Myths and Misconceptions:
Pre-Service Teachers’ Content Knowledge and Christopher Columbus

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This preliminary action research study focused on examining the content knowledge that Kindergarten- 6 (K-6) pre-service teachers hold about particular historical events typically taught in their classrooms related to Christopher Columbus and the ways in which their content knowledge is centered on historical myths and misconceptions. The purpose of this study was to determine if pre-service teachers’ participation in a constructivist–based lesson designed to challenge myths and misconceptions about historical events and people affects pre-service teachers’ content knowledge with regard to the traditional “heroification” of Christopher Columbus (Loewen, 2007, p. 30). Working with Christopher Columbus and his “heroification” (Loewen, p. 30) may offer options for considering how pre-service teachers can translate the investigation of traditional historical teachings about this Eurocentric hero to other studies of individuals who have been traditionally held as iconic in the teaching of elementary social studies. This perpetuation of teaching social studies as a series of white male heroes without the recognition of multiple perspectives could and should be investigated in the teaching of history with young learners and with future teachers in social studies teaching methods courses (Ukpokodo, 2003).

“Young people are exposed to formal history as well as myths and stories from a variety of sources including schools, their families, and the media” (Seixas, 1993, p. 301). Because of the many ways in which pre-service teachers have learned the pervasive myths of Columbus as the first explorer to reach the Americas, the flat earth myth, the reasons behind Columbus’ journey, and his treatment of the Native American people, there is an implicit and specific need to examine what pre-service teachers believe as they enter the field of education and then also the ways in which this content knowledge can be challenged and nurtured (Singam, 2007; Loewen,
This study offers an alternative to the traditional ways of teaching and learning about historical figures by using Columbus as a model for the consideration of other historical figures held up as icons in American history texts. This action research investigates the fostering of the concepts of historical inquiry, recognition of varied perspectives, collaborative socialization and discussion (Schmidt, 2011), and the use of multiple sources for investigation when teaching elementary students history through the social studies in elementary education.

**Research Questions**

The research questions for this study are twofold: What is the impact, on pre-service teachers, of a constructivist teaching lesson designed to challenge U.S. myths and misconceptions about selected historical events associated with Christopher Columbus taught in Kindergarten-6 social studies? and What content knowledge is held by K-6 pre-service teachers about Christopher Columbus pre- and post- their involvement in a constructivist teaching methods course teaching social studies education?

The study aims to add to the existing body of research related to how teacher educators can address pre-service teachers’ content knowledge about historical events and people and the myths and misconceptions that are often taught in United States history in K-6 education such as the iconic “heroification” (Loewen, 2007, p. 30) of America’s central players in history. Because traditional teaching methods are pervasive in social studies instruction (Kincheloe, 2001; Meuwissen, 2006) specific studies aimed at the teaching of American history in more constructivist methods are scarcely addressed in the research. Pre-service teachers need more exploration with alternative means to traditional methods and teacher educators need to provide these varied views to elementary pre-service teachers. Mareketti stated that “optimal learning occurs when students are interested in the subject matter, are motivated with challenging learning opportunities, and when immersed in atmospheres that make learning enjoyable” (2011, p. 547-548).

**Review of Literature**

It is critical that pre-service teachers in elementary education are engaged in developing their own understanding of historical concepts and related events prior to teaching K-6 students. It is also imperative that pre-service teachers are engaged in social constructivist activities that encourage learning among their peers and with their teacher as a guide so that they can, in turn, emulate such teaching and learning with their own future students. “Social constructivism is a highly effective method of teaching that all students can benefit from since collaboration and social interaction are incorporated” (Powell & Kalina, 2009, p. 243). When history is framed as a social and interpretive process, then the subject ceases to be a memorization of random and unrelated facts and becomes a more active, engaging practice with the student at the center of the learning process (Wiersma, 2008). The focus shifts and becomes pointed at the learners’ conceptualization of events and the ability to relate them to their own lives and the lives of others. Relevancy is of the upmost importance for conceptualization and generalization to occur. The emphasis on a retelling of facts is modified in favor of a focus on interpretation and investigation of the facts as they are presented from various sources (Sunal & Haas, 2011).
The use of primary documents as important teaching tools related to the study of history with elementary and middle school students is a valuable teaching strategy (Barton & Levstik, 2004; Potter, 2003). The use of such documents can benefit both the teacher and student as it promotes students’ interest and engagement. More importantly, it serves as a realistic teachable tool to meet the needs of a teacher encouraging students to investigate historical perspectives rather than promoting the memorization and regurgitation of facts from a textbook (Fertig, 2005). When students are able to examine and interpret elements in a document from the time period studied, students build a deeper and more concrete understanding than can occur through simple recall and sole reliance on textbooks. Although primary documents are vital tools for students’ usages, it is not the documents in themselves that are the objective, but the inquiry that the documents encourage. Barton discussed this when stating, “Much of the potential of original historical sources lies in their ability to stimulate curiosity, just as discrepant events do in science” (2005, p. 751). It is crucial that along with the use of primary and secondary documents including photographs, diaries, etc. teachers encourage students in the examination of multiple sources and help students to relate to them within their context and place in history. Such encouragement needs to be done with a comparison among differing views from the time period studied, as well as other time periods’ perspectives (Barton, 2005).

