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AUTHOR Diem, Richard A.
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ABSTRACT

Researchers noted that introducing technology within a course specific framework, such as a methods class, often results in preservice teachers increasing their computer competency and confidence in using technology and can greatly influence the adoption of technology as part of instructional experiences. To determine if these constructs were indeed part of social studies preservice teacher educational experiences and to examine the ways in which technology was introduced to incoming professional social studies educators, a social studies methods, class technology evaluation rubric was designed. It was hypothesized that through the implementation and analysis of this rubric, a view of the possibilities and limitations of technology applications in social studies methods classes would emerge. Classes used for the experiment were the required exit level social studies methods course for secondary preservice teachers in a large public university. Classes were delivered in a mixed field based environment. The study's design employed the collection of both qualitative and quantitative data to gauge the effects of technological interventions. Six results were indicated: (1) student knowledge about technology use and application in social studies content areas increased during the methods class; (2) students noted that technology use in the secondary school field sites was further ahead than at the university level; (3) the most common use of technology at either the university or at the school field sites was via the Internet for either class use or personal use; (4) teaching instructional technology applications in social studies needs to be broadened beyond base line use to an application and design mode; (5) instructional use of technology has been increased through student demand rather than from institutional pressures despite the imposition of standards requiring the integration of technology in instruction; and (6) the introduction of technology applications as part of a preservice methods class needs to be done through a seamless integration of both skill and content. (BT)

An Examination of the Effects of Technology Instruction In Social Studies Methods Classes

Richard A. Diem
College of Education and Human Development
The University of Texas at San Antonio

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Introduction:

Over the past decade training, the appropriate placement of technology skills, especially within the context of pre-service teacher education programs, and their curricular applications have been recognized as one of the most important components of successful technology learning paradigms. Most, if not all, pre-service teacher education programs, nationally, have some type of technology requirement. While this is true in all subject, or content, fields recent research focusing on the impact of technology and the acquisition of social studies skills notes that when students are able to connect conceptual frameworks to concrete experiences they form a foundation in which they are able to dissect complex ideas (Shaver, 1999).

As technology offers a means by which information is rapidly collected, organized, and stored, it can also provide learners and teachers a differential instructional forum to learn how to develop the observational, thinking, and reasoning skills that are necessary if these concepts are to develop to fruition. Since these notions are at the heart of the social studies (NCSS, 1994), technology offers those preparing to be social studies teachers a new and exciting platform to engage and extend these ideas.

Pedagogical exposure to these constructs begins, in most cases, while a member of a social studies methods class. Overbaugh and Reed (1992) note that introducing technology within a course specific framework such as a methods class often results in pre-service teachers increasing their computer competency and confidence in using technology. Keiper, Harwood and Larson (2000) also relate that pre-service teaching experiences in social studies methods classes can greatly influence the adoption of technology as part of instructional experiences.

To determine if these constructs were indeed part of a social studies pre-service teacher educational experiences and to examine the ways in which technology was introduced to incoming professional social studies educators, a social studies methods class technology evaluation rubric was designed. It was hypothesized that through the implementation and analysis of this rubric a view of the possibilities and limitations of technology applications in social studies methods classes would emerge.

Purpose:

The purpose in developing this study was four-fold:

1. To assess the effects of a variety of technology training efforts in social studies methods classrooms.
2. To determine how social studies methods instructors use, apply, and integrate technology in their classrooms.
3. To note if social studies pre-service student's knowledge and attitudes about the use of technology changes as a result of instructional interventions.
4. To expand on previous studies of technology integration in social studies methods classes (Keiper, Harwood, and Larson, 2000 for example) through the use of a dual data collection and analysis method.

Sites:

The methods classes used for this experiment were the required exit level social studies methods course for secondary (grades 7-12) pre-service teachers in a large public university. These classes were delivered within a mixed field based environment. That is, half the classes were taught at school sites with the remainder of the classes taught in campus based settings Students had access to both in-class computer technology as well as computer labs at the university and at all of the school sites. In addition, all sites, university and schools, had Internet drops within individual classrooms and in libraries and computer laboratories. Stand-alone social studies software was also available through either the university curriculum library or the individual schools.

Design:

The design for this study employed the collection of both qualitative and quantitative data to gauge the effects of technological interventions

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Qualitative data was obtained via a mixed methodology approach. Through interviews, observations, and written documents data was collected and triangulated to ensure trustworthiness. Additional information was collected through structured and semi-structured weekly reflections from methods instructors and their students that were e-mailed to the researcher on a weekly basis.

