128.58a 2.01</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. a: Evaluated at covariates appeared in the model: Pre-motivation =127.23,*

*:Estimated Marginal Means, CIS: Course Interest Survey.

Table 2

**ANOVA for Students’ Motivation Based on the CIS Scores by WebQuests**

<table>
<thead>
<tr>
<th>Sources</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F-statistic</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>12449.40</td>
<td>1</td>
<td>12449.40</td>
<td>76.53</td>
<td>.000</td>
</tr>
<tr>
<td>Group</td>
<td>653.37</td>
<td>1</td>
<td>653.37</td>
<td>4.01</td>
<td>.048</td>
</tr>
<tr>
<td>Error</td>
<td>17080.06</td>
<td>105</td>
<td>162.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1889020.00</td>
<td>108</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. α = .05, p < .05, CIS: Course Interest Survey.

However, table 2 demonstrates the analysis of covariance (ANCOVA) for both groups with reference to the pre-service social studies teachers’ motivation, and is based on the Course Interest Survey. It indicates a significant main effect for the participants who were required to design WebQuest-based applications, \( F (1, 108) = 4.02; p=.048 < \alpha = .05 \). Moreover, table 1 displays that the pre-service social studies teachers who developed their WebQuests outscored the ones not required designing WebQuest-based applications, [the mean score of the treatment group is 133.19a, and the mean score of the control group is 128.58a].

Discussion and Conclusion

This current study denotes that designing WebQuest-based applications in comparison to designing other types of educational materials suitable for the level of middle school students had greater impacts on the motivation of the pre-service social studies teachers in an instructional technology and material design course. This finding is lined up with the reports of Halat (2008b) who found that the pre-service elementary school teachers who designed WebQuest-based applications in a mathematics teaching method course demonstrated a better motivational performance than the others who did not design WebQuest-based activities in their course work. Similarly, the result of the current study is not in contrast with the argument of Schofield (1995) who asserted that using technology in teaching and learning has positive effects on students’ motivation, attitudes and achievements. Furthermore, the findings of Yang et al. (2012) indicate that the pre-service early childhood and special education teachers found WebQuest useful in fostering their critical thinking, motivation and engagement, and creativity after learning how to develop a WebQuest. This promotes the result of this current research. The finding of the study is also lined up with the claim of Heafner (2004) stating, “effective technology integration offers opportunities to enhance social studies instruction and to increase student motivation while preparing students with the knowledge, skills, and values necessary to become good citizens, which are the fundamental goals of the social studies” (p.49).
Moreover, the finding of this study supports the recommendation of NCSS (2002) stating that pre-service social studies teachers should be able to use technology in class efficiently that encouraged the educators in social studies teacher preparation programs to include technology in method courses. Similarly, Bennett (2001) stated that it was prominent for teacher candidates to learn and have both the necessary skills and conceptual understanding the value of technology in education. The authors of this study took this advice as an incentive for this research study that taught the pre-service social studies teachers how to use technology in teaching and combine pedagogical strategies with technology in social studies method courses. The participants of this study had an opportunity to practice their pedagogical and content knowledge in different ways in a WebQuest environment. Even though they had difficulties at the beginning of study, then they overcame their difficulties with the support of the researchers because none of the participants were familiar with WebQuest and none of them had this kind of experience in their educational life. At the end of the semester, they successfully completed their WebQuest projects and they made presentations in the classes and shared their views with their peers. Mostly, they stated that they had a hard time with the design of WebQuest, but they were happy with the results that were fruitful for them. They claimed that they would use WebQuest in their future teaching. These outcomes are not in contrast with the claim of Bates (2008) stating that there were several challenges inherently integrating technology and social studies methods. But, “there is a potential for learning how to use web design as a part of social studies instruction, and that given the right support, teacher candidates are capable of taking the technology in hand to design inquiry-based social studies learning opportunities for their future students” (p.18).

Furthermore, although this study is not about mathematics education, the outcomes of the current study support the findings of research studies carried out by Halat and Jakubowski (2001) and Halat (2008b) who concluded that doing WebQuest-based activities gave the pre-service elementary, middle and secondary mathematics teachers an opportunity to implement their pedagogical and mathematical content knowledge in a different way, showed them how to adapt technology in their teaching and taught them how effectively the Internet and other programs could be used in the classrooms. Likewise, Yang et al. (2011) said that designing WebQuest-based applications positively affected the pre-service special education teachers stating that after dealing with WebQuest, they were eager to use more technology and web resources in their future teaching. Besides, Alstaedter and Jones (2009) claimed that WebQuest could be an influential way to motivate undergraduate students in a foreign language course.

