DISSERTATION

JORDANIAN SOCIAL STUDIES TEACHERS' ATTITUDES AND THIER PERCEPTIONS OF COMPETENCY NEEDED FOR IMPLEMETING TECHNOLOGY IN THEIR CLASSROOMS

Submitted by

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ABSTRACT

JORDANIAN SOCIAL STUDIES TEACHERS' ATTITUDES AND THIER PERCEPTIONS OF COMPETENCY NEEDED FOR IMPLEMETING TECHNOLOGY IN THEIR CLASSROOMS

This study used a cross-sectional survey design to examine the attitudes of Jordanian seventh to twelfth-grade social studies teachers toward technology, and their perceptions of the competency needed for implementing technology in their classrooms. It also explored the relationship between teachers' attitudes and their percptions of competency for implementing technology.The convenience sample of Jordanian social studies teachers (n = 221) was a blend of male (n = 135) and female teachers (n = 86). Results indicated that teachers with relatively high positive attitudes toward implementing technology were far more likely to have high perceptions of competency needed for implementing technology in social studies classrooms in the country of Jordan. Furthermore, the youngest male teachers had higher attitudes towards implementing technology than the youngest female teachers, while the oldest male teachers had less positive attitudes than the oldest female teachers. The result of the study provides information that is useful to social studies educators, professional development leaders, national policy makers and teachers of social studies who are interested in understanding the factors that affect technology use in social studies classrooms in Jordan.

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CHAPTER ONE: INTRODUCTION

Technology is basically considered as a procedure or tool that people use to make life easier and better. Herschbach (1995) defined technology as "organized knowledge for practical purposes" (p. 31). Also Kimble (1999) stated that technology's "pervasive use across almost all aspects of modern life including business, industry, communication, and entertainment warrants continued efforts on the part of educators to prepare students for participation in a technological world" (p. 1). During the past decade, generous investments in educational technology have helped prepare students to meet the needs of the workforce. Such technological investments are visible in most classrooms today that have an appropriate level of access to technology. It is clearly evident as well that most teachers are qualified to use technology for classroom instruction. Technology is now considered an intrinsic part of high-quality education for all students and for their academic achievement. Numerous researchers have emphasized that technology integration promotes problem-solving and higher-order thinking (Hopson, Simms, & Knezek, 2002).

Technology standards set by the International Society for Technology in Education (ISTE) has reinforced this principle. ISTE has standards not only for students, but also for teachers and administrators. These standards are called the National Educational Technology Standards (NETS) (Education, 2007). By and large, the U.S. Department of Education is adopting and funding the NETS standards.

Today, innovative digital technology tools are a part of the educational technology landscape. However, Gorder (2008) stated, "Effective integration of technology is the result of many factors, but the most important factor is the teachers' competence and ability to shape instructional technology activities to meet students' needs" (p. 1).

Gorder (2008) studied teacher perceptions of instructional technology and how they impact technology integration. Her study compared the integration of technology based on gender, grade level taught, teaching experience, and other categories. The results showed that teachers used technology for professional productivity, and to facilitate and deliver instruction, but they did not integrate it well into teaching and learning. There was also a significant difference in technology integration and use by grade level, with teachers in the secondary and high schools using more technology than those at the elementary level.

Further investigation of the literature shows that different variables impact teachers' abilities to integrate technology. In a study conducted by Miranda and Russell (2011), The findings suggested relationships between several factors for teacher-directed technology use in the classroom. These factors included: teacher experience with technology, positive technology beliefs, technology obstacles, pressure in technology use, the principal's technology use and discretion, and the technology standards. At the classroom level, results suggested that the strongest predictor of reported teacher-directed technology use was the teacher's belief about the instructional benefits of technology.

Teachers' beliefs concerning the use of technology have received a considerable amount of coverage in current research. Because of the importance of teachers' beliefs, Ertmer (2005) offered suggestions to incorporate technology in ways that would impact teachers' pedagogical beliefs and perhaps increase their use of technology. Ertmer (2005), recommended having a conceptual overview of teacher beliefs as a vital first step. Teachers should introduce technology as a tool to accomplish tasks that are relevant (e.g., communicating with parents, locating resources for instruction, creating student assignments). Once teachers start to value the tool, then the emphasis can shift to its potential for accomplishing or enriching other tasks.

Liu, Jones, and Sadera's (2010) study agreed on the topic of teachers' perceptions. They concluded that teachers' perceptions of instructional practice were related to their familiarity with and knowledge of theory and research about the instructional practice. Teachers' experiences with an instructional strategy and their knowledge about it also correlated to their willingness to implement that new practice. According to the data collected by Liu et al. (2010), relationships found to impact teachers' to use a new practice were: teaching experience, familiarity, theory and research knowledge, and perceptions of instructional practice.

Furthermore, in another recent study, Holden and Rada (2011) investigated how users come to accept and use a given technology. The findings emphasize the need to evaluate user characteristics as contributors to the user's perception of technology. Teacher acceptance, satisfaction, and perceived usability of innovative tools are crucial to the diffusion of these technologies. In another study, Slay, Sieborger, and Hodgkinson-Williams (2008) also reiterated that teachers need to be competent users of a particular technology before they use it for instruction. In addition to training in technological skills, teachers also need the opportunity to practice those skills.

In summary, past research suggests that several variables such as beliefs about the benefits of using technology, the availability of technology, teachers' competence using technology, personal knowledge and experience, ease and obstacles of use, support and expectations from administration, and technology standards impact the integration of technology within the classroom.

Problem Statement

Research on educational technology implementation within K-12 is pervasive; however, research on technology education implementation in content areas such as social studies is limited. In contrast, educational technology research in the United States has been moving toward examining the impact of technology implementation in specific content areas.

As the role of technology in education is rapidly increasing worldwide, developing countries' have begun responding with technology utilization and implementation (Abuhmaid, 2008). For example, the Jordanian government's commitment to excellence in education has been a driving force in spite of the challenges in infrastructure, resources, and planning (El-Hmaisat, 1998; Rumzan, Chowdhury, Mirza, & Idil, 2010). In addition to Jordanian governmental efforts to equip schools with technology (i.e., computers and Internet connections), there is also gradual growth in the use of technology in Jordanian homes (Khaswneh & Al-Awidi, 2008).

Other research has pointed out that developing countries face challenges in implementing educational technology. The lack of technological infrastructure (i.e., computers, Internet connectivity) and the lack of faith in the importance of such technology, are some of these challenges (Dirani & Yoon, 2009), explained that developing countries may be able to become competitive in the global economy only through the adoption of "e-learning, the field of open and distance learning (ODL), and modern learning and teaching concepts to the culture and educational systems of the region" (p. 14).

While some research has examined developing countries' responses to technology implementation and e-learning (Abbad, Morris, & de Nahlik, 2009; Rumzan et al., 2010), limited research has examined the extent to which teachers integrate technology into teaching. This

research examined teachers' attitudes and perceptions concerning technology use and the integration of technology into teaching. In Jordanian schools, current research on the integration of technology has focused on teachers across disciplines and grade levels. In addition, research suggests Jordanian teachers' use and integration of technology is very low (Al-Zaidiyeen, Mei & Fook, 2010). For these reasons, the current study examined the attitudes of Jordanian seventh to twelfth-grade social studies teachers toward technology, and their perceptions of competencies needed for implementing technology into their classrooms in regards to their age, gender, teaching experience and grade level taught.

Purpose of the Study

The overall purpose of this study was to examine the attitudes of Jordanian seventh to twelfth grade social studies teachers toward technology, and their perceptions of the competency needed for implementing technology in their classrooms. This current study was guided by Al Ghazo's (2008) research, in which investigated the attitudes of faculty members in Mu'tah University in Jordan regarding integration of technology into classrooms. The current study differs from Al Ghazo in that the participants were social studies teachers in basic upper level and secondary schools instead of university faculty members.

Research Questions

The overarching research question was directed at examining the attitudes of Jordanian seventh to twelfth-grade social studies teachers toward technology and their perceptions of competency needed for implementing technology into their classrooms. Specifically, the study addressed the following research questions:

Q 1**:** Is there a statistically significant difference in the attitudes of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels

toward implementing technology into their classrooms?

Q 2**:** Is there a statistically significant difference in the perceptions of competency of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementing technology into their classrooms?

Q 3**:** Is there an association between the attitudes of seventh to twelfth-grade social studies teachers and their perceptions of the competency needed toward implementing technology into their classrooms?

Q 4**:**

(A) Is there a statistically significant main effect or interaction between age and gender of social studies teachers and their attitudes toward implementing technology into their classrooms?

(B) Is there a statistically significant main effect or interaction between gender and teaching experience of social studies teachers and on their attitudes toward implementing technology into their classrooms?

Q 5:

(A) Is there a statistically significant main effect or interaction between age and gender of social studies teachers on their perceptions of the competency needed toward implementing technology into their classrooms?

(B) Is there a statistically significant interaction between gender and teaching experience of social studies teachers and on their perceptions of the competency needed toward implementing technology into their classrooms?

Q 6: How well does the combination of teaching experience, grade-level taught and gender, predict teachers' attitudes toward technology into their classrooms?

Q 7: How well does the combination of teachers' attitude, teaching experience, grade level taught and gender predict teachers' perceptions of the competency needed toward implementing technology into their classrooms?

Defnitions of Terms

Computer Attitudes: An attitude is "the predisposition of an individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner" (Halloran, 1970, p.192)

Perception: The process of using one's senses to develop thoughts or beliefs about an object (Hamlyn, 1969).

Technology: Technology is defined from the greek, techne which is related to doing, or the knowledge of doing. Technology, "as a distinctive phenomenon refers to the use of knowledge, materials, tools, techniques, systems, and sources of power to make life easier and better and to work more productively and efficiently" (Cemalettin, 2006, p.15). For example, solid state circuits, miniaturization, robotics, communication, software, new ways to do things via computers, latest state-of-the-art processes, computer hardware, software skills needed to have a competitive edge, applications of computers, computer-based information (Rothwell & Kolb, 1999).

Technology integration: The practice of using new and emerging technology in ways that are both curriculum-based and future-oriented to create meaningful learning experiences and to increase technology literacy.

Social studies: Is the integrated study of the social sciences and humanities to promote civic competence.Within the school program, social studies provides coordinated, systematic study drawing upon suchdisciplines as anthropology, archaeology, economics, geography, history, law,

philosophy, politicalscience, psychology, religion, and sociology, as well as appropriate content from the humanities, mathematics, and natural sciences. The primary purpose of social studies is to help young people develop the ability to make informed and reasoned decisions for the public good as citizens of a culturally diverse, democratic society in an interdependent world (NCSS, 1994, p. 3).

Social Studies Teachers: In this study, social studies teachers refer to grades 7-12 social studies teachers who have completed Technology Education Survey (TIES).

Limitations of the Study

There are two main limitations to this study. First, the sample was limited to seventh to twelfth grade social studies teachers in Amman, Jordan. This limits the generalization of the research findings to other populations. Second, the survey information is self-reported data. Therefore, the results might be affected by the teachers' social desirability to provide desired information rather than accurate information.

Delimitations of the Study

This study was confined to seventh to twelfth-grade social studies teachers at public schools in Amman, Jordan. The study was delimited to those teachers who were available from the Fifth Directorate. The Fifth Educational Directorate was chosen for the availability to use professionals who were able to deliver the survey packets and retrieve them after they were completed.

Researcher's Perspective

I began interest in the educational field while getting a bachelor's degree from Yarmouk University, Jordan. In 2000, I obtained a master's degree in Education from Huddersfield University, United Kingdom. My plan at the time was to continue study in the area of education

focusing on the educational technology field in such areas as the social studies context. Then, my chance came to further my education in the field of Education in the U.S. I jumped at the opportunity to obtain a doctorate and continue my research interests.

As Van Manen (1990) said, "to do research is always to question the way we experience the world" (p. 5). This has certainly been my experience, doing research and studying in the United States has helped me shed more light on best theory and practices of technology and provided me with real contexts and settings at the local school and district level, and also in higher education. As an Educationist and coming from Jordan, it is clear that we need more research studies to further the development teachers' technology skills in Jordan. During my journey of study in the U.S., I was able to visit some schools in Fort Collins, Colorado where my children attended. I observed and followed the development of excellence in the commitment and discipline of technology used in the schools in general, and the classrooms in particular. I noticed different technology tools that were hardly recognizable in Jordan. While educational technology is not something new in Jordan, I hope to contribute new ideas and approaches to the development of new skills in order to help Jordanian teachers to implement the technology available into their teaching at a time when technology is becoming an essential part of our lives.

CHAPTER TWO: REVIEW OF LITERATURE

This study examined the attitudes of Jordanian seventh to twelfth-grade social studies teachers' attitudes toward technology and their perceptions of competency needed for implementing technology into their classrooms.

The literature review is divided into six parts. The first section explores the context of the research project; specifically, providing an overview of the research on educational technology in Jordan, the Middle East, and other parts of the world. The second section focuses on technology integration in the classroom in general, and the social studies classroom in the United States in particular. The third section examines research on the attitudes and perceptions of technology implementation in general, and perceived competency in particular. The fourth section investigates technology integration in the classroom. The fifth section focuses on the benefit of integrating educational technology. The sixth and final part explores the challenge of computer technology integration.

Current Research on Educational Technology in Jordan and the Middle East

Located in the Middle East, Jordan is an Arab country with a Muslim majority and a Christian minority. It is situated South of Syria, South West of Iraq and Saudi Arabia and East of Israel and Palestine. Both the rich ancient and modern history of Jordan shapes its geopolitical; its relations with neighboring states as well as governance at the local level. Regional conflict as well as local political tensions constantly altered its socio-political trajectory during the course of the last fifty years. In parallel, the school system went through continuous and rapid change. (Alazzi, 2008).

Alazzi, (2008) outlined different time frames that have shaped social studies curriculum in Jordan.These key historical and political events can be divided into four main time frames: (a) 1921–1951; (b) 1952–1977; (c) 1978–1989; (d) 1990 to the present.

The 1921-1951 phase marked the Israeli Arab Conflict of 1948, a tension that had its socioeconomic and political impact from one side and the paved way for progress in social studies in Jordan. Politically, the British mandate put the Jordanian sovereignty under Britain rule. Both social studies and the educational curriculum were controlled by the colonizer. With that, the curriculum advanced British colonial interests and policy. The fields of history and geography were of main interest (Alazzi, 2008).

Between 1952 and 1977 further social studies development took place. By then Jordan gained its independence. The Ministry of Education started overshadowing development and restructure of various educational fields and social studies. The ministry added six new subjects to social studies. These were Arabic history, Arabic geography, the Arab world, philosophy, sociology, childhood education, and women's education. The main teaching methods of this era relied heavily on lecturing and rote memorization. As it could be deduced from the new subjects, social studies curriculum focused Arabic language and Arabic identity. Countries with special diplomatic relations with Jordan were given more attention (Alazzi, 2008).

During the third milestone in social studies development, from 1978 to 1989, the Ministry of Education relied on expert knowledge and empirical research for the textbook write up and integration in the curriculum. Ministry of Education reduced the number of social studies subjects from eight to only three, namely history, geography, and Arabic society. As opposed to the second phase, more focus was on quality than quantity during this period. History subject incorporated larger units, such as Arabic, the history of Islam and modern world history to count

a few. The Palestinian problem and Israeli-Arab conflict were a major area of struggle, which in turn, had their weight on the nation's political economy. Geography subject covered the Arab world, Europe, North and America (Alazzi, 2008).

The Gulf War of 1990 had its impact on social studies curriculum development in Jordan. This war brought about an unprecedented disaster and a disruption of regional exchange; Jordan's diplomatic relations with some neighboring states were jeopardized since the country took a neutral position on the war.

At the same time, three key political strategies have contributed to an improvement in Jordan's economy. Jordan had invested in peace pacts with neighboring states; initially Jordan brokered peace between Palestine and Israel then between the Jordan itself and Israel. This bold move came with substantial economic back up from the United States to Jordan as one of the mediators in peace making. The third move involved a World Bank's excuse to Jordan from debts and a deferment to the remaining debts (Alazzi, 2008).

This also came with positive and negative consequences on social studies curriculum. The draw back of such change was manifested in the social studies curriculum inability to effectively handle escalation of events; especially when it came to stressing critical thinking and reflexivity. However, geopolitical events contributed to the emergence of a new social studies curriculum, amongst which civic egagement and citizenship (Alazzi, 2008).