The individual qualitative data collection format that was followed consisted of structured interviews and observations whose focus was on the use of technology in campus methods classes and at the individual school sites. These included queries on attitudes about technology, levels of technology use, and applications of technology within social studies lessons. In addition, each student was required to keep a weekly e-mail diary noting if technology was used in his or her methods class and if they saw technology being used in their field site

(either through individual or classroom use). Additional commentary on the effectiveness of technology in instruction was also required. One hundred and eight pre-service social studies students and two methods instructors participated in this endeavor over a two-year period.

Data was collected and analyzed on an ongoing basis to obtain formative and summative findings. In addition students were observed and interviewed before and after taking the methods course. These observations and discussions focused on using technology as part of the student's instructional practice. Exit, or end of the course interviews, were also conducted focusing on student awareness, attitudes, and comprehension of technology and social studies applications.

Quantitative data was also collected and analyzed using a casual comparative design. This data was collected via the administration of the Levels of Technology Implementation (LoTi) survey developed by Moersch (1994). This nationally validated instrument breaks down the implementation of technology into six levels, from non-use to refinement. It was given two times:

- Before the onset of the pre-service methods class
- After the pre-service methods class was completed

After the second administration of the survey, individual results were compared with the qualitative data set. Comparisons were made as to the answers provided through the survey and the field data collected through interviews, observations, and written responses.

The research plan as described above was structured to serve as a guide to chart the progress of technology instruction particularly on it is used, its effect on student attitudes, and its implementation in field based or student teaching classes.

Results:

The results noted below are based on an analysis of both the qualitative and quantitative data sets:

1. Student knowledge about technology use and applications of technology in social studies content areas increased over the duration of the methods class. The average scores on the LoTi increased from a level 2 – exploration to a level 4a Integration –Mechanical. In addition, student use of technology as part of their lesson preparation and delivery increased as well as their knowledge about technology.

2. Students noted that technology use in the secondary school field sites was further ahead than at the university. While the schools in which students observed and taught introductory lessons were required to have their students use technology as an integral part of their social studies classroom experience this was not true of their university course work, both in and out of their teacher preparation program. Students also noted that more of high school instructors allowed time for technology use (both required and optional) than university teachers.

3. The most common use of technology at either the university or at the school field sites was via the Internet for either class use or personal use. The Internet was used as the initial research tool for almost all of the students. Here research is used in a very broad sense as students obtained everything from model lesson plans to bibliographies from the net. It had replaced going to the library to get intellectual information for most of these students. The pre-service students also noted that the high school students and their teachers used the net in a similar manner.

4. The teaching of instructional applications of technology in social studies needs to be broadened beyond base line use (i.e. databases, Internet,) to an application and design mode. While there was instruction on how to use basic computer products little or no time was spent on how to actually apply technology to a learning environment. When asked to do this at school field sites as part of the secondary school instructional requirements, most pre-service students could not comply.

5. Instructional use of technology has been increased through student demand rather than from institutional pressures despite the imposition of standards requiring the integration of technology in instruction. Most pre-service students, in this study, knew more about technology than their instructors. They were the ones who "pressured" the instructors to increase the time spent on technology discussions rather than the instructors taking the lead in noting how best to use and apply technology. Likewise many of the high school students who the pre-service teachers came in contact with were more knowledgeable about the possibilities of the instructional uses of technology than their teachers.

   This is indicative of an "under preparation" in the use and application of technology despite the influx of a variety of technology standards from both state and national levels. Many in today's social studies teacher preparation programs still do not have opportunities to learn how to construct and apply technology within their lesson frameworks (US Department of Education, 2000).

6. In sum, the results of this study indicate that the introduction of technology applications as part of a pre-service methods class needs to be done through "a seamless integration" of both skill and content. That is, technology to be understood most effectively in an instructional format should be used through a social studies content example within an associated technology skill. Within this study the most successful teaching/learning technology based experiences followed this format.

   Twenty years ago the content field that was identified as least likely to use a computer was social studies (Goodlad, 1983). While this is not true to the extent it previously was, too many of today's social studies teachers still do not go beyond a cursory use of technology in their classrooms (US Department of Education, 2000). If this "under use" of technology is to change the cycle must begin at the pre-service level.

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