The result of this study also supports the claims of Stipek (1998) and Middleton and Spanias (1999) who stated that carefully structured instructional design including clear and meaningful task activities and level of difficulty had great effects on students’ achievement and motivation in teaching and learning because WebQuests comprise well-designed and meaningful task activities in its structure.

In brief, this study pointed out that there was statistically significant difference detected with reference to motivation between the treatment and control groups favoring the treatment group. In other words, the pre-service social studies teachers who designed WebQuest-based applications in an instructional technologies and material design course indicated a greater motivational performance than the others who did not design WebQuest-based applications in their course work.

Implications and Limitations

According to Tally (2007), meaningful technology integration in social studies education has not been relatively fast to meet the expectations of a digitized democratic and productive society in 21st century. Therefore, policy makers should invest a great amount of money on this issue, and social studies educators and researchers should spend considerable amount of time and work hard on the integration of technology into social studies classrooms. For instance, use of technology such as, online simulations, digital sources, and WebQuests in teaching and learning in social studies classrooms may empower students as producers of knowledge, ideas,
or new concepts rather than consumers of knowledge, ideas, or concepts is perhaps enough to increase their consciousness towards social issues, problems, and so forth in society (Ayers, 2014; O’Brien, 2010). Although few studies (e.g., Abbit & Ophus, 2008; Acun, 2014) indicated that web-supported environment including WebQuests have little positive impacts on student achievement in social studies education, several research studies (e.g., Altstaedter & Jones, 2009; Halat & Peker, 2011; Tsai, 2006) showed that WebQuests have great effects on the motivation of pre-service teachers. These claims support the result of the current study which implies that designing WebQuest-based applications at undergraduate level educational courses may have prominent effects on the motivation of the pre-service social studies teachers in teaching and learning. This current study highlighted the importance of recommendations made by NCSS (2002) expressing that new educational strategies and technologies be implemented in social studies education classrooms.

According to the reports of several research studies (Anderson & Becker, 2001; Ravitz et al., 2000), social studies teachers integrate technology into their classrooms less than the other subject areas of teachers. So, the finding of this current study encourages not only the pre-and in-service social studies teachers, but also the teacher trainers to adapt the use of technology in their courses, and advises the administrators of teacher preparation programs at universities to support their teaching staff with necessary technological devices and software. In other words, this practice would be one of the best examples that show nice implementations of technology integration into the social study classrooms.

Moreover, research has shown that constructivism and technology play prominent roles in students thinking and learning (e.g., Ayers, 2014; Hooper & Hokanson, 2000; Vanguri et al., 2004). Using a constructivist approach in teaching and learning in social studies contains the facilitation of inquiry learning. At this point, WebQuest comes to mind as an example because it has been defined as a student-centered and project-based approach to teaching and learning, which is supported by a variety of theories including the following areas: constructivist philosophy, critical and creative thinking, situated learning environments, cooperative learning, and engaged learning. Consequently, WebQuests might provide an opportunity for social studies educators to implement in the meaningful integration and implementation of technology and theories into social studies classrooms. The implementation of this current study might be a good example for social studies educators to combine technology with educational theories, ideas, or insights and to practice inquiry-based learning, and to integrate on-line resources with student-centered, activity-based learning.

There were couples of limitations in the study. At the beginning of the study, the pre-service social studies teachers had insufficient knowledge with the webpage creators such as FrontPage, Publisher, and so on, and development of a WebQuest. They also had less desire to complete their project because of the fact that they had a hard time to find professional, well-designed websites. The participants found good websites but they required membership to access the information on the net. Besides, the lack of language limited the use of well-qualified internet-resources written in different languages in their projects. The finding of this study cannot be generalized to other pre-service social studies teachers in different universities and countries because they might have different educational and technological facilities.

Future Research

Most of the research studies regarding the implementation of WebQuest deal with student motivation. Therefore, one might conduct research studies that focus on the effects of WebQuest on the student accomplishment at different school levels in social studies education. Moreover, one might conduct qualitative researches in order to get more information about the development process and implementation of WebQuest in social studies education.
References


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