In spite of the rapid political and historical changes, the Jordanian government has responded well to the sweeping demands of the twenty-first century. With the advent of the Information Age, the government has been swift in its support of schools by providing planning, resources, and modern educational technology (Abuhmaid, 2008). For example, in 1999, King Abdullah II of Jordan started a mandate to install technology in all public and private schools in

the country in an attempt to make it the "IT hub" of the Middle East (Jordanian Ministry of Education, 2003). This initiative also emphasized the idea of improving professional development for both teacher and student educations (Jordanian Ministry of Education, 2002). Thus, the Ministry of Education has the responsibility to train and prepare all K–12 teachers to integrate technology into their classrooms in order to achieve their teaching goals.

Ministry of Education teacher training has been faced with stiff challenges because teachers lack the awareness of effective technology integration, which impacts its implementation (Abu Samak, 2006). While governments, school administrations, and school boards continue to support the provision of educational technologies, the extent to which teachers integrate technology in the classroom is not clear (Hixon & Buckenmeyer, 2009).

Al Zaidiyeen, Mei, and Fook (2010), examined teachers' attitudes and levels of technology use in classrooms in rural secondary schools in Jordan. The study revealed the value of teachers' attitudes toward the use of technology in education. The study sample was randomly assigned from 650 teachers. A total of 460 teachers responded to the questionnaire to measure the level of information and communication technology, and teachers' attitudes toward information and communication technology (ICT) use. The results showed that teachers' use of technology was low, even though the teachers had positive attitudes toward technology use. The study did find a positive relationship between their level of ICT use and their attitudes toward ICT.

Al Ruz and Khasawneh (2011), conducted a study to examine Jordanian pre-service teachers and technology integration. The sample of this study comprised 1,008 pre-service teachers. All participants were selected from the teacher education program at a public university in Jordan. All participants were seniors in their final semester prior to graduation, and the study

sample was made up generally of females (83%). The results showed that pre-service teachers needed to see a high level of modeling by faculty members in order to achieve a high level in technology self-efficacy, a high level of technology proficiency and a high level of perceived usefulness of technology. The study's conclusion was that pre-service teachers need to make major efforts to integrate technology within their classroom.

Furthermore, Kassaimih (2006) conducted a qualitative study to investigate Jordanian teachers' perceptions and attitudes of technology integration and the value of technology to education in public schools in Jordan. This study utilized interviews and observations to understand more in-depth about teachers' perceptions and experiences toward using technology in their classrooms. The sample consisted of four schools that were selected randomly from four categories of elementary, secondary, urban, and rural. The findings indicated that there was a lack of time for teachers and students to use technology. All four categories of teachers learned how to use computers and the Internet on their own and in pre-service teacher courses. Another finding was the lack of resources available for teachers. All teacher participants lacked the availability of sufficient computers. The results showed that five to seven students were assigned to each computer. Another theme that emerged from this study was the lack of support from the school administration and government agencies concerning the provision of technology in the classroom. Finally, the results showed that there were no significant differences in teachers' perceptions among the four categories. Kassimih concluded that Jordan has not yet found success in integrating technology that may allow teachers to have different perceptions and experiences with it.

In a study that targeted English language learners, Abu Samak (2006) examined the factors that may impact Jordanian English Foreign Language (EFL) teachers' attitudes toward

information and communication technology. The findings showed that Jordanian EFL teachers held positive attitudes toward information and communication technology. Also, Jordanian EFL teachers had high access to technology and moderate competency. Other factors such as age and teaching experience showed an inverse relationship between these factors and teachers' attitudes.

The integration of technology has also been studied in several Middle Eastern countries. Al Mekhlafi and Al Meqdadi (2010) studied technology integration in K-12 schools in the United Arab Emirates. The authors used a mixed method that included focus groups, interviews, and a questionnaire with a sample of 100 teachers. The findings showed that schools in the UAE were progressive at integrating technology in their classes. The teachers also used a variety of technology tools such as computers with different software, transparencies, the Internet, maps, flyers, and folded papers. Second, there were differences between male and female teachers in regard to the methods of integrating technology; female teachers used different technology tools more than the male teachers.Third, female teachers had more experience, usage, and familiarity of technology tools and applications than male teachers. Fourth, both male and female teachers at UAE Model Schools had high self-perception of their skills and competency to implement technology effectively in their classrooms. Finally, results indicated that both genders highly regarded their competencies in technology implementation.

In Egypt, Bakr (2011) examined the attitudes of Egyptian teachers toward computers. The study sample consisted of 118 public school teachers; 53 males and 65 females. The findings showed that Egyptian public school teachers' attitudes toward computers and computer use were positive. Also, the results showed no significant differences in terms of gender and teaching experience regarding the use of technology.

Erdogan (2011) investigated Turkish primary school teachers' perceptions of school culture of ICT integration in education with a sample of 1,540 primary school teachers. Results showed that the teachers' perceptions of school environments regarding the motivational and technical features were not supportive and negative. Also, results showed that the perceptions of teachers who did not own a personal computer and had little access to the Internet were found to be much more negative toward school ICT culture than those who owned a personal computer and had access to the Internet.

Additionally, Akengin (2008), conducted a qualitative study that examined the uses of information technologies in the field of social studies in Turkey. His research consisted of interviews of twenty prospective teachers studying in a social studies teaching program in Turkey. The results showed that "prospective teachers were acquainted with computers, the internet and projectors the most from among the information technologies and think that these technologies were utilized at schools and teacher training programs" (Akengin, 2008, p. 126). Akengin concluded that technology was commonly used as a teaching tool to help enhance student comprehension in Turkey. Different technologies are useful in different situations. For example, using the Internet to show images of geographical phenomenon would be helpful for students. Using a projector to display these images would be even more helpful for student comprehension.

During the research process, the interviewees were asked a series of questions about information technologies, the definition of information technology, and the use of information technologies in the classroom. Some interviewees were unable to provide a definition and use for information technology. The most common answers for information technologies used were computers, overhead projectors and the Internet. One prospective teacher in the study said, "The

Internet is an incredible bookcase, a library for me" (Akengin, 2008, p. 131). Additionally, the prospective teachers expressed that the disadvantages for using technology were that it may "results in research laziness, decrease in student participation, and it increases teacher prep time for a lesson" (p. 136).

In summary, the literature on technology implementation in Jordan and the Middle East points out several trends. First, teachers generally have positive attitudes toward using and implementing technology (Alazzi, 2008; Al Zaidiyeen et al., 2010). Second, schools in poor countries such as Jordan and Egypt lack an appropriate level of technology (e.g., not enough computers). Meanwhile, in rich countries such as the United Arab Emirates, schools are better equipped with technology, and the implementation of technology is very advanced (Al Mekhlafi and Al Meqdadi, 2010). Third, teachers' attitudes and beliefs about technology are affected by a variety of variables, such as the availability of technology, self-efficacy, technology proficiency, and perceived usefulness of technology (Hew & Brush, 2007).

Technology Integration in Social Studies in the United States

Research in the United States points out that technology integration is still lacking in spite of the technological prowess that this country enjoys. An early study by Cuban (1991) concluded that instruction had changed little, influence was limited on the structure of social studies classrooms, and that teacher-centered instruction and the use of textbooks still dominated this field. Becker (2002) and Berson (1996), noted that social studies teachers have not used technology in their teaching as well as teachers in other fields. For example, Becker and Ravitz (2001), reported that (24 %) of English teachers used computers more than twenty times during the year, compared to (17%) of science teachers and only (12%) of social studies teachers. Although recent studies have emphasized the success of using technology within the social

studies program, there has been little change in regard to teachers' practices in the social studies classroom. As the editor of *Social Education* Simpson (1999) asserted, "We are still at the early stages of identifying and evaluating the best uses of current technology in the classroom, far from the instructional and technical possibilities that will be realized in the 'cybercentury' to come" (p. 133).

Furthermore, Whitworth and Berson (2003), examined research studies from 1996 to 2001 in the three major publications of the National Council for the Social Studies: *Social Education*, *Social Studies and the Young Learner*, and *Theory and Research in Social Education*, and articles from general education journals. The authors concluded that the use of technology and Internet was not significant for the social studies classroom; however, "it is still the primary tool of facilitating students' access to the content and materials, and remain somewhat relegated to being an appendage to traditional classroom materials" (p. 483).

If the goal of civic education is to be met in the social studies classroom, Whitworth and Berson (2003) concluded that there is a need for more innovation in implementing and integrating classroom technology. Another area of research that impacts technology implementation in social studies relates to the attitudes and perceptions of teachers concerning technology implementation (p. 484).

Zaho (2004) conducted a qualitative research project to examine social studies teachers' perceptions of technology integration, their use of technology, and the impact of technology integration training on their teaching, with a sample of 17 social studies teachers in middle and high schools. Results showed that social studies teachers had different visions of technology use in the classroom. Some used it for its effectiveness, some for the enhancement of their teaching

and student learning, and others for relaxation. Furthermore, social studies teachers reported that technology integration affected their teaching.

Beck and Eno (2011), reviewed 121 peer-reviewed articles, books, and conference proceedings to determine the pedagogy of social studies education and technology integration. They concluded that technology can be used to support social studies pedagogy as traditional teaching and inquiry-based, student-centered learning, although it is probably support inquiry-based, student-centered learning.

Gardner (2011), conducted a research project by using three methods: interviews, questionnaires, and observations with social studies teachers in a rural school district in Central New York. Results revealed issues of access to technology for both students and teachers. However, technology is an imperative tool and is changing the role of the teacher. Moreover, there is still a lack of professional development training in the use of technology and it is also not clear how technology should serve in the classroom.

Attitudes and Perceptions Concerning Technology Implementation

Teachers' attitudes and perceptions concerning technology implementation cover a considerable amount of the literature on education technology. The literature points out that a wide range of variables, such as the teachers' pedagogical approach, confidence and comfort using the technology, and available technical support, to name a few, impact their attitudes and perceptions. The following literature review highlights some of the seminal studies that cover this topic.

A quantitative and qualitative study that Palak and Walls (2009) conducted in the United States examined the attitudes and beliefs of teachers concerning technology. They designed the study to answer these two questions: (a) How do teachers' beliefs relate to their instructional

technology practices? (b) How do factors other than beliefs relate to teachers' instructional technology practices? The study consisted of only teachers who were currently using technology in their classroom and who taught in technology-rich schools. They chose this sampling to limit the influences of barriers such as lack of equipment, support, and teacher comfort levels with technology. They selected 138 teachers for the survey. Sixty percent of those participating represented pre-K through sixth-grade teachers. Forty percent represented seventh through twelfth-grade teachers.

Their quantitative method consisted of two surveys. One survey measured the teachers' beliefs in teacher-centered versus student-centered learning. This survey used a five-point Likert scale. The second survey reported teachers' use of technology in their classroom. The variables involved items such as: attitudes toward technology usage, teacher confidence and comfort, technical support, general school support, ratio of students to computers, specific teacher software in use, and teaching strategies used. The qualitative method consisted of classroom observations, interviews, lesson-plan submissions, and written reflections (Palak & Walls, 2009).

Findings showed that teachers had a positive attitude about educational technology. However, the extent to which they use the technology varies. Educational practice beliefs influence this level of use. Teachers who were more in line with teacher-centered learning did not view technology as having as much impact on student learning as those who had student-centered learning beliefs. Teacher participants were comfortable with the technology and felt they had support from the administration. They felt they had good support if they had questions or needed assistance with hardware or software (Palak & Walls, 2009).

With a sample of 32 primary and secondary teachers in Eugene, Arizona (2006), conducted a study to examine the relationship among teachers' beliefs about instruction, attitudes

toward technology, and teachers' practice of integrating technology. This study showed no significant correlation between observed teacher practices and beliefs, and also no significant correlation between teacher practices and attitudes toward technology.

Another study conducted by King (1999), examined teachers' levels of computer and information technology competencies and their attitudes toward technology, and connected the teachers' competencies and attitudes toward computers to their gender, age, school type and geographic location. The sample of the study included 380 teachers in 31 schools in school district in Western Newfoundland, Canada. The in-service teachers' ages ranged from twenty to over fifty, their teaching experience ranged between two and twenty-five years, teaching at different school types, and were fairly evenly represented by gender and urban and rural location.

The results showed significant differences in the views of male and female teachers with respect to their technology competency; younger teachers were more competent in the use of technology than older teachers, and elementary teachers were less technologically competent than high school teachers. Also, the study indicated that teachers' attitudes toward computer technology is generally positive, with little differences between teachers' gender, age, and urban and rural teachers. Also, his study indicated a strong positive correlation between positive attitudes toward computers and teacher competency level.

Sa'ari, Luan, and Roslan (2005), examined teachers' attitudes and perceived competency towards information technology with a sample of 160 secondary teachers (64 males; 96 females) from three selected schools in Malaysia. The results showed that most teachers who had teaching experience ranging between nine to forteen years had positive attitudes towards information

technology. Moreover, the results indicated that teachers had moderate levels of information technology competency. Also, they lacked suitable IT skills to integrate the technology.

Kusano et al. (2013), conducted a comparison study that investigated the effects of the ICT environment on teachers' attitudes and technology integration in Japan and U.S. elementary schools. The purpose of their research was to find what factors affect teachers' attitudes toward the use of technology and how they vary between the two countries. The study sample contained 99 elementary teachers in the U.S. Teachers' attitudes were connected to their age and teaching experience of 11 male teachers and 88 female teachers in the U.S. and 67 elementary teachers in Japan with 32 male and 35 female teachers. The results showed that the Japanese teachers' gender significantly predicted teachers' perceived ease of use and usability, perceived usefulness, and attitudes toward using technology, while the U.S. teachers' gender did not. Male teachers were predicted to have higher perceived ease of use and usability, perceived usefulness and attitudes toward using technology in both countries. Also, the results showed that the U.S. teachers' age significantly predicted perceived ease of use and usability. Younger teachers were predicted to have more positive perceived ease of use and usability.

Czaja and Shark (1998), investigated age differences in attitudes toward computers. The sample consisted of 163 men and 221 women who were community-dwelling adults ranging in age from 20-75 years. Findings revealed that older people have more negative attitudes toward computer technology than younger people. Also, their study investigated age differences in attitudes toward computers as a function of experience with computers and computer task characteristics. Results found differences based on age in overall attitudes; age effects were found for the dimensions of comfort, efficacy, dehumanization, and control. The results showed that those experienced with computers had positive attitudes, regardless of age. These effects

were moderated by gender. In general, the results showed that computer attitudes were changeable for people of all age groups. However, the experience had an influence on attitude change.

Sadik (2006), examined factors influencing teachers' attitudes toward personal use and school use of computers. The sample consisted of 443 public school teachers in Egypt. The attitudes toward computer school use and personal use was connected to teachers' gender, age and teaching experience. The findings showed a significant relationship between attitudes toward personal use and school use of computers based on teachers' gender, age, and teaching experience. In sum, the findings indicated that teachers who have positive attitudes towards their personal use also have positive attitudes towards its usage in schools.

Adodo (2012) examined the combined contribution of computer self- concept, interest/attitude, and gender of Nigerian Universities pre-service teachers towards Interactive Computer Technology (ICT). The sample consisted of 240 pre-service teachers from five universities in Nigeria. Results showed a significant difference between the male and female pre-service teachers towards computer skills. Also, Nigerian pre-service teachers had high interest and positive attitudes towards ICT. The relationship between interest/attitude and competency was low, positive, but significant, as well as the relationship between gender and competency was significant.

Albirini (2006) examined the attitudes of high school English as Foreign Language (EFL) teachers in Syria toward ICT. The study investigated the relationship between computer attitudes and computer attributes, cultural perceptions, computer competence, computer access, and personal characteristics. Findings showed that teachers have positive attitudes toward Interactive

Computer Technology (ICT) in Education. Computer attributes, cultural perceptions and computer competence were the best predictors of attitudes towards ICT.

Wang (2007), examined the attitudes of faculty members toward technology and their perceptions of the competencies needed for effective integration of technology in Taiwan. The sample was 336 faculty members in 62 college education programs. The results showed significant differences between faculty members based on age. The results also revealed that faculty members had positive attitudes toward technology and see themselves as competent to integrate technology.

Abu Qudais, Al-Adhaileh, and Al-Omari (2010) conducted a study to examine the main factors affecting faculty members' attitudes towards using technology in their teaching, with a sample of 251 faculty members that were selected randomly among 22 universities (ten public and twelve private universities) in Jordan.

Results indicated no significant differences in faculty member's attitudes toward Information Communication Technologies (ICT) based on their gender, college, experience, university, and country of Ph.D. Moreover, results revealed that the faculty members had the basic knowledge and skills of using technology as well as they have positive attitudes towards using technology.