The myth of Columbus being the first to discover America is perpetuated more often and more fervently than any other myth in elementary education (Singham, 2007). Singham addressed this in stating, “the Columbus myth came in the form of American chauvinism that wanted to believe that the world was pretty much steeped in ignorance before Columbus’ voyage” (p. 592). Columbus is often portrayed in a favorable light, if not a heroic one; yet, there are discrepant accounts of his contributions and his actions. As a leader, Columbus was responsible for the enslavement of many of the original natives in our country, as well as others along his route. When we credit Columbus as the first explorer and the one who single-handedly discovered America, we neglect to recognize the other European, African, Portuguese, etc. explorers who also contributed to the colonization of the West (Loewen, 2007). We know other people had already traveled along his same routes prior to Columbus’ first transatlantic journey. Still we continue to recognize Columbus as the first, rather than the one who is now the most memorable and the most well-known leader of all journeys. We also know that the myth of the flat Earth was widely falsified, as most scholars and lay people of the time believed the world to be round, and we know that Columbus never set out to debunk this incorrect belief of his countrymen (Singham).

Many Americans cling to their historical icons and often recoil from information disavowing their character or their works. It is difficult to realize that there were many reasons that Columbus sailed and some of them were not entirely positive. European domination and accretion of power and wealth were central reasons for the initial journey. The ramifications of such imperialistic essentialism survive today. The myth of foiling Turkish pirates that preyed on the ships of Christian sailors due to their religious pursuit of Islam hardly explains the religious freedom for both Jews and Christians at the time by the Moors and Turks (Loewen, 2007). Also, this myth fails to recognize the Christian oppression of island natives that occurred involving both slavery and genocide in Haiti and elsewhere on the part of Columbus and his crew.
When we teach the story of Columbus, it is imperative that we show a representative of the many cultures exploring at the time and showcase the impact of the meeting of those cultures (Loewen, 2007). It is essential that we promote an open forum that discusses, not whether Columbus was good or bad, but the many factors at play during that time period and the many results that came from the events set in motion at the time (Barton & Levstik, 2004). It is important to use Columbus not as a hero in himself, but as a representative of what colonization and domination by one culture can do to those colonized. He is neither to be showcased as a villain or a champion, but merely as an example. Loewen stated that when we “paint simplistic portraits of a pious, heroic Columbus, they provide feel-good history that bores everyone” (p. 69). Certainly, history should explore people for the complexities they represent and not as static ideologues to be revered and unquestioned.

The question remains, if we know there are myths associated with history, why are teachers repetitively (re)inforcing and (re)teaching them to our students? According to Puk, “Myths survive in our social studies teachings for many reasons. First of all, teaching history is more problematic than perhaps most practitioners are aware of or are willing to admit” (1994, p. 230). Myths have been perpetuated largely to keep principal views about our country centered in pride and patriotism. When we seek the reality in our own history, most often there is not a clear-cut simple explanation as to the events that have taken place. History is uncomfortable, clean, and often unclear. It involves interpretation, analyzing, and evaluation (Okolo, Ferretti, & MacArthur, 2007). Many times teachers are unable, unwilling, or simply uncomfortable with presenting the messiness that often accompanies an examination of choices and consequences of our American past. My aim here is to investigate modeling an alternative method for teaching about historical figures. If pre-service teachers are exposed to another way of teaching and learning that they may not have experienced in their own elementary education learning about American history, will such exposure affect their content knowledge in relevant and meaningful ways?

Teachers may perpetuate historical myths or (re)teach or (re)inforce (mis)conceptions simply because they are uninformed themselves to the truth or multiple interpretations of historical events. Many teachers lack background knowledge in the real events that they are teaching, so they rely on the (mis)conceptions they hold and the incorrect materials with which they were taught. Professional development opportunities and undergraduate teaching preparation programs are limited in the areas of social studies and history education (Meuwissen, 2006). One source of limitation has been the immense efforts for teacher development aimed at effective teaching of mathematics and reading; two areas largely tied to the mandated high stakes testing areas. Little effort has been given to the interests of teaching history and to the time afforded to it as social studies is generally limited in the teacher’s instructional day. The integration of history among subject areas has also been inadequate with the adoption of mandated reading and mathematics programs that do not lend themselves to thematic and integrated teaching. Teachers also incorrectly believe that if they are reading a text that discusses historical figures or events, this is enough to effectively incorporate the teaching of history.