In summary, teachers had positive attitudes about educational technology and positive perceptions of technology use regarding their competency. Teachers' perceptions and beliefs were influenced by their level of technology use. Also younger teachers are more competent and have more positive attitudes than older teachers. Furthermore, computer attributes, cultural perceptions and computer competence were best predictors of attitudes towards technology.

Technology Integration in the Classroom

Gorder (2009), studied K–12 teachers who had attended a professional development program in South Dakota to examine how well those teachers integrated technology into their classrooms. The study focused on three areas: the barriers teachers face in technology integration, the professional development teachers need in order to continue to use educational technology, and the impact of professional development on the integration of technology into the classroom. A survey was given to 300 K-12 teachers. Overall, the study was able to identify that the teachers who participated were knowledgeable when it comes to working with technology. The participants felt the biggest barrier to being able to integrate technology into their classroom was time to prepare lessons. They felt they needed a large time commitment to accomplish this goal. The support the participants received was largely tied to existing technology. They felt they received the least support when it came to new technology.

Lu and Overbaugh (2009), conducted a study on teachers' perceptions concerning the barriers that prevent them from integrating technology within their classroom. The researchers believed that environment has a significant impact on teacher-technology integration. They looked at rural and urban schools, and elementary and high schools. Overall, the study showed that Virginia had a good technology-implantation program. The schools provided voluntary professional development to those who wished to increase their technology skills and usage. Teachers had a variety of technology to choose from; however, teachers in rural areas were limited more than urban schools. No significant difference for technology usage between elementary and high schools was found. Rural schools had a more difficult time getting up-to-date equipment and support.

Vannatta and Fordham (2004), investigated 170 teachers' attitudes as predictors of technology use among K–12 teachers. Results revealed that the combination of factors, including amount of technology training, time spent in the workweek, and openness to change were predictors of classroom technology use.

Ching, Hung, and Lee (2008), examined the relationship between teachers' beliefs about their instruction and uses of technology with a sample of 582 pre-service teachers. The correlation analysis revealed that constructivist teaching was significantly correlated with constructivist use and traditional use, while traditional teaching was correlated negatively with constructivist use. Moreover, a weak and negative association was shown between traditional teaching and traditional use. The results showed that constructivist teaching and traditional teaching were negatively correlated. Multiple regressions showed that constructivist use and age significantly predicted traditional use, and constructivist teaching and age significantly predicted constructivist use.

Goedde (2006) examined the best factors (ATC score, socioeconomic status, district in-service teacher variables: number of years' experience and hours of technology related professional development) that predicted pre-service teacher technology competency. The sample was 278 teachers in school districts located in Ohio during Fall 2004- Spring 2005. The data were generated from two resources: the *Assessment of Technology Competency* (ATC) retake survey, which is administered for pre-service teachers, and two additional existing sources of data for gathering information about pre-service teacher background experiences.

Findings revealed no significant correlation between pre-service teacher technology competency and average teacher years of experience and district household median income. Also, a very slight positive relationship was found between average number of teacher hours of

professional development and median household income. However, the researcher could not conclude the relationships that affect pre-service teacher technology competency. As a result, a significant regression model was not generated.

Woods, Goc Karp, Miao, and Periman (2013) examined K-12 physical educators' technology competencies and usage. The sample was 114 physical educators who assessed their perceived competency, usage of technology, the issues of technology, and where they learned to use technology. The sample were members in the Northwest District Association of the American Association of Health, Physical Education, Recreation and Dance (NWD). Results showed a significant difference for gender when physical education teachers assess their own competency of general technology. As a result, male teachers perceived themselves to have higher levels of competence than female teachers. While, no significant difference was found in terms of school level and teaching experience. Furthermore, results indicated a significant difference between school levels when teachers assess their competency of technology use specific to physical education. While no significant differences were demonstrated for gender, or years of teaching.

In summary, research on technology implementation shows that several variables, such as: the amount of technology training, time spent on technology, openness to change, time used for preparation, and support and availability of up-to-date technology equipment can affect implementation. The perception of technology effectiveness and benefits seems to play a major role in technology implementation.

The Benefits of Integrating Educational Technology

Educators can incorporate technology to challenge students and motivate them to think for themselves while improving their overall educational experience. By using images and video,

teachers can break down the walls of the classroom and take students places they have never been before (Frey & Fisher, 2008). The Internet has played a powerful role in helping students meet other students from around the globe, communicate with them, and learn about their cultures and language. The Internet provides teachers and students with easy access to information.

Teachers should plan accordingly to introduce and integrate technology into the curriculum, to enhance the overall classroom environment, and increase student engagement, motivation, and satisfaction. A technology-enhanced environment may have positive impacts on students' motivation, if students work collaboratively without having the emphasis put on social comparison (Hsieh, Cho, Liu, & Schallert, 2008).

Frey and Fisher (2008) stated:

> Educators have the advantage—and the opportunity—to involve students in the creation and presentation of their own knowledge. By teaching students to "go visual," to use multimedia to express themselves, we can make our students stars, and our classrooms center stage for learning. (p. 23)

The Challenge of Computer Technology Integration

Research has emphasized that some obstacles exist that hinder teachers from using technology in their classrooms. As Smerdon (2000) stated, The shortage of suitable computers and the time for teachers to get the necessary technology skills are some of the major obstacles to teachers implementing instructional technology into their classrooms. Other researchers have indicated that various factors prevent teachers from using technology in their classroom, these include: inadequate professional development programs, lack of vision about the importance of technology in the teaching and learning process, a lack of time spent on technology experiments, and inadequate technical support (Ertmer, 2005; Franklin, 2007).

According to Lengel and Lengel (2006), it has become a challenge for teachers to keep up with the rapid changes in technology in order to bridge the gap between the technologies used at home and those used at school. Additionally, the technological distance between schools and society seems to be increasing, since workplaces are moving rapidly toward extensive information, continuous communication, and complex multitasking, while some schools are still tied to pencil, paper, books, and tests. Also, the authors point out that technology becomes attractive to students when it is used creatively and integrated fully into the curriculum. Technology can improve the overall learning environment of schools and enhance the engagement of students so that they can feel more connected to the school.

Hew and Brush (2007) investigated barriers that hinder teachers from integrating technology in their classrooms. The authors analyzed studies that were conducted in empirical research from 1995 to 2006. They found at least five common barriers that might explain why teachers may not integrate technology into the classroom. These barriers are: resources, which include lack of access to available technology, time, and technical support (e.g., Karagiorgi, 2005; O'Mahony, 2003); the lack of specific technology knowledge and skills that related to teaching methods and classroom management, which is identified also as one of the reasons for teachers to not use the technology (Snoeyink & Ertmer, 2001/2002; Williams, Coles, Wilson, Richardson, & Tuson, 2000); institutional barriers, which include: (a) leadership, (b) school time-tabling structure and (c) school planning, teachers attitudes and beliefs about learning and teaching by technology (Ertmer, 2005; Windschitl & Sahl, 2002); and subject culture, identified as a ''general set of institutionalized practices and expectations which have grown up around a particular school subject, and shapes the definition of that subject as a distinct area of study'' (Goodson & Mangan, 1995, p. 614).

In summary, research is not conclusive as far as technology use, the extent to which social studies teachers implement technology, or their attitudes toward the integration of technology in teaching. As the previous literature points out, there is a need to further examine the extent to which social studies teachers integrate technology into their teaching. In the current study, it is important to find out the extent to which social studies teachers integrate technology in their classrooms and their perceptions toward the integration of technology. Studies such as this are useful for examining how social studies teachers are currently using technology in their classrooms. However, while research into pre-service teachers and social studies educators has increased, research studies of teachers' use of technology has been limited (Lipscomb, 2003). Most of the studies show that social studies teachers are often slow to use technology in their classrooms. Similarly, Becker, Ravitz, and Wong (1999) found that despite numerous claims that technology can play an important role in the classroom, social studies teachers seemed to follow the traditional teaching practices and to resist technology and new change. Further, Martorella (1997), also argued that while other teachers in different subject areas have included technology in their classrooms, social studies teachers have been slow to respond to innovations.

Conclusion

The aforementioned research points out teachers are not fully cognizant of the benefits of the available technology tools to enhance the student learning process accordingly. The use of technology is still ineffective in the classroom and is not utilized for improving students' skills and abilities in the area of problem solving and critical thinking. Additionally, the ineffective use of technology is due to the lack of teacher planning and implementation. Previous research studies also emphasized that in order to use and integrate technology effectively, teachers need to change their traditional teaching methods and their attitudes as well.

It is clear from previous and recent research that the teachers' experience of technology plays an important role in integrating technology. Furthermore, the benefits of technology use shows that students are able to develop various skills from good technology use, such as higher order thinking skills. Students now encounter multimodal technologies on a daily basis by using Facebook, Twitter, MySpace, fan forums, Wiki, BlogSpot, Podcast, instant messaging, Skype, iPods, email, and cell phones. Outside of school, in their homes and in the community, young people are becoming technologically savvy. They can become rapidly adept at taking advantage of social networking websites, playing electronic games, and locating information of all kinds (Parris, Fisher, & Headley, 2009).

The literature reviewed pointed out that teachers' perceptions are varied; some support technology use, while others are worried about the effects of its use. Finally, previous research has pointed out the need for teachers to improve their skills in integrating technology, since teachers' knowledge and skills using technology impacts their attitudes. Teachers' experience in using technology makes them more comfortable to utilize technology (Spaulding, 2007).

CHAPTER THREE: METHODOLOGY

The primary purpose of this study was to examine the attitudes of Jordanian seventh to twelfth grade social studies teachers toward technology and their perceptions of the competency needed to implement technology in their classrooms. Specifically, the study examined the differences between teachers' attitudes toward technology based on age, gender, teaching experience and grade-level taught, and also their perceptions of the competency needed to implement technology on the basis of their age, gender, teaching experience, and grade-level taught.

This chapter addresses the following topics related to methodology: the research design, research questions, study limitations, participants, a description of the instrument(s) used to collect data, data collection procedures, and data analysis techniques.

Research Design

This was a quantitative study utilizing a cross-sectional survey design, meaning that the researcher collected data at one point in time with an interest in describing relationships among variables (Tate, 1998). Additionally, this study was largely exploratory in nature. Few researchers have conducted studies on the use of technology by social studies teachers in the Arab world in general, and in Jordan in particular. The goal of this research study was to explore the attitudes of Jordanian seventh to twelfth grade social studies teachers toward technology and their perceptions of the competency needed to implement technology in their classrooms.

Research Questions

The specific research questions for the study included the following:

Q 1**:** Is there a statistically significant difference in the attitudes of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementiong technology into their classrooms?

Q 2**:** Is there a statistically significant difference in the perceptions of competency of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementing technology into their classrooms?

Q 3**:** Is there an association between the attitudes of seventh to twelfth-grade social studies teachers and their perceptions of the competency needed toward implementing technology into their classrooms?

Q 4**:**

(A) Is there a statistically significant main effect or interaction between age and gender of social studies teachers and their attitudes toward implementing technology into their classrooms?

(B) Is there a statistically significant main effect or interaction between gender and teaching experience of social studies teachers and on their attitudes toward implementing technology into their classrooms?

Q 5:

(A) Is there a statistically significant main effect or interaction between age and gender of social studies teachers on their perceptions of the competency needed toward implementing technology into their classrooms?

(B) Is there a statistically significant interaction between gender and teaching experience of social studies teachers and on their perceptions of the competency needed toward implementing technology into their classrooms?

Q 6: How well does the combination of teaching experience, grade-level taught and gender, predict teachers' attitudes toward implementing technology into their classrooms?

Q 7: How well does the combination of teachers' attitude, teaching experience, grade level taught and gender predict teachers' perceptions of the competency needed toward implementing technology into their classroom?

Sample of Participants and Research Site

The participants of this research were seventh to twelfth-grade social studies teachers in Amman, Jordan. Permission for the study was obtained from the Ministry of Education, Amman Fifth directorate, and the Colorado State Institutional Review Board (IRB). Following this permission, the researcher requested a list of seventh to twelfth-grade social studies teachers in Amman's Fifth Educational Directorate. The target population for this study consisted of all seventh to twelfth-grade social studies teachers teaching in Amman's Fifth Educational Directorate.

The accessible population has 110 public schools in the Fifth Directorate. Each school has two or three social studies teachers. Thus, the total number of social studies teachers from seventh to twelfth grades in this directorate was 221 teachers; 135 males and 86 females. All of the teachers were invited to participate in the study.

Instrumentation

The instrument for this study was a survey developed by Kelly (2003) called the Technology in Education Survey (TIES). Due to the cultural context of the study, the researcher used an Arabic-language version of the survey used by Al Ghazo (2008). Al Ghazo used the TIES to examine technology integration in education of university teachers in Jordan. Permission from Kelly and Al Ghazo was sought and granted for use of the instrument.

The instrument was selected for several reasons. First, the instrument's purpose was highly relevant to the researcher's purpose and had a high reported internal consistency (Kelly, 2003) . Second, the TIES had already been translated into the Arabic language. Third, the Arabic version already had established validity and reliability from Al Ghazo's study. Additionally, Wang (2006) successfully used the TIES survey internationally for examining technology integration in Taiwan.

The survey was a structured questionnaire. The survey was divided to three sections: 'Personal and Situational Data', 'Attitudes toward Using Technology', and 'Competency for Using Technology'. The sections were comprehensive and aided in determining social studies teachers' attitudes toward the implementing of technology into the classroom and the perceptions that these teachers had regarding the competency needed for implementing technology into the classroom.

The 'Personal and Situational Data section' contained four demographic factors: age, gender, teaching experience, and grade level taught. The 'Attitude toward Using Technology' section contained eleven items. Each of these items utilized a five-point Likert-type scale (1 = very important, 2 = somewhat important, 3 = important, 4 = somewhat not important, 5 = not important). The 'Competency for Using Technology' section also contained eleven items that

used a five-point Likert-type scale (1 = very competent, 2 = somewhat competent, 3 = competent, 4 = somewhat not competent, 5 = not competent) (Kelly, 2003). For the purpose of the currect study, the researcher modified the scale to be a ten-point Likert-type that ranged from 1= not important or competent and 10 = very important or competent. These modifications were based on committee recommendations. Thus, responses to all of these 22 items utilized a ten-point Likert-type scale in which each item had a score ranging from 1-10, with 1 being the lowest score, indicating not important or not competent, and 10 being the highest score, indicating very important or very competent.

Prior to launching the study, the researcher tested the items of the modified scale to make sure it was suitable and readable for the actual sample. Participants were asked to review the content of the questionnaire and its appropriateness. Participants were encouraged to provide feedback concerning any problems with the survey. Moreover, the researcher also examined the reliability and validity of the instrument before it was implemented. Therefore, the researcher distributed the survey to fifteen participants, with nine males and six females, as a pilot for the actual sample. These participants were working on their master's and doctoral degrees. By doing this, the researcher ran Cronbach Coefficient Alpha to examine the internal consistency. Reliability was found to be .77 for the 'Attitudes toward Using Technology' section, and .87 for the 'Competency for Using Technology' section. These scores are both in the acceptable range.

Reliability and Validity of the Instrument

Reliability refers to the consistency and accuracy of the measurement (Seliger & Shohamy, 1989). While validity refers to the extent to which an instrument measures what it is designed to measure (Brown, 1996). According to Wyckoff (1998), "A valid instrument

measures what the researcher claims to measure; a reliable instrument measures the data in a consistent and accurate manner rather than randomly" (p. 48).

Kelly's original TIES survey reported a Cronbach Coefficient Alpha of .78 for the 'Attitudes Toward Using Technology' section, and .91 for the 'Competency for Using Technology' section. Kelly established content validity by using a panel of five professors of educational technology employed at Mississippi University (Kelly, 2003). Al Ghazo (2008) established face and content validity for the Arabic version of his instrument with the help of a panel of experts consisting of five university professors who were content experts; three were from the English Language department and two were from the Arabic Language department at Mu'tah University. The expert panel evaluated the instrument, both before and after it was used, and necessary modifications were made. This current study tested internal consistency using Cronbach Coefficient for the 'Attitudes toward Using Technology' section and found a coefficient of .80, and .90 for the 'Competency for Using Technology' section**,** which indicate a very strong reliability.

Data Collection and Confidentiality

The first stage in the implementation of this research study was to obtain permission for human subjects' participation and approvals to conduct this study from the Jordan Ministry of Education, Amman's Fifth Educational Directorate, and Colorado State University's Institutional Review Board (IRB) prior to the implementation of the study. After the researcher obtained permission, the research sites were contacted. The research packet, which included the survey, was mailed to the professionals who volunteered to assist the researcher. Mailing the surveys took place in February 2013, which marked the beginning of the spring semester of the school year in Jordan. Every research packet was accompanied with a consent letter in Arabic (see

Appendix A), the survey in Arabic, and another envelope for the participant to return the survey. The consent letter explained to participants the purpose of the study, outlined the voluntary nature of participation, and the right to withdraw from participation at any time with no penalty.

Efforts were taken to maintain confidentiality. Paper document data were stored in a locked cabinet in the researcher's office. Electronic data were stored on the researcher's computer with password protection. No one had access to the data except the researcher and the committee. The researcher did not collect any personal information that might identify the participants. Every survey was given an ID number for entering the data and then placed in a package and sent to the professionals in Jordan.

The professionals aiding the study were five teachers currently working in the universal schools in Jordan. They distributed the surveys to the subjects in the first week of February 2013. The researcher stayed in contact with the professonals to ensure packets were picked up three weeks later at the end of February. The teachers had three weeks to complete the surveys. The researcher sent a reminder to the proessionals to follow up with the participants to fill out the survey. Another reminder was sent to the professionals for a second follow-up. The researcher provided his contact information so that the professionals could mail the surveys back to him.

Data Analysis

After receiving completed questionnaires, the researcher coded the participants' responses and entered them into the Statistical Package for Social Science (SPSS) program version 20.0. The data was double checked for accuracy.

The study utilized descriptive (e.g. mean and standard deviations) and inferential statistics; *t*-tests, ANOVA, and multiple regression were used to analyze the results. Specifically,

the researcher used descriptive statistics such as measures of central tendency and variability, and frequencies to calculate teachers' responses based on demographic data.

Analysis of Difference Questions

This study investigated the difference between two independent groups (upper basic level and secondary level) on an approximately normal dependent variable (attitudes, perceptions of competency), thus, a *t*-test was reasonable to use.

This study also utilized One-Way ANOVA to compare the means of the groups in order to make inferences about the population means. Therefore, ANOVA is nessecary if the researcher wants to compare three or more groups (e.g: age, gender, teaching experience and grade level taught) in a single analysis (Morgan, Leech, Gloeckner, & Barret, 2007).

Analysis of Associational Questions

This study analyzed the associations between teachers' attitudes and their perceptions of competency needed for implementing technology. For this, Pearson's product-moment correlations were utilized. Assumptions for the Pearson correlation were: (a) the two variables have a linear relationship, (b) scores on one variable are approximately normally distributed for each value of the other variable and vice versa, and (c) outliers can have a big effect (Morgan, Leech, Gloeckner, & Barret, 2007).

Analysis of Complex Associational Questions

The researcher utilized multiple regression to investigate the best predictors of teachers' attitude scores toward technology in social studies classrooms and their perceptions of competency needed for implementing technology. Pearson correlations do not tell the larger story of how the two variables may combine to predict possible outcomes. Accordingly, multiple regression was desirable because it made it possible to combine independent variables to produce

predictions of a dependent variable and because it helped to separate the effects of those independent variables (Allison, 1999). Specifically, the predictor variables (teaching experience, grade-level taught, and gender) were evaluated and combined to produce the best prediction of teachers' attitudes and their perceptions of competency needed. Accordingly, the study's research questions were answered and used the following inferential statistics tests below:

The first research question, "Is there a statistically significant difference in the attitudes of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementing technology into their classroom? ", was answered by calculating a t-test.

The second research question, "Is there a statistically significant difference in the perceptions of the competency of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementing technology into their classroom?", was answered by calculating a t-test.

The third research question, "Is there an association between the attitudes of seventh to twelfth-grade social studies teachers and their perceptions of the competency needed toward implementing technology into their classrooms?", was answered by calculating the Pearson's product-moment correlation to examine the strength and direction of the relationship between the two dependent variables: attitudes of seventh to twelfth-grade social studies teachers regarding the implementation of technology into their classrooms, and their perceptions concerning the competencies needed for implementing technology into their classrooms.

The research question 4a, "Is there a statistically significant main effect or interaction between age and gender of social studies teachers and on their attitudes toward implementing technology into their classroom?", was answered by computing factorial design ANOVA.

The research question 4b, “Is there a statistically significant main effect or interaction between gender and teaching experience of social studies teachers and on their attitudes toward implementing technology into their classroom?”, was answered by computing factorial design ANOVA.

The research question 5a, “Is there a statistically significant main effect or interaction between age and gender of social studies teachers and on their perceptions of the competency needed toward implementing technology into their classroom?”, was answered by computing factorial design ANOVA.

The research question 5b, “Is there a statistically significant interaction between gender and teaching experience of social studies teachers and on their perceptions of the competency needed toward implementing technology into their classroom?”, was answered by computing factorial design ANOVA.

The sixth research question, “How well does the combination of teaching experience, grade-level taught and gender predict teachers’ attitudes toward technology into their classroom?”, was answered by computing multiple regression.

The seventh research question, “How well does the combination of teachers’ attitude, teaching experience, grade level taught and gender predict teachers’perceptions of the competency needed toward technology into their classroom?”, was answered by computing multiple regression.

Summary

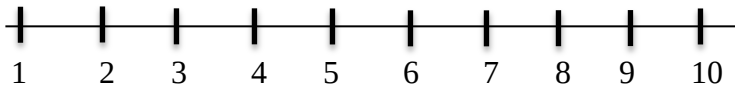
This study sought to examine the attitudes of Jordanian seventh to twelfth-grade social studies teachers toward technology and their perceptions of the competency needed to implement technology in their classrooms. Specifically, the study examined the differences between

teachers' attitudes toward technology based on age, gender, teaching experience and grade-level taught and also their perceptions of the competency needed to implement technology on the basis of their age, gender, teaching experience, and grade-level taught.

This study utilized a quantitative method with a cross-sectional survey called the Technology in Education Survey (TIES), which was divided to three sections: 'Personal and Situational Data', 'Attitudes toward Using Technology', and 'Competency for Using Technology'. The study utilized descriptive (e.g. mean and standard deviations) and inferential statistics; *t*-tests, ANOVA, and multiple regression were used to analyze the results.

CHAPTER FOUR: RESULTS

The overarching research question examined the attitudes of Jordanian seventh to twelfth-grade social studies teachers' attitudes toward technology and their perceptions of the competency needed for implementing technology into their classrooms. Participants were asked to respond to 22 items, on ten-point Likert-type statements dealing with teachers' attitudes and their perceptions of competency.



1 2 3 4 5 6 7 8 9 10

Not Important Or not competent — Very Important Or very competent

After receiving the responses from the participants, the researcher combined every two points into one point to make it a five-point Likert scale for analysis as below. This was based on committee recommendations to eliminate possible confusion from the original instrument.

1& 2 = Not important or not competent

3&4 = Somewhat not important or somewhat not competent

5&6 = Somewhat important or somewhat competent

7& 8= Important or competent

9&10 = Very important or very competent

Once the responses were computed, the total mean scores of teachers' attitudes were extracted (78.8), while total mean scores of teachers' perceptions of competency was also found (64.1). These are shown in Table 4 later in the chapter. A high score on the attitude section and the teachers' perceptions of competency section indicated generally positive attitudes and high

perceptions of competency. The attitudes of teachers were represented by a mean score on a revised five-point scale, where 5 (very important or competent) represents the maximum score of the scale and

1 (not important or competent) represents the minimum score. In this current study, teachers' responses in regards to their attitudes fell between 7 and 8, which is considered a high positive attitude. Teachers' resposes in regards to their perceptions of competency needed fell between 5 and 6, which indicated they considered moderate competency was needed.

The study addressed the following questions:

Q 1**:** Is there a statistically significant difference in the attitudes of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementiong technology into their classrooms?

Q 2**:** Is there a statistically significant difference in the perceptions of competency of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementing technology into their classrooms?

Q 3**:** Is there an association between the attitudes of seventh to twelfth-grade social studies teachers and their perceptions of the competency needed toward implementing technology into their classrooms?

Q 4**:**

(A) Is there a statistically significant main effect or interaction between age and gender of social studies teachers and their attitudes toward implementing technology into their classrooms?

(B) Is there a statistically significant main effect or interaction between gender and teaching experience of social studies teachers and on their attitudes toward implementing technology into their classrooms?

Q 5:

(A) Is there a statistically significant main effect or interaction between age and gender of social studies teachers on their perceptions of the competency needed toward implementing technology into their classrooms?

(B) Is there a statistically significant interaction between gender and teaching experience of social studies teachers and on their perceptions of the competency needed toward implementing technology into their classrooms?

Q 6: How well does the combination of teaching experience, grade-level taught and gender, predict teachers' attitudes toward implementing technology into their classrooms?

Q 7: How well does the combination of teachers' attitude, teaching experience, grade level taught and gender predict teachers' perceptions of the competency needed toward implementing technology into their classroom?

Data was collected from a convenience sample of social studies teachers, using a paper- and-pencil-structured questionnaire over a one month period of time during the spring of 2013.

Descriptive Summary of Teachers' Characteristics

The teachers' descriptive information is shown in Table 1. The total number of participants who completed and returned the Technology Education Survey (TIES) was 221. The response rates for data analysis from each of the school districts were 100 percent.The table shows that 61 percent (135) of the social studies teachers were males and 38 percent (86) were

females. Forty-one percent (91) of the participants were in the 31-39-year age range, 32 percent (72) of them were thirty years old or younger, while 26 percent (58) were at least forty years old.

In terms of teaching experience, 29 percent (65) of the participants had eight to thirteen years of experience, 26 percent (59) of the participants had between one and seven years, 22 percent (49) of the participants had between fourteen and eighteen years and nearly 22 percent (48) of the participants had between nineteen and twenty-nine years on the job. More than half of the participants, 57 percent (128), taught at the upper basic level, while 42 percent (93) taught at the secondary level.

Eighty-five percent (189) of the participants stated that they had at least basic access to computers. Among these with access, 69 percent (153) of the participants were using the following software programs which were categorized as basic: Microsoft Word, Power Point, Excel, Microsoft Publisher, PageMaker, Digital Cameras, Internet browsers, Video Cameras.

Table 1: *Social Studies Teachers' Descriptive Statistics*

Variable	Category	Frequency	Percent
Gender			
	Male	135	61.1
	Female	86	38.9
Age			
	30 and under	72	32.6
	31-39	91	41.2
	40 and over	58	26.2
Experience			
	1-7	59	26.7
	8-13	65	29.4
	14-18	49	22.2
	19-29	48	21.7
Level Taught			
	Basic Upper Level	128	57.9
	Secondary Level	93	42.1
Access to Computer			
	Yes	189	85.5
	No	32	14.5
Type of Technology			
	Advanced	36	16.3
	Basic	153	69.2
	No Use	32	14.5

The remainder of the chapter presents the findings related to the seven research questions. For statistical significance, an alpha level of .05 was applied for all results. All variables and their measurement levels were determined during the data entry process.

Research Question One

Research question one asked: is there a statistically significant difference in the attitudes of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementing technology into their classroom? A *t*-test was computed to address the first question. Findings showed no statistically significant differences between basic upper (M = 80.14, SD = 15.82) and secondary levels (M = 76.89, SD = 15.65), t (219) = 1.514, p =.132), as shown in Table 2. This means that social studies teachers' attitudes

toward technology were similar regardless of the grade level taught. The effect size *d* is .20, which is considered a very small effect size.

Table 2: *T-Test for Teachers' Attitudes Based on Grade Level Taught*

	Grade level taught	*N*	*M*	*SD*	*t*	*df*	*p*
Attitudes	Upper level	128	80.14	15.82	1.514	219	.132
	Secondary level	93	76.89	15.65			

Research Question Two

The second research question explored the issue of competency. Research question two asked: is there a statistically significant difference in the perceptions of the competency needed of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementing technology into their classrooms? A *t*-test was used to examine the second research question. As shown in Table 3, no statistically significant differences were found in the perceptions of the competency needed between basic upper (M = 65.58, SD= 20.11) and secondary levels (M = 62.16, SD = 18.11, t (219) = 1.300, *p* =.195). This indicates that social studies teachers do not significantly differ on their perception of competency scores toward implementing technology in social studies classrooms based on the grade level taught. The effect size *d* is .18, which is also very small.

Table 3: *T-Test for Teachers' Perceptions of Competency Needed Based on Grade Level Taught*

	Grade Level Taught	*N*	*M*	*SD*	*t*	*df*	*p*
Competency	Upper level	128	65.58	20.11	1.300	219	.195
	Secondary level	93	62.16	18.11			

Research Question Three

Research question three asked is there an association between the attitudes of seventh to twelfth-grade social studies teachers and their perceptions of the competency needed toward implementing technology into their classrooms? Pearson's Correlation Coefficient test was used to answer the third research question. Results showed (see Table 4) that the two variables were significantly correlated with a very strong positive correlation ($r(221) = .79$, $p < 0.01$). This means that teachers who had relatively high positive attitudes toward technology were far more likely to have high positive perceptions of the competency needed to implement technology. According to Cohen (1988), this result is much larger than typical effect sizes, indicating the strength of the relationship between the teachers' attitudes and their perception of the competency.

Table 4: *Bivariate Correlations Among Teachers' Attitudes and Their Perceptions of Competency Scores*

	Variables	r	M	SD
1.	Attitudes		78.77	15.79
2.	Competency	.80	64.14	19.32

$p < .05$

Research Question 4a

Research question 4a asked: is there a statistically significant main effect or interaction between age and gender of social studies teachers on their attitudes toward implementing technology into their classroom? Means and standard deviations were computed and then two-way ANOVA tests were run as well. Results, presented in Table 5, show that the total mean of teachers' attitudes based on age categories ranged between 70.43 and 84.17. Interestingly, the thirty-year-old and younger teachers had the highest mean of positive attitudes towards

technology in social studies classrooms, while the forty and over teachers had the lowest mean of positive attitudes. Meanwhile, female teachers tended to have less positive attitudes towards implementing technology than male teachers.

Table 6 shows these results have a significant interaction between the effects of gender and age on teachers' attitudes (p =.034). A significant difference was also found between male and female teachers, meaning that the younger male teachers (30 years and younger) had higher attitudes towards implementing technology than the younger female teachers, while the older male teachers (40 years and older) had higher positive attitudes than the older female teachers.

Furthermore, the researcher ran a post- hoc test (Tukey) to examine where the age differences were. Post hoc indicated that the younger teachers (30 and under) and older teachers (40 and over) differed significantly in their attitudes (p < 05, d=.86). Likewise, there were also significant mean difference on teachers attitude between (31- 39 years old) and (40 and over years old) teachers (p < 05, d=.57).

Thus, a significant main effect was found for age on teachers' attitudes (F (2,215) = 19.98, p < .05). Eta for age was about .4, which according to Cohen (1988), approaches a large effect. Furthermore, there was also a significant main effect of gender on teachers' attitudes, (F (1,215) = 20.55, p <.05). Eta for gender was about 0.3, which according to Cohen (1988), is approaches a medium effect.

Table 5: *Means, Standard Deviations, and n for Teachers' Attitudes as a Function of Gender and Age.*

	Males			Females			Total	
Age	*n*	*M*	*SD*	*n*	*M*	*SD*	M	SD
30 & under	38	87.21	7.25	34	80.76	16.42	84.17	12.77
31-39	59	81.27	10.49	32	77.16	18.45	79.82	13.86
40 and over	38	76.26	11.74	20	59.35	23.99	70.43	18.63
Total	135	81.53	10.83	86	74.44	20.73	78.77	15.79

Table 6: *Analysis of Variance for Teachers Attitudes as a Function of Gender and Age*

Variable and source	*df*	*MS*	*F*	η^2	*Sig*
Attitudes					
Age	2	4070.81	19.98*	.157	.000
Gender	1	4187.78	20.55*	.087	.000
Age * Gender	2	698.08	3.43*	.031	.034
Error	215				

* $p < .05$

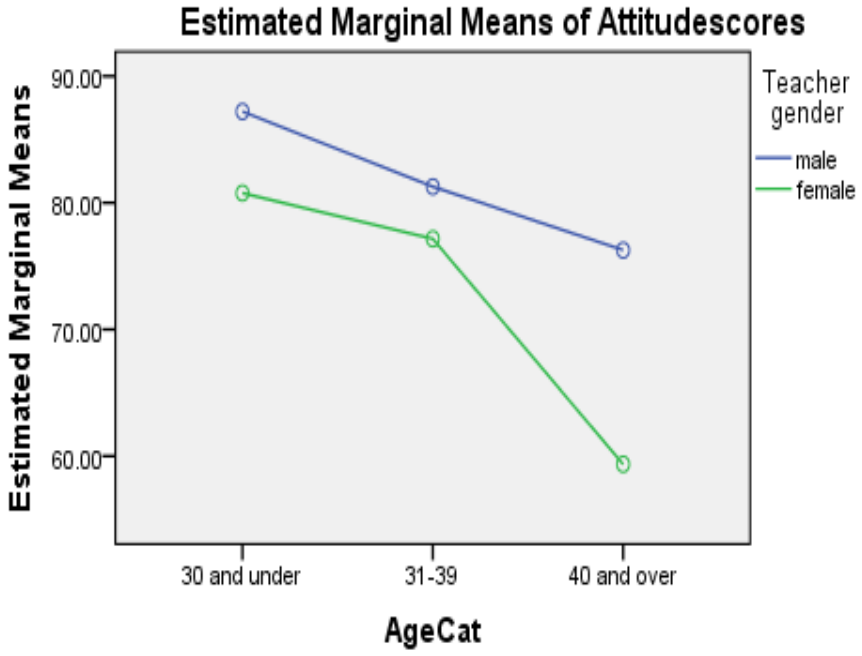


Figure 1*:* two-way ANOVA test teacher gender with age

Research Question 4b

Research Question 4b asked: is there a statistically significant main effect or interaction between gender and teaching experience of social studies teachers on their attitudes toward implementing technology into their classroom? Means and standard deviations were computed and then two-way ANOVA tests were computed. Table 7 shows that the total means of teachers' attitudes about implementing technology based on teaching experience categories ranged between 70.48 and 85.49. Teachers with one to seven years of teaching experience had the highest mean of positive attitudes towards implementing technology in social studies classrooms, while teachers who had 19-29 years of teaching experience had the lowest mean of positive attitudes.

Table 8 shows a significant interaction between the effects of gender and teaching experience with teachers' attitudes (p =.027). A significant difference was also found between male and female teachers based on their teaching experience. Male teachers with the least experience had the highest attitudes towards implementing technology, higher than all female teachers, while male teachers with the most teaching experience had less positive attitudes than female teachers with experience between one and thirteen years.

Furthermore, the researcher ran a post- hoc test (Tukey) to examine where the teaching experience differences on attitudes were. Post hoc indicated mean diffrences on teachers' attitudes between 1-7 years and both 14-18 years ($p < .05$), and 19-29 teaching experience ($p < .05$, d= 1). Likewise, there were significant mean differences on teachers' attitudes between 8-13 teaching experience years and both 14-18 years ($p < .05$, d = .50) and 19-29 ($p < .05$, d = .73). Thus, a significant main effect of teaching experience on teachers' attitudes was found (F (3, 213) = 16.93, $p < .05$). Eta for teaching experience was about .4, which according to Cohen

(1988) approaches a large effect. Furthermore, a significant main effect was found for gender on teachers' attitudes (F (1,213) = 23.24, p <.05). Eta for gender was about .3, which according to Cohen (1988), approaches a medium effect.

Table 7: Means, Standard Deviations, and n for Teachers' Attitudes as a Function of Gender and Teaching Experience

	Males			Females			Total	
Years Experience	*n*	*M*	*SD*	*n*	*M*	*SD*	M	SD
1-7	35	87.31	7.54	24	82.83	14.69	85.49	11.13
8-13	34	83.32	10.29	31	80.64	16.16	82.05	13.38
14-18	35	79.17	10.19	14	62.71	23.71	74.47	16.80
19-29	31	75.71	11.86 135	17	60.94	23.07	70.48	17.94
Total	81.53	10.83		86	74.44	20.73	78.77	15.79

Table 8: *Analysis of Variance for Teachers' Attitudes as a Function of Teaching Experience and Gender*

Variable and source	*df*	*MS*	*F*	η^2	*sig*
Attitudes					
Teaching Exp	3	3323.91	16.93*	.193	.000
Gender	1	4562.78	23.24*	.098	.000
Age * Gender	3	614.64	3.13*	.042	.027
Error	213				

* p < . 05

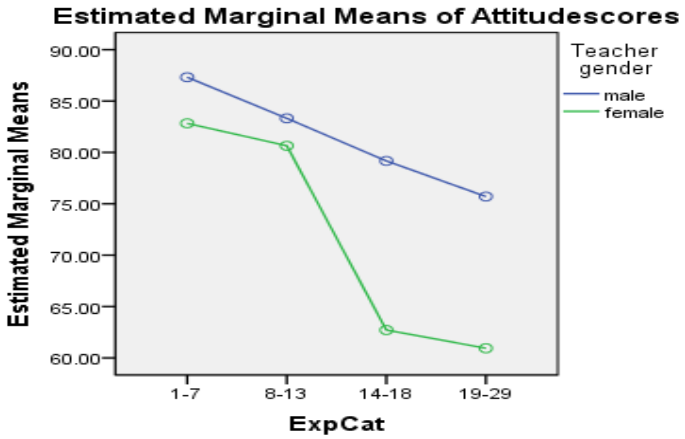


Figure 2: two-way ANOVA test teacher gender with teacher age.

Research Question 5a

Research question 5a asked: is there a statistically significant main effect or interaction between age and gender of social studies teachers on their perception of the competency needed for implementing technology into their classroom? Means and standard deviations were computed and then two-way ANOVA tests were computed as well. Table 9 shows that the total mean of perceptions of competency scores of teachers grouped into age categories ranged between 49.50 and 75.72. Female teachers who were thirty or younger and who were thirty-one to thirty-nine scored the highest mean of perception of competency needed for implementing technology in social studies classrooms, higher than all male teachers, whereas male and female teachers who were forty or older scored the same lowest mean of perceptions of competency (49.5). As seen in Table 10, there is a significant main effect of age on teachers' perceptions of competency (F (2, 215) = 38.93, $p < .05$). Eta for age was about .52, which according to Cohen (1988) is a very large effect. There was, however, no significant main effect found for gender on teachers' perceptions of competency (F (1,215) = 2.99, p =.085). There was also not a significant interaction between gender and age on teachers' perceptions of competency (p =.203).

Furthermore, the researcher ran a post-hoc test Tukey to examine where the age diffrences showed different perceptions of competency. Post hoc indicated mean diffrences on teachers' perception of competency between 30 and under and both 31-39 ($p < .05$) *and* 40 and over ($p <. 05$). Likewise, there were also significant mean difference on teachers' percpetions of competency between 31- 39 years old and 40 and over ($p < .05$).

Table 9: *Means, Standard Deviations, and n for Teachers' Perceptions of Competency as a Function of Age and Gender*

	Males			Females			Total	
Age	*n*	*M*	*SD*	*n*	*M*	*SD*	M	SD
30 and under	38	74.50	11.80	34	77.09	17.90	75.72	14.94
31-39	59	60.95	16.33	32	70.50	18.62	64.31	17.67
40 and over	38	49.53	14.46	20	49.45	20.99	49.50	16.81
Total	135	61.55	17.33	86	68.21	21.58	64.14	19.32

Table 10: *Analysis of Variance for Teachers' Perceptions of Competency as a Function of Age and Gender*

Variable and source	*df*	*MS*	*F*	η^2	*sig*
Competency					
Age	2	10507.98	38.93*	.266	.000
Gender	1	807.30	2.99	.014	.085
Age * Gender	2	698.08	1.60	.015	.203
Error	215				

* $p < .05$

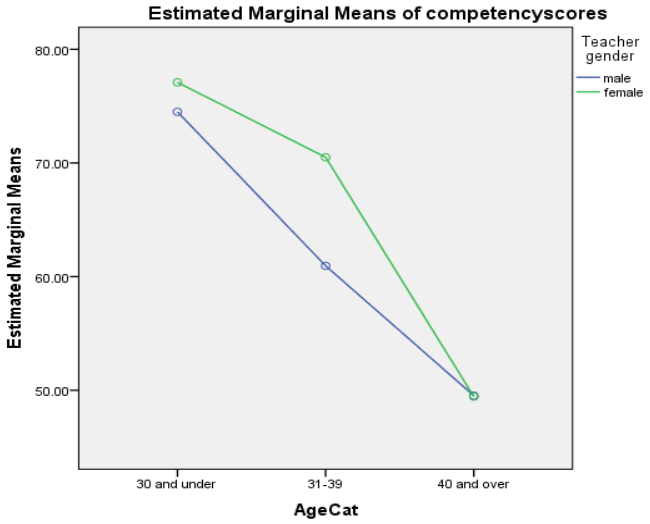


Figure 3: two-way ANOVA test teacher gender with age.

Research Question 5b

Research question 5b asked: is there a statistically significant interaction between gender and teaching experience of social studies teachers on their perceptions of the competency needed for implementing technology into their classroom? Means and standard deviations were computed and then two-way ANOVA tests were computed as well. Table 11 shows the total mean of perceptions of competency scores of teachers grouped into teaching experience categories ranged between 49.42 and 76.39. Female teachers with the least teaching experience had higher perceptions of competency for implementing technology in social studies classrooms than male teachers, meanwhile female teachers with the most teaching experience had nearly as high perceptions of competency needed as male teachers. Table 12 shows no significant interaction between gender and teaching experience on teachers'perceptions of competency (p =.671). Furthermore, no significant main effect of gender on teachers' perceptions of competency was found (F (1,213) = 3.05, p =.082). There was, however, a significant main effect of teaching experience on teachers' percpetions of competency (F (3, 213) = 30.86, $p <$ .05). Eta for teaching experience was about .55, which according to Cohen (1988) is a very large effect.

The researcher ran a post- hoc test (Tukey) to examine where the teaching experience differences were. Post hoc indicated mean diffrences on teachers' perceptions of competency between teachers with 1-7 years and with both 14-18 years of teaching experience ($p < .05$) and 19-29 teaching experience ($p < .05$). Likewise, there were significant mean differences on teachers' percpetions of competency between teachers with experience of 8-13 years and with both 14-18 years ($p < .05$) and 19-29 ($p < .05$).

Table 11: Means, Standard Deviations, and n for Teachers' Perceptions of Competency as a Function of Gender and Teaching Experience

	Males			Females			Total	
Years Experience	*n*	*M*	*SD*	*n*	*M*	*SD*	M	SD
1-7	35	73.97	11.87	24	79.92	16.67	76.39	14.19
8-13	34	66.82	14.57	31	74.35	15.46	70.41	15.36
14-18	35	55.09	17.06	14	56.50	22.87	55.49	18.66
19-29	31	49.03	14.00 135	17	50.12	21.32	49.42	16.74
Total	61.55	17.33		86	68.21	21.58	64.14	19.32

Table 12: Analysis of Variance for Teachers' Perceptions of Competency as a Function of Teaching Experience and Gender

Variable and source	*df*	*MS*	*F*	η^2	*sig*
Competency					
Teaching Exp	3	7996.86	30.86*	.303	.000
Gender	1	790.24	3.05	.014	.082
Teaching Experience * Gender	3	133.98	.517	.007	.671
Error	213				

* $p < .05$

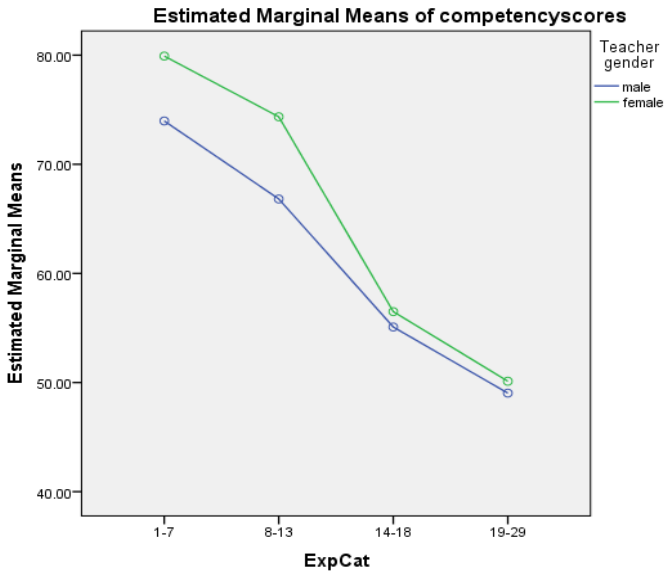


Figure 4: two-way ANOVA test teacher gender with teaching experience

Research Question Six

Research question six asked: How well does the combination of teaching experience, grade-level taught and gender, predict teachers' attitudes toward implementing technology into their classroom? The researcher ran preliminary tests (Pearson correlation tests) to examine the association between age and teaching experience before addressing the sixth and seventh research questions. Findings showed that the two variables were highly correlated r =.98. (see Figure 1). In other words, age and teaching experience were highly correlated as demonstrated in the earlier ANOVA runs. A specific treatment was used with research questions 6 and 7 by excluding age from these questions, the researcher then used teaching experience as a continuous variable rather than a categorical variable.

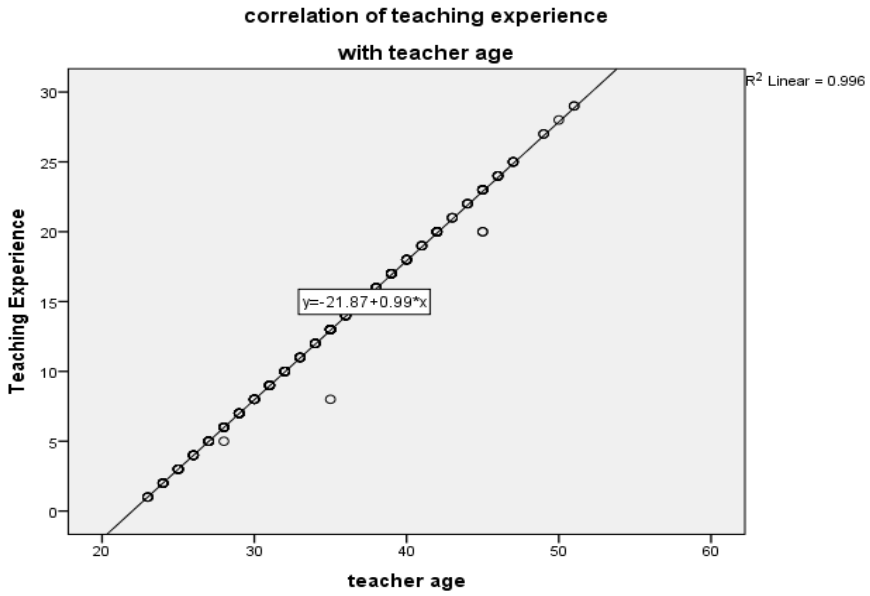


Figure 5: Correlation of teaching experience with teacher age.

To address question six, descriptive statistics and multiple regressions were computed to answer, "How well does the combination of teaching experience, grade-level taught and gender predict teachers' attitudes toward implementing technology into their classroom?" As shown in

Table 13, the independent/predictor variable of teaching experience is moderately correlated with teacher attitudes. Furthermore, a multiple regression test was computed to investigate the best predictors of teachers' attitude scores toward implementing technology in social studies classrooms. Results show (see Table 14) that the combination of variables (teaching experience, grade-level taught, and gender) was a statistically significant predictor (F (3, 217) = 22.08, $p <$ .05). The beta coefficients and the p-value showed that teaching experience, grade level taught and gender significantly predicted teacher attitudes. Thus, the above variables are significantly contributing to the equation. R squared explained about 22 percent of the variance (R= .47), which is nearly a large effect, and this means that the difference among participants has practical importance.

Table 13: *Means, Standard Deviations, and Intercorrelations for Teachers' Attitudes and Predictor Variables (N=221)*

Variable	*M*	*SD*	*Teaching EX*	*Grade L.T*	*Gender*
Teacher Attitudes	78.77	15.79	.39*	.10	.22*
Predictor variable					
1. Experience	12.75	6.85	--	12*	.09
2. Grade Taught	1.42	.50		--	.22
3. Gender	1.39	.49			--

* $p < .05$

Table 14: *Multiple Regression Summary for Teaching Experience, Grade Taught and Gender on Predicting Teachers' Attitudes (N=221).*

Variable	*B*	*SEB*	β	sig
Experience	.98	.138	.43*	.000
Grade Taught	4.38	1.91	.14*	.023
Gender	8.09	1.93	.25*	.000
Constant	108.75	4.45		

* $p < .05$

Research Question Seven

Research question seven asked: How well does the combination of teaching experience, grade level taught, gender and attitudes predict teachers' perceptions concerning competency

needed toward implementing technology into their classroom? Descriptive statistics and multiple regressions were computed to answer the question. As shown in Table 15, the independent/predictor variables of teaching experience and teachers' attitudes were highly correlated with teachers' perceptions of competency needed. Furthermore, multiple regression was computed to investigate the best predictors of teachers' perceived competency scores toward implementing technology in social studies classrooms. Results (see Table 16) showed that the combination of variables (teaching experience, grade level taught, gender, and attitudes) was statistically significant to predict teachers' perception of competency needed (F (4, 216) = 215.25, $p < .05$). The beta coefficients and the p-value showed that teacher gender, teaching experience and attitudes toward technology significantly predict teachers' perceptions of competency ratings. However, grade taught was not a significant predictor of teachers' competency. R squared explained about .80 percent of the variance (R= .89) which is much larger than typical. Thus, teacher gender, teaching experience and attitudes are significantly contributing to the above equation. Specifically, teaching experience needs to be included to obtain this result.

Table 15: *Means, Standard Deviations, and Intercorrelations for Teachers' Perceptions of the Competency and Predictor Variables (N=221).*

Variable	*M*	*SD*	*T. Experience*	*Grade L.T*	*Gender*	*attitudes*
Teacher Competency	64.14	19.32	.57*	.09	.17*	.79*
Predictor variable						
1. Experience	12.75	6.85	--	.12*	.09	.39*
2. Grade Taught	1.42	.50		--	.05	.10
3. Gender	1.39	.49			--	.22*
4. Attitudes	78.77	15.79				--

* $p < .05$

Table 16: Multiple Regression Summary for Teaching Experience, Grade Taught, Gender and Attitudes on Predicting Teachers' Perceptions of Competency (N=221).

Variable	*B*	*SEB*	β	*Sig*
Experience	.74	.10	.26*	.000
Grade Taught	2.25	1.21	.06	.065
Gender	12.36	1.26	.31*	.000
Attitudes	.92	.04	.75*	.000
Constant	12.66	5.41		

* $p < .05$

Summary

In conclusion, a number of statistically significant results were found in this study. A brief summary of these results follows. Teachers with relatively high positive attitudes toward implementing technology were far more likely to have high perceptions of competency needed for implementing technology in social studies classrooms. A significant interaction was found between age and gender on teachers' attitudes, with female teachers tending to have lower positive attitudes about implementing technology than male teachers. Also, the youngest teachers (thirty years and younger) had the highest mean of positive attitudes towards implementing technology in social studies classrooms and the oldest teachers (forty years and older) had the lowest mean of positive attitudes. Meanwhile, female teachers tended to have less positive attitudes towards implementing technology than male teachers. Moreover, male and female teachers with the least experience (7 years and less) had high attitudes towards technology and male and female teachers with the most teaching experience (19-29 years) had less positive attitudes.

A significant interaction was found between age and gender of social studies teachers and their perceptions of competency needed to implement technology. Female teachers who were thirty or younger and who were thirty-one to thirty-nine scored the highest mean of perceptions of competency toward implementing technology in social studies classrooms, higher than all

male teachers, while male and female teachers who were forty or older scored the same lowest mean (49.5) of perceptions of competency. Female teachers with the least teaching experience had high perceptions of competency for implementing technology in social studies classrooms, while female teachers with the most teaching experience had lower perceptions of competency than male teachers.

The combination of teaching experience, grade-level taught, and gender variables was a statistically significant predictor of attitudes. Meanwhile, the combination of teaching experience, grade-level taught, gender, and attitude variables predicted about eighty percent of teachers' perceptions of competency scores, which is extremely high.

CHAPTER FIVE: DISCUSSION

The purpose of this study was to assess the attitudes of Jordanian seventh to twelfth-grade social studies teachers toward technology and their perceptions of competency needed for implementing technology into their classrooms. The study was guided by seven research questions discussed in the previous chapters. This chapter presents a brief overview of the sample, delimitations and limitations of the study, the findings of the study in comparison to the literature, implications of research, and further research questions to be explored.

Sample

A sample of 221 seventh to twelfth-grade social studies teachers was taken in the Fifth Educational District, Amman, Jordan during the 2013 academic year. The sample consisted of 128 who taught in the basic upper level, and 93 certified as secondary teachers. The study used the Technology in Education Survey (TIES) instrument, which was designed to gather all necessary data needed for testing the seven proposed questions. Participants were mailed a hard copy of the surveys. Descriptive and inferential statistics were utilized to report results for each of the research questions. Statistically significant results were found in this study, which indicated that teachers with relatively high attitudes toward implementing technology were far more likely to have high perceptions of competency for implementing technology in social studies classrooms.

Discussion of Research Questions

Research Question One

Is there a statistically significant difference in the attitudes of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward implementing technology into their classroom?

Results for the first research question showed that no differences existed between social studies teachers' attitudes when comparing the basic upper and secondary levels toward technology in classrooms. Teachers' attitudes were similar regardless of the grade level they taught. This result is consistent with Kassaimih's (2006) study that indicated no significant differences in Jordanian teachers' perceptions of the participants concerning the level they taught on either secondary or elementary levels. In contrast to the current finding, Gorder's (2008) study indicated a significant difference in technology integration and use by grade level; technology usage with high school teachers was more significant than those in the elementary levels.

This discrepancy could possibly be explained by different issues. First, the facts of gradual growth in the use of technology by developing countries (Khaswneh & Al-Awidi, 2008) and the lack of technological infrastructure (i.e., computers, Internet connectivity). Second, the lack of faith in the importance of such technology, which are only some of the challenges that face developing countries (Dirani & Yoon, 2009). These factors also hinder Jordanian teachers from using technology in all levels of the schools, and have contributed to the different perceptions and attitudes towards its use.

Research Question Two

Is there a statistically significant difference in the perceptions of the competency needed of social studies teachers in basic upper (seventh to tenth-grade) and secondary (eleventh to twelfth-grade) levels toward technology?

Results showed no differences in teachers' perceptions of the competency needed with technology between basic upper and secondary social studies teachers. Teachers' perceptions of competency needed were similar regardless of the grade level they taught. This finding matches Woods, Gockard, Miao, and Perlman's (2008) study that also indicated no significant differences were found in terms of school levels.

The lack of technology resources and a lack of time are possible reasons that hinder teachers from implementing technology in different settings in these schools. Another possible reason is that grade-level taught is probably not specifically associated with levels of technology in the curricula.

Research Question Three

Is there an association between the attitudes of seventh to twelfth-grade social studies teachers' and their perceptions of the competency needed toward implementing technology into their classroom?. Results showed that the teachers' attitudes and their perceptions of the competency needed toward technology had a very strong positive correlation *(r = .79*). This means that teachers who had relatively high positive attitudes toward technology were far more likely to have high positive perceptions of competency for implementing technology. This current result is consistent with Sa'ari, Su Luan, and Roslan's (2005) study that found teachers who are competent in using computers indicate that they find information technology (IT) more useful, and that most teachers have positive attitudes and moderate levels of information

technology (IT) competency. Similarly, this is supported by Al Ghazo (2008), Abu-Samak (2006), Kelly (2003), and Bruce's (1999) findings that all found a strong positive correlation between positive attitudes toward computers and teacher competency level. Furthermore, Albirini (2006) suggested that teachers who had higher computer competence may foster positive attitudes, and as a result, they use computers effectively within their classrooms.

Research Question 4

Question 4A. Is there a statistically significant main effect or interaction between age and gender of social studies teachers and their attitudes toward implementing technology?

In the current study, results showed that younger teachers had more positive attitudes toward technology than older teachers; thus, a main effect of age on teachers' attitudes was found. This result is consistent with the findings of Czaja and Shark (1998) who found that the younger and middle-aged teachers had more prior experience with, and higher attitudes about, computer technology than the older teachers. This also suggests that the younger teachers were more willing to use technology when they had positive attitudes and this may help to improve curricula for students (Wang, 2006).

In the current study, a significant difference was also found between male and female teachers. Specifically, the youngest male teachers had higher attitudes towards implementing technology than the youngest female teachers, while the oldest male teachers had less positive attitudes than the oldest female teachers. This result is supported by Tezci's (2009) study, which indicated that male teachers had higher scores than female teachers in regards to knowledge and usage of technology. Male teachers had more positive attitudes than female teachers in this study also. From the cultural percpective, the researcher suggests that these male teachers in general

could have more access, skills, training programs, more time and/or more interest than female teachers.

On the other hand, the findings of the current study are inconsistent with the previous research of Birisci, Metin, and Karakas (2009) studying teachers in Turkey. Birisci et al. found no significant difference in teachers' attitudes toward computers based on gender.

Question 4B. Is there a statistically significant main effect or interaction between gender and teaching experience of social studies teachers and their attitudes toward implementing technology?

Results showed that male teachers with the least experience had the highest attitudes towards implementing technology, higher than all female teachers, while male teachers with the most teaching experience had less positive attitudes than the two youngest female teacher categories. Thus, a significant main effect of teaching experience on teachers' attitudes was found. Furthermore, a significant main effect was found for gender on teachers' attitudes. This current result is consistent with Sadik's (2006) findings, which indicated that male teachers had higher computer experience and explicitly more positive attitudes toward technology than female teachers.

Research Question 5

Question 5A. Is there a statistically significant main effect or interaction between age and gender of social studies teachers and their perceptions concerning competency needed toward implementing technology into their classroom?. Results showed that female teachers who were thirty or younger, or were thirty-one to thirty-nine, scored the highest mean of perceptions of competency needed toward implementing technology in social studies classrooms, higher than all male teachers. However, male and female teachers who were forty or older scored the same

lowest mean of perceptions of competency. This result corroborates Bruce's (1999) finding of significant differences between male and female teachers' technology competency. However, Bruce (1999) found that male teachers tended to perceive themselves to be more competent than female teachers, which contradicts the current finding that indicated female teachers had higher perceptions of competency than male teachers. These current findings may be due to the fact that these specific female teachers had more hours of training than the male teachers, and spent more time on average with computers than the men in the study.

This study also found a significant main effect of age on teachers' perceptions of competency, indicated by the youngest female teachers having higher perceptions of competency scores than the youngest male teachers. Whereas, male and female teachers who were forty or older scored the same lowest mean of perceptions of competency (49.5). Two possible explanation for this finding could be the fact that the youngest teachers are part of the new generation born with access to computers and technology, and perhaps, they see themselves as more competent because they gained more experience with technology, while the oldest teachers had less chance of gaining experience with technology. This is consistent with Bruce's (1999) study, which indicated significant differences were found between the youngest teachers (20-30 year-olds) and the oldest (41-50-year-olds). Also, this study result informed Breisser (2006) which indicated that female teachers had better perceptions of technology competence than male teachers. This may indicate the teachers' awareness of the availablability of technology tools and the benefits of them to their teaching.

Question 5B. Is there a statistically significant interaction between gender and teaching experience of social studies teachers and their perceptions of the competency needed toward implementing technology into their classroom?

Results showed that female teachers with the least teaching experience had higher perceptions of competency for implementing technology in social studies classrooms than male teachers, while female teachers with the most teaching experience had lower perceptions of competency scores than male teachers. Thus, a significant main effect of teaching experience on teachers' perceptions of competency was found.

One possible explanation for this finding is due to the fact that the teachers' age, skills, and knowledge of technology enable them to properly implement technology in the classroom. This means that the youngest teachers who have the least teaching experience are more competent than the oldest teachers with more teaching experience. This finding is inconsistent with Woods, Gockard, Miao, and Perlman's (2008) study that indicated male teachers had higher perceptions of competency than female teachers, while no significant difference in teaching experience and grade level taught were found in a general teaching setting. On the other hand, Woods, Gockard, Miao, and Perlman (2008) also examined teachers' perceptions of competency towards technology in a specific teaching setting (i.e. Physical Education). It was shown that significant differences were found based on grade-level taught, but no significant differences were found based on gender and teaching experience.

Research Question Six

Does the combination of teaching experience, grade-level taught and gender, predict teachers' attitudes toward implementing technology into their classroom?. Results showed that the independent predictor variable of teaching experience was moderately correlated with teacher attitudes. Results also showed that the combination of variables (teaching experience, grade-level taught, and gender) was a statistically significant predictor of teacher attitudes toward technology. This result matches Subhi's (1999) study that showed teaching experience was

significantly predictive of teachers' attitudes. A comparison study conducted by Kusano et al. (2013) showed that Japanese teachers' gender significantly predicted the perceived ease of use and usability, perceived usefulness, and attitude toward using technology, while the U.S. teachers' gender did not. Also, the results of the current study are inconsistent with a study conducted by Agbatogun (2010), which showed gender was not significantly predictive of teachers' attitudes towards interactive computer technology.

Research Question Seven

Does the combination of teaching experience, grade level taught, gender and attitudes predict teachers' perceptions of the competency needed toward implementing technology into their classroom?. Results show that the independent/predictor variables of teaching experience and teachers' attitudes were highly correlated with teachers' perceptions of competency. Results also showed that the combination of variables (teaching experience, grade level taught, gender, and attitudes) was statistically significant to predict teachers' perceptions of competency. This finding is consistent with Akcaoglu (2008), who found that gender affected teachers' technology usage and competency level. Also, Albirini (2006) found that attitudes about computers can be a predicative value for computer attributes, cultural perceptions, and computer competence. This result is also in line with the study of Adodo (2012), which indicated that teacher gender and teacher attitudes predict competency. In contrast with the current result, Goddeh (2006) found that teaching experience for pre-service teachers did not predict technology competency. No evidence in the previous literature discussed the combination of the variables addressed in question seven. Also, to the researcher's knowledge, there is no literature discussing grade-level taught as a predictor of percpetions of competency.

Limitations of the Study

Several limitations existed in this study. First, the study sample was found by convenience and limited to seventh to twelfth-grade social studies teachers employed in public schools in the Fifth Educational Directorate in Amman, Jordan. The sample was not randomly selected, which limits the external validity of the study; therefore, the results of the study can't be generalized to the larger group of teachers in Jordan. Second, the study used a cross-sectional survey design; consequently it is limited to this specific period of time.

Finally, the survey information depended on self-reported data and the responses of participants provided were based entirely on the attitudes of the teachers and on their perceptions of their competencies; therefore, the results might be affected by the teachers' social desirability to provide desired information rather than accurate information.

Implications of the Study

The implications of this study are beneficial to teachers, administrators and policy makers at the Ministry of Education in Jordan because it reveals social studies teachers' attitudes and their perceptions concerning the competency needed for implementing technology in the classroom. Policy makers must take actions toward the acceptance of technology by providing technology training programs to teachers and preparing them to use technology to benefit their students. It is the ministry's responsibility as a decision maker to support and encourage public school teachers to adopt technology, work with it effectively, and in meaningful ways to change the way of teaching and learning. This study will be important for academic supervisors in all the educational directorates in Jordan who are in charge of training teachers. This study is useful to principals, administrators, teachers, and parents because it helps shed more light on understanding teachers' attitudes and perceptions concerning the competency needed to

implement technology in the classroom; this, in turn, will lead to professional development and the improvement of technology resources for teachers.

It is clear from the current study that teachers had generally positive attitudes toward technology. And, since they are the ones trying to integrate technology in the classroom; teachers are the ones the ministry needs to hear. Policy makers also need to listen, as they should provide more access and time for teachers and students to learn and engage technology in the classrooms.

Recommendations for Future Research

After completion of this study, a number of recommendations for future research can be made. These include the following. First, this study could be replicated using the same methodology but in different directorates in Jordan that also have a large number of teachers. This would make the results more generalizable. Another further research project could investigate the perceptions and attitudes of school principals and counselors.

This study was quantitative, but further research could be qualitative by conducting interviews and observations to gain in-depth information that could enrich the findings of this study and create a better understanding of technology usage in Jordan. This study used a cross-sectional design and a short period of time to collect the data. It would be helpful for further research to be a longitudinal study design to obtain more description of the subject and discover the issues of technology.

This study examined factors such as, age, gender, teaching experience and grade-level taught. It is recommended to examine other factors that may affect teachers from integrating technology, such as: school support, technical support, teachers' academic degree, and training programs.

Conclusion and Summary

This study has contributed to the growing body of knowledge in the field of technology integration and social studies teachers, particularly in Arab countries. To this end, the study investigated social studies teachers' attitudes and their perceptions of competency needed for implementing technology in Jordanian schools. The findings of the study affirm past research findings that indicated the positive association of teachers' attitudes with their perceptions of competency. Furthermore, it did not appear from the current study that teachers differ in their attitudes and perceptions of competency based on the grade level they taught.

The current study agrees with the past research that indicated younger teachers tended to have more positive attitudes toward technology than older teachers. Also, this current result indicated that teachers with the least experience had the highest attitudes towards implementing technology than the teachers with the most experience. This is supported by past research. It is clear that teachers' experiences with technology is playing an important role in integrating technology into the classroom, for better or worse.

This study found that the youngest female teachers had the highest mean of perceptions of competency needed for implementing technology in social studies classrooms, even higher than the youngest male teachers. This study also showed that female teachers with the least teaching experience had higher perceptions of competency for implementing technology in social studies classrooms than male teachers, while female teachers with the most teaching experience had lower perceptions of competency scores than male teachers.

Finally, this current study identified predictors of teachers' attitudes and perceptions of competency to implement technology based on the variables of gender, grade-level taught and

teaching experience. These variables are clear in the literature with some other factors that might impact the attitudes toward integrating technology.

This study is a preliminary step in this area and the researcher plans to conduct further investigations into the factors that might affect technology integration in Jordan and other developing countries. The researcher also hopes that this study will help principals, administrators, teachers, and parents to understand teachers' attitudes and perceptions concerning the competency needed to implement technology. This, in turn, will lead to professional development and the improvement of technology resources for teachers.

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APPENDIX A: Technology Education Survey (TIES)

SECTION 1- Personal Data

Directions: Please provide the following information for data analysis purposes. All responses are kept strictly confidential (Please do not sign your name).

Today's date: ___ / ____ / ____

(1.) Gender: _____M ____F

(2.) Age ____

(3.) Number years of teaching experience: ____

(4.) Grade level taught: Basic Upper Level _____ , Secondary Level _____

(5.) Do you have access to computer technology

____ No

____ Yes. If yes, check all that apply.

____ Home

____ School

____ Other (Please Explain)

(6.) Type of technology and software programs you are using. (Check all that apply)

____ Microsoft word

____ PowerPoint

____ Excel

____ Access

____ Microsoft Publisher

____ PageMaker

____ Digital Camera

____ Internet browsers

____ Kid Pix

____ Video Camera

____ Accelerated Reader

____ Cornerstone Language Arts Program

____ Hyper Studio

____ Other (Please list)

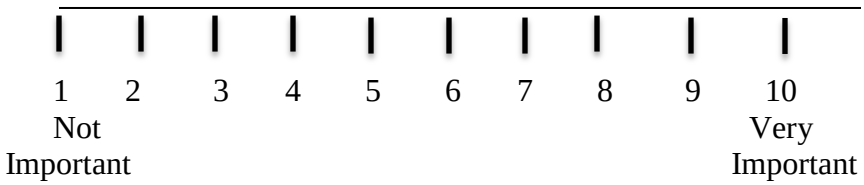
TECHNOLOGY IN EDUCATION SURVEY (TIES)

SECTION II - ATTITUDE TOWARD USING TECHNOLOGY

Directions: Below is a set of statements dealing with using technology in your content area. **Rate the IMPORTANCE** of each statement by circling the appropriate number for each item. Computer-based Technology (classroom based Instruction technology).

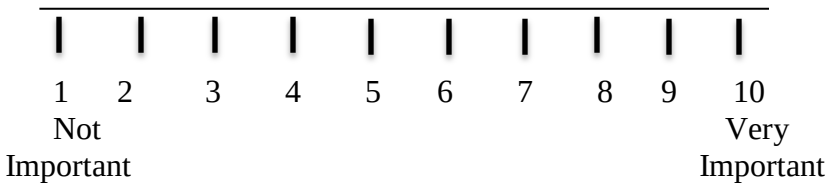
How important or unimportant is it to

1. Use Computer-Based technology as an integral part of classroom instruction?



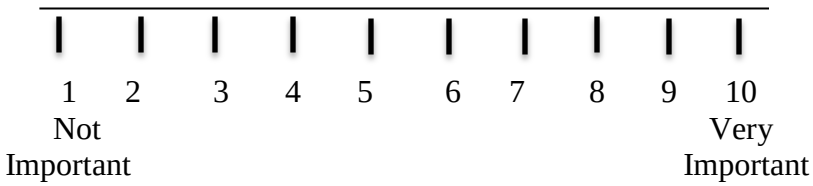
How important or unimportant is it to

2. Motivate students to use Computer-Based technology in a variety of subject-related situations?



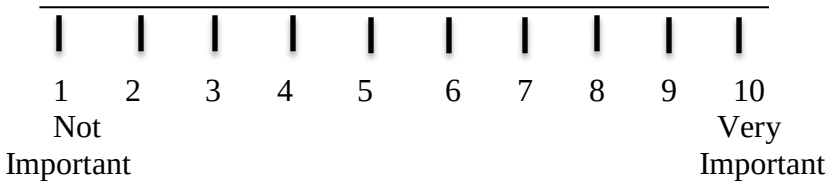
How important or unimportant is it to

3. Design activities that require students to use electronic sources for gathering specific information?



How important or unimportant is it to

4. Structure lessons that help students use Computer-Based technology to enhance desired learning?



How important or unimportant is it to
5. Select and design Computer-Based technology related activities that assess each student's knowledge about technology?

Not Important — Very Important

How important or unimportant is it to
6. Understand how to organize the class into small groups for completing Computer-Based technology
related tasks?

Not Important — Very Important

How important or unimportant is it to
7. Provide instruction that uses Computer-Based technology in designing graphic, pictorial aids, such as
charts, graphs, tables, and diagrams?

Not Important — Very Important

How important or unimportant is it to
8. Design situations that encourage students to evaluate the information gained from using Computer Based technology?

Not Important — Very Important

How important or unimportant is it to
9. Help students identify and locate information through the use of Computer-Based technology of
appropriate interest and difficulty?

How important or unimportant is it to
10. Design lessons that require students to use Computer-Based technology to gather information to solve a problem?

How important or unimportant is it to
11. Assist students in setting a definite purpose for using Computer-Based technology to enhance learning
the class material?

TECHNOLOGY IN EDUCATION SURVEY (TIES)
SECTION 111 - COMPETENCY FOR USING TECHNOLOGY
Directions: Below is a set of skills dealing with the use of technology in the content areas. **Rate YOUR COMPETENCY** to perform each skill by circling the appropriate answer for each item:

Assess your competency to
12. Use Computer-Based technology as an integral part of classroom instruction?

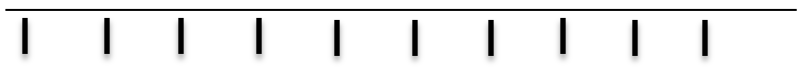
Assess your competency
13. To motivate students to use technology in a variety of subject-related situations?

Not Competent — Very Competent

Assess your competency to
14. Design activities that require students to use electronic sources for gathering specific information?

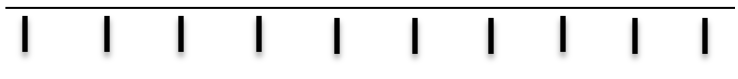
Not Competent — Very Competent

Assess your competency to
15. Structure lessons that help students use Computer-Based technology to enhance desired learning



Not Competent — Very Competent

Assess your competency
16. To select and design Computer-Based technology related activities that assess each student's knowledge about technology.



Not Competent — Very Competent

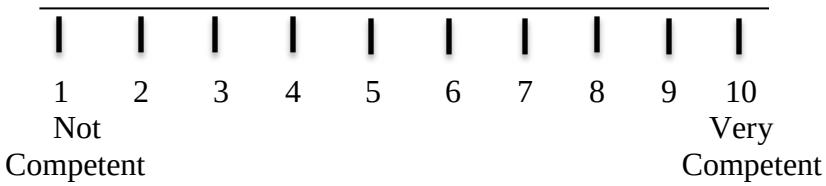
Assess your competency to
17. Understand how to organize the class into small groups for completing Computer-Based technology
related tasks?

Assess your competency to
18. Provide instruction that uses Computer-Based technology in designing graphic, pictorial aids, such as
charts, graphs, tables, and diagrams?

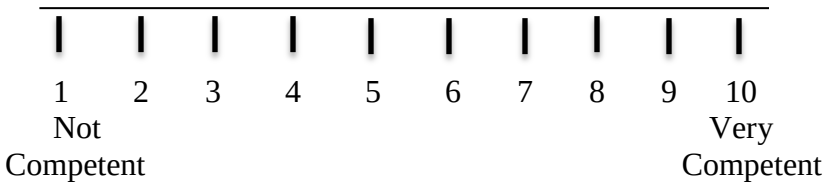
Assess your competency to
19. Design situations that encourage students to evaluate the information gained from using Computer-
Based technology?

Assess your competency to
20. Help students identify and locate information through the use of Computer-Based technology of appropriate interest and difficulty?

Assess your competency to
21. Design lessons that require students to use Computer-Based technology to gather information to solve a problem?



Assess your competency to
22. Assist students in setting a definite purpose for using Computer-Based technology to enhance learning
the class material?



APPENDIX B: Recritment Letter

الزملاء والزميلات الافاضل مدرسي مادة الاجتماعيات,

انا طالب دكتوراه في كلية التربية في جامعة ولاية كولورادو/ امريكا الشمالية. ارجو مشاركتك في هذه الدراسة المسحية التي ستكون جزءا" من رسالتي للدكتوراة. وقد تم اختيارك على اساس موقعك كمدرس لمادة الاجتماعيات في المدارس الحكومية بتربية عمان الخامسة.

ان الهدف من هذه الدراسة هو استطلاع اتجاهات ومدى إدراك مدرسي التربية الاجتماعية لأهمية دمج التكنولوجيا في الصفوف الاساسية العليا و الثانوية لمادة التربية الاجتماعية. ان اهتمامي بدراسة هذا الموضوع في النظام المدرسي ينطلق من ادراكي للمسؤولية التي تقع على عاتق المدرسين ودورهم الهام في بناء اجيال المستقبل.

ان اسئلة الإستبانة بسيطة مباشرة ولن تأخذ من وقتك سوى 15 دقيقة , وذلك بإعطائي معلومات اساسية حول الجنس, العمر, عدد سنوات الخبرة, ومستوى الصف الذي تدرسه. وسيكون هناك 22 سؤال حول إستخدام التكنولوجيا في الصف: إحدى عشر سؤالا تعكس إتجاهاتك حول إستخدام التكنولوجيا في الصف. وإحدى عشر سؤالا تعكس مدى كفائتك لإستخدام التكنولوجيا في الصف. ارجو وضع دائرة حول الرقم الذي يناسب رأيك من1الى 10.

إن تعبئة الإستبانة وإعادتها تعني موافقتك على المشاركة في هذه الدراسة. ان مشاركتك تطوعية واجابتك ستعامل بسرية تامة ولن يتم استعمالها إلا لإغراض البحث العلمي, بحيث لا يمكن التعرف على اي شخصية من المشاركين فيها. وسيتم أخذ جميع الإحتياطات المعقولة للحفاظ على السرية التامة. وسنزودك بملخص عن النتائج إذا رغبت بذلك. يمكنك توجيه أية

اسئلة عن هذه الدراسة لي على عنواني الالكتروني mbatainh@rams.colostate.edu

او الى المشرف على دراستي البروفسور الدكتورة شرون اندرسون, كلية التربية/ جامعة ولاية كولورادو على عنوانها الالكتروني Sharon.Anderson@colostate.edu

"لقد تمت مراجعة هذا المشروع والموافقة عليه من قبل لجنة المواضيع الإنسانية في جامعة ولاية كولورادو ويمكنك توجيه أية أسئلة تتعلق بحقوقك كمشارك في هذا البحث إلى رئيس لجنة البحث العلمي في مديرية تربية عمان الخامسة".

الباحث
محمد توفيق البطاينة
تلفون: 9704126980 1

APPENDIX C:Technology In Education Survey (TIES)
Arabic Version

إستبيان حول إستخدام التكنولوجيا فى الصف

الجزء الاول : معلومات شخصية

تاريخ اليوم : __ / ___/ _____

1. الجنس : ذكر_____ أنثى ____
2. سنوات الخبرة التدريسية : _____
3. العمر : _____
4. المرحلة التدريسية : أساسي علوي: _____, ثانوي : _____
5. هل لديك امكانية استعمال تقنية الحاسب الالي ؟

لا :_____

نعم : _____ إذا كان الجواب بنعم , (حدد المكان أو الاماكن التي يمكنك استعمالها فيه)

المنزل _____ المدرسة _____ أخري (وضح) _____

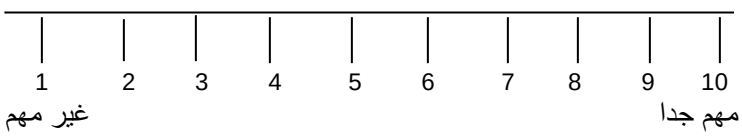
6. ما نوع التقنية أو البرامج التي تستعملها ؟ (حدد)

___ Microsoft word	____ Internet browsers
____ PowerPoint	____ Kid Pix
____ Excel	____ Video Camera
____ Access	____ Accelerated Reader
____ Microsoft Publisher	____ Cornerstone Language Arts Program
____ PageMaker	____ Hyper Studio
____ Digital Camera	____ Other (Please list)

الجزء الثاني : الموقف من استعمال التكنولوجيا :

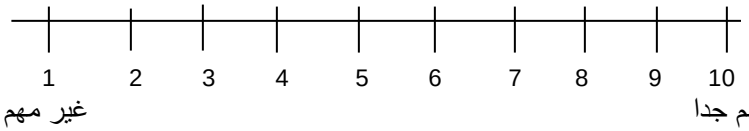
تعليمات: في ما يلي تجد مجموعة من العبارات حول استعمال التكنولوجيا في مجال تخصصك . قدر أهمية كل عبارة بوضع دائرة حول الرقم المناسب لكل عبارة.

1.ما مدى أهمية أو عدم أهمية استعمال تقنية الحاسوب كجزء مكمل في قاعة الدرس؟

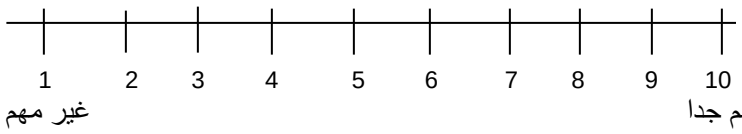


2. ما مدي أهمية أو عدم أهمية تحفيز الطلبة لاستعمال تقنية الحاسوب في مواضيع مختلفة؟

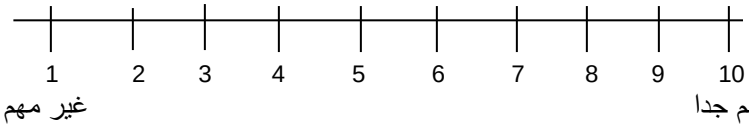
3. ما مدى أهمية أو عدم أهمية تصميم نشاطات تتطلب ان يستعمل الطلاب مصادر الكترونية لجمع معلومات محددة؟



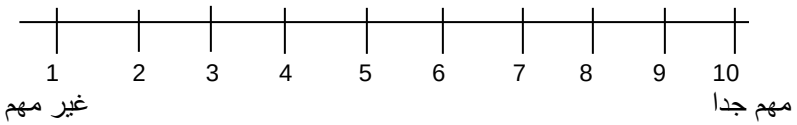
4. ما مدى أهمية أو عدم أهمية تنظيم دروس تساعد الطلاب على استعمال تقنية الحاسوب لتعزيز التعلم المرغوب؟



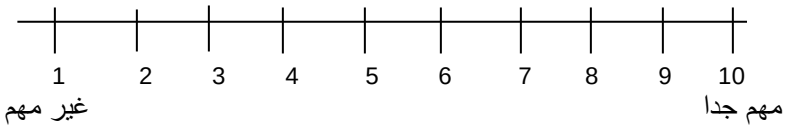
5. ما مدى أهمية أو عدم أهمية اختيار وتصميم نشاطات متعلقة بتقنية الحاسوب والتي تقيم معلومات كل طالب عن الحاسوب على حدة؟



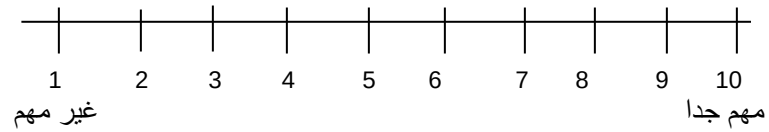
6. ما مدى أهمية أو عدم أهمية فهم كيفية تنظيم طلاب الصف في مجموعات صغيرة لانجاز مهمات متعلقة بتقنية الحاسوب؟



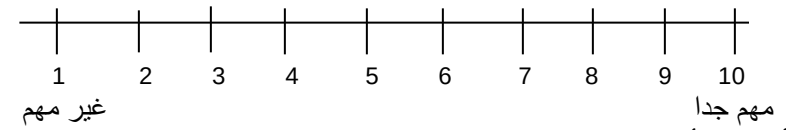
7. ما مدى أهمية أو عدم أهمية اعطاء تعليمات لاستعمال تقنية الحاسوب في تصميم رسوم , صور مساعدة , مثل الكروت, الرسوم , الجداول , والمخططات؟



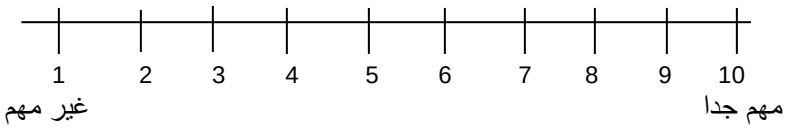
8. ما مدى أهمية أو عدم أهمية تصميم مواقف تعليمية لتشجع الطلبة على تقييم المعلومات المستقاة من استعمال تقنية الحاسوب ؟



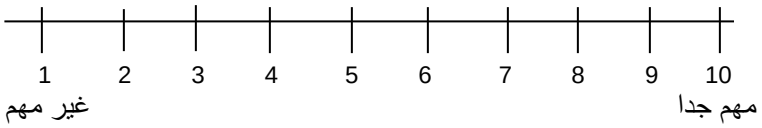
9. ما مدى أهمية أو عدم أهمية مساعدة الطلبة للتعرف وايجاد المعلومات من خلال استعمال تقنية الحاسوب المناسبة من حيث الاهمية والصعوبة؟



10. ما مدى أهمية أو عدم أهمية تصميم دروس تتطلب من الطلبة استعمال تقنية الحاسوب لجمع معلومات لحل مشكلة ما؟



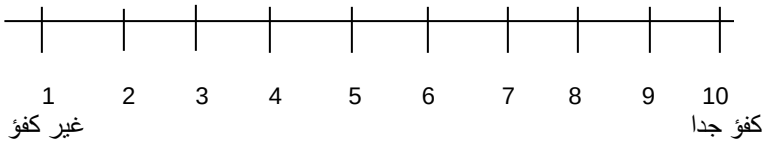
11. ما مدى أهمية أو عدم أهمية مساعدة الطلبة في وضع هدف محدد لاستعمال تقنية الحاسوب لتحسين تعلم المواد الصفية؟



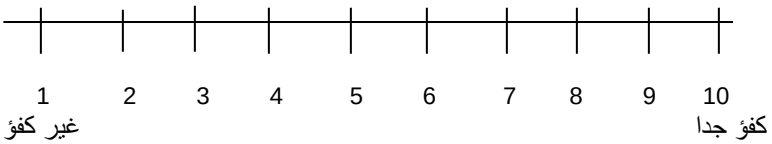
<u>الجزء الثالث: الكفاءة لاستعمال التكنولوجيا :</u>

تعليمات: في ما يلي تجد مجموعة من المهارات تدور حول الكفاءة في استعمال التكنولوجيا. قدر مدى كفاءتك في انجاز كل مهارة بوضع دائرة حول الجواب المناسب.

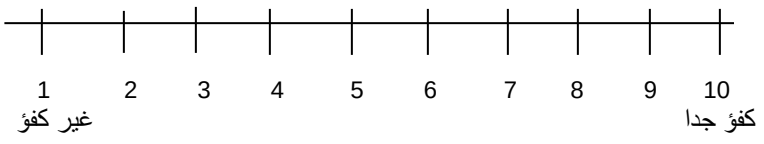
12. ما مدى كفاءتك في استعمال تقنية الحاسوب كجزء مكمل لغرفة الدرس؟



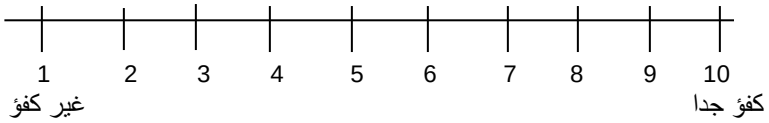
13. ما مدى كفاءتك في تحفيز الطلبة لاستعمال التكنولوجيا في مواقف تعليمية مختلفة متعلقة بموضوع الدرس؟



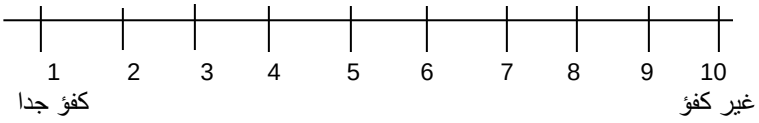
14. ما مدى كفاءتك في تصميم نشاطات تتطلب أن يستعمل الطلاب مصادر الكترونية لجمع معلومات محددة؟



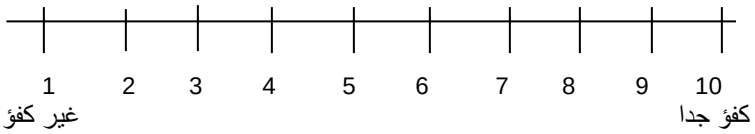
15. ما مدى كفاءتك في تنظيم دروس تساعد الطلاب على استعمال تقنية الحاسوب لتعزيز التعلم المرغوب؟



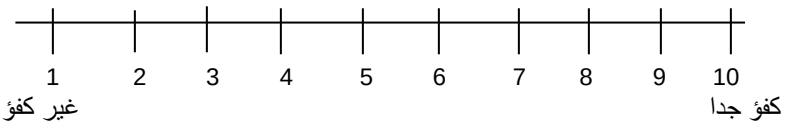
16. ما مدى كفاءتك في اختيار وتصميم نشاطات متعلقة بتقنية الحاسوب والتي تقيم معلومات كل طالب عن الحاسوب على حدة؟



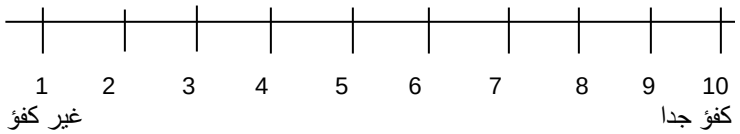
17. ما مدى كفاءتك في فهم كيفية تنظيم طلاب الصف في مجموعات صغيرة لانجاز مهمات متعلقة بتقنية الحاسوب؟



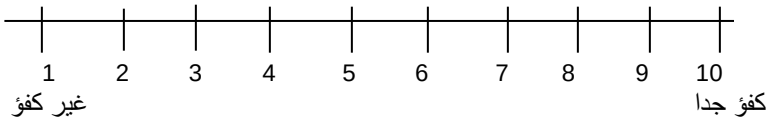
18. ما مدى كفاءتك في اعطاء تعليمات لاستعمال تقنية الحاسوب في تصميم رسوم , صور مساعدة , مثل الكروت,الرسوم, الجداول, والمخططات؟



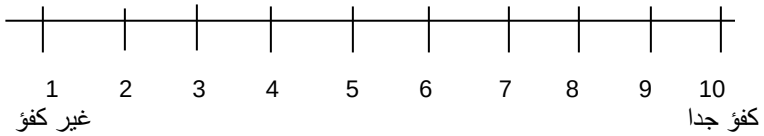
19. ما مدى كفاءتك في تصميم مواقف تعليمية لتشجع الطلبة على تقييم المعلومات المستقاة من استعمال تقنية الحاسوب ؟



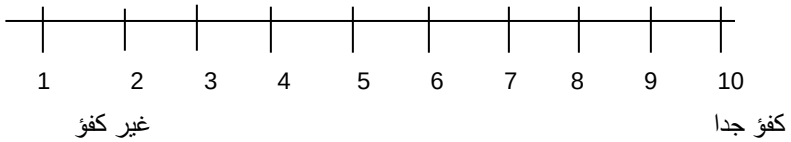
20. ما مدى كفاءتك في مساعدة الطلبة للتعرف وايجاد المعلومات من خلال استعمال تقنية الحاسوب المناسبة من حيث الأهمية والصعوبة؟



21. ما مدى كفاءتك في تصميم دروس تتطلب من الطلبة استعمال تقنية الحاسوب لجمع معلومات لحل مشكلة ما؟



22. ما مدى كفاءتك في وضع هدف محدد لاستعمال تقنية الحاسوب لتحسين تعلم المواد الصفية ؟



شكراً جزيـــــلاً لتعاونك

APPENDIX D: Cooperation Letter

Colorado State University

College of Applied Human Sciences
School of Education
209 Education Building • 1588 Campus Delivery • Fort Collins, Colorado 80523-1588
Phone: (970) 491-6317 • Fax: (970) 491-1317 • www.soe.cahs.colostate.edu

TO: Ministry of Education, Jordan

FROM: Sharon K. Anderson, Professor, School of Educa[redacted]

RE: Dissertation Study of Mohammad Al Bataineh

DATE: January 2, 2013

I am the doctoral advisor for Mohammad Al Bataineh and am supervising his dissertation study. He has contacted you to request your approval for his study looking at the attitudes and perceptions of Social Studies teachers in the Amman Fifth Directorate. If you need any additional information or details please feel free to contact me. Thank you for your consideration.

Sharon.anderson@colostate.edu

001-970-491-6861

APPENDIX E

بسم الله الرحمن الرحيم

وزارة التربية والتعليم

مديرية التربية والتعليم للواء وادي السير

الرقم : ١٣/٧ / ٥٣٠

التاريخ : ١٨ / ربيع الاول / ١٤٣٤

الموافق: ٣٠ / كانون الثاني / ٢٠١٣

مديري ومديرات المدارس الحكومية

الموضوع : البحث التربوي

السلام عليكم ورحمة الله وبركاته ،،،،

لا مانع لدينا من قيام الطالب محمد توفيق البطاينة من جامعة ولاية كولورادو / الولايات المتحدة الأمريكية والمسجل في برنامج الدكتوراه تخصص (التربية / أساليب تدريس التربية الاجتماعية) بدراسة حول "استخدام الكمبيوتر والتكنولوجيا في الصفوف الدراسية من السابع إلى الثاني عشر من وجهة نظر معلمي التربية الاجتماعية " وتتضمن الدراسة قيام الطالب بتطبيق إستبانة على عينة من معلمي التربية الاجتماعية في مدارسكم .

يرجى تسهيل مهمة الطالب المذكور أعلاه وتقديم المساعدة الممكنة له.

وتفضلوا بقبول فائق الاحترام ،،،،

[redacted]

المملكة الأردنية الهاشمية
وزارة التربية والتعليم

[redacted]

نسخة / مدير الشؤون التعليمية والفنية
نسخة/ رئيس قسم التدريب والتأهيل والإشراف التربوي
نسخة /كاتب الإشراف
نسخة /الديوان

APPENDIX F: Request to Use the Survey

Web Clip
Tip from Google - Find local businesses on Google Maps.

Survey Use Permission

Inbox x

Dr. Ali Alghazo <dr.alialghazo@gmail.com> Nov 21

to me

English
Arabic
Translate message
Turn off for: English
Dear Mohammad Bataineh

I have recieved a fowared email from my esteem advisor and mentor Dr. Bob Putnam in which you are seeking permision to use the survey used in my PhD dessertation.

In response to your request my permission of the use of the survey instrument is granted.

Thank you

APPENDIX G: Recruitment Letter

CSU letter head

Date: Feb, 5, 2012

Dear Participant,

My name is Mohammad AL Bataineh and I am a graduate student researcher from Colorado State University in the School of Education. Under the guidance of my advisor, Sharon Anderson, Ph.D., Professor in the School of Education, we are conducting a research study on Teachers attitudes and perceptions towards integrating technology in social studies classroom among Jordanian Schools. The Principal Investigator is Sharon Anderson, Ph.D., and I am the Co-Principal Investigator.

We would like you to complete a 15-minute paper copy survey to give us basic information about you such as your gender, age, grade level taught, and number years of teaching experience. there will be twenty two questions dealing with the use of technology in the classroom; 11 questions will ask you to reflect your attitudes toward using technology in your classroom and the other eleven questions will ask you about your competency for using technology in your classroom.

Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participation at any time without penalty. Please fill and return the survey in the envelope provided and place it in the provided box located in the principal office.

You will only be identified with an ID number. When we write about the study to share it with other researchers, we will write about the combined information we have

gathered. You will not be identified in these written materials. While there are no direct benefits to you, the researchers hope that the study will help you to learn about teachers' attitudes and perceptions concerning the need to implement technology; this, in turn, will lead to professional development and the improvement of technology resources for social studies teachers in Jordan.

There are no known risks associated with participating in this study. It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known and potential, but unknown, risks. If you are interested in participating in this study, please complete the attached survey, return it in the envelope provided and place it in the box provided in the principle office of your school. If you have any questions, please contact Mohammad Al bataineh at .mbatainh@rams.colostate.edu Or Sharon Anderson at Sharon.Anderson@colostate.edu

If you have any questions about your rights as a volunteer in this research, contact Janell Barker, Human Research Administrator, at 970-491-1655.

Sincerely,

Sharon Anderson Mohammad AL Bataineh

Professor Doctoral Candidate

APPENDIX H: Consent to Participate in a Research Study

Colorado State University

TITLE OF STUDY: Jordanian Teachers' attitudes and perceptions towards integrating technology in Social Studies classroom

PRINCIPAL INVESTIGATOR*:* Sharon K. Anderson, Ph.D., School of Education, Sharon.Anderson@colostate.edu

CO-PRINCIPAL INVESTIGATOR: Mohammad Al Bataineh, PhD Student, School of Education, mbatainh@rams.colostate.edu ; Telephone: 970-492-9195

WHY AM I BEING INVITED TO TAKE PART IN THIS RESEARCH? You are invited to participate in this research because you are Social Studies teacher in public schools in the Fifth Educational Directorate and you teach one of the grade levels between 7th to 12 grade levels.

WHO IS DOING THE STUDY? Graduate student Mohammad AL Bataineh, is conducting the study under the guidance of his advisor, Sharon Anderson, Ph.D.

WHAT IS THE PURPOSE OF THIS STUDY? The purpose of this study to examine the attitudes and perceptions of Social Studies teachers in regards to integrating technology within their classroom.

WHERE IS THE STUDY GOING TO TAKE PLACE AND HOW LONG WILL IT LAST? Participants can complete the survey at school or at home. Completing the survey will take about 15 minutes.

WHAT WILL I BE ASKED TO DO*?* You will first be asked to complete a paper copy survey that asks a few demographic questions as well as a set of questions dealing with the use of technology in your classroom.

ARE THERE REASONS WHY I SHOULD NOT TAKE PART IN THIS STUDY? You should not participate in this study if you are not a Social Studies teacher in Fifth Educational Directorate public schools in Amman, Jordan and not teaching grade levels 7 to 12.

WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?

There are no known risks associated with this study. It is not possible to identify all potential risks in research procedures, but the researcher(s) have taken reasonable safeguards to minimize any known and potential, but unknown, risks.

ARE THERE ANY BENEFITS FROM TAKING PART IN THIS STUDY? There is no direct benefit to you as a result of your participation in this research, but the researchers hope this study will advance the understanding of teachers' attitudes and perceptions toward implementing technology in the classroom. In turn, this could lead to professional development and the improvement of technology resources for Social Studies teachers in Jordan.

DO I HAVE TO TAKE PART IN THE STUDY? Your participation in this research is voluntary. If you decide to participate in the study, you may withdraw your consent and stop participating at any time without penalty or loss of benefits to which you are otherwise entitled.

WHO WILL SEE THE INFORMATION THAT I GIVE? We will keep private all research records that identify you, to the extent allowed by law.

Your information will be combined with information from other people taking part in the study. When we write about the study to share it with other researchers, we will

write about the combined information we have gathered. You will not be identified in these written materials.

WILL I RECEIVE ANY COMPENSATION FOR TAKING PART IN THIS STUDY? The participants will not receive any compensation.

WHAT HAPPENS IF I AM INJURED BECAUSE OF THE RESEARCH? The Colorado Governmental Immunity Act determines and may limit Colorado State University's legal responsibility if an injury happens because of this study. Claims against the University must be filed within 180 days of the injury.

WHAT IF I HAVE QUESTIONS?

Before you decide whether to accept this invitation to take part in the study, please ask any questions that might come to mind now. Later, if you have questions about the study, you can contact the PI, Dr. Sharon Anderson (970-491-6861) or Co-PI, Mohammad Al- Bataineh (970-492-9195). If you have any questions about your rights as a volunteer in this research, contact Janell Barker, Human Research Administrator at 970-491-1655. We will give you a copy of this consent form to take with you.

Your signature acknowledges that you have read the information stated and willingly sign this consent form. Your signature also acknowledges that you have received, on the date signed, a copy of this document containing __2__ pages.

_____ _____

Signature of person agreeing to take part in the study Date

_____

Printed name of person agreeing to take part in the study

_____ _____

Name of person providing information to participant Date

_____ _____

PI Signature Co-PI Signature