A final reason explaining why teachers may reinforce historical myths is the heavy reliance on inaccurate or incomplete texts. Loewen (2007) stated that “Textbooks dominate American history courses more than they do any other subjects” (p. 3). Teachers lean on textbooks to
inculcate students with patriotic themes and common knowledge of dates, names, and events. Instead of utilizing texts as a resource and supplementing them with outside ideas and resources, teachers fall back on strict recall and memorization of facts and definitions. A problem with the texts is that, “they leave out anything that might reflect badly upon national character” (Loewen, p. 5). Our intent as history teachers is not to desecrate the reputation of our country and its leaders. However, we have an obligation to give our students multiple perspectives and even allow them to conclude their own interpretations. Every event in history has not been tied up neatly. Our students should have access to the knowledge that all things have not been resolved well for all people and just simply that all things have not been resolved, period. We cannot do this with sole reliance on a generic, mass produced text.

Much of the way in which American students have been taught in social studies is in an attempt at “sterilizing history” (Puk, 1994, p. 231). As educators, our duty is to inform our students, but more importantly, we are to teach our students to become learners in their own right. They are to learn what it is to learn, and to be able to explore and examine on their own. If we present the form of history that is included in most textbooks, then we may be passing on false information and limiting the understanding of our students and the scope and depth of their knowledge base. As teachers we have the obligation to present multiple perspectives and examine historical occurrences for what they were and what they mean to us now. In order to do this appropriately, we have to educate ourselves and then present various resources to our students, many of whom might contradict one another. In order for teachers to be prepared to teach with such an approach, it is necessary to equip pre-service teachers with accurate and appropriate content knowledge enabling them to confront the myths that plague our history. Pre-service teachers must be given the tools and the means to be able to teach history as an examination of varied and diverse viewpoints, rather than a conclusive consensus that is never-changing (Puk). “Young people are exposed to formal history as well as myths and stories from a variety of sources including schools, their families, and the media” (Seixas, 1993, p. 301). Because historical inaccuracies, myths, and even outright lies permeate popular culture and the American collective understanding, we, as educators, have the difficult task of separating fact from fiction and presenting the same information from wide-ranging and assorted viewpoints in order for our students to be capable, informed, and responsible stewards of “our” American history. “Even in a democracy, history always involves power and exclusion, for any history is always someone’s history, told by that someone from a partial point of view” (Appleby, Hunt, & Jacob, 1994, p. 11). It, therefore, is the duty of educators to remain informed and enlightened, while simultaneously allowing students to do the same. It is in this way that this action research study addresses the work of illuminating content knowledge as, “teaching includes a responsibility on the part of everyone involved constantly to clarify the nature of knowledge rather than simply and passively to pass it on to some other unsuspecting sponge” (Puk, p. 232).

Method

Twenty pre-service teachers in their third professional semester in an elementary teaching program at a major Tier I research institution were participants within this action research study. All 20 participants were enrolled pre-service teachers in an elementary social studies teaching methods course in their final year in their teacher education program. Focus groups were selected on a voluntary basis, resulting in six pre-service teacher participants in pre- and post-
intervention focus groups. The setting in which the focus group participants were interviewed was their course classroom. The pre-focus group was conducted after the second class period and lasted approximately 45 minutes. It was held prior to the modeling of a Columbus lesson in class and prior to the pre-service teachers’ participation in the lesson. The second focus group interview took place after the last class of the semester for the methods course and lasted approximately 45 minutes.

Pre- and post-surveys were administered to all 20 pre-service teachers in a computer lab where they were seated at their own individual computer entering their answers individually. The pre-survey was given on the first class session of the semester, prior to any instruction in the social studies methods course and prior to participating in the Columbus lesson. The post-survey was given on the last class session of the semester and after their participation in the Columbus lesson.

Pre-service teachers were involved in a constructivist-based inquiry lesson that encouraged them to confront their knowledge gaps specifically focused on addressing widespread myths, misconceptions, and inaccuracies taught in K-6 elementary social studies classes about Christopher Columbus. The students completed an anticipation guide where they looked at their own content knowledge and attempted to answer open-ended questions. Students were then involved in historical inquiry through multiple resources including primary documents, textbooks, websites, and children’s literature. Discussions and debates were held during the class session with the pre-service teachers interacting with one another and the instructor facilitating with guiding questions. The pre-service teachers also employed a graphic organizer for their own use to record information as they worked. The pre-service teachers were forced to confront information found about Christopher Columbus in social studies textbooks and children’s literature that contrasted initial accounts from primary documents, historically accurate social studies web resources, and historically accurate children’s literature. The accuracy of children’s textbooks and children’s literacy in the teaching of history associated with Columbus have become frequently examined within the research as areas of concern when teaching social studies responsibly to elementary students (Knopp, 1995; Bigelow, 1992). Finally, the pre-service teachers returned to their anticipation guides at the end of the class and determined whether they could answer all of the questions with fidelity and also discussed whether there were absolute answers to be found.

After participating in the lesson and at the end of the course, students completed post-surveys that sought to establish what effects, if any, the active lessons had on pre-service teachers’ knowledge gaps, misconceptions, or inaccuracies about Christopher Columbus. Pre-service teachers were engaged in focus group discussions about their knowledge gaps and the significance of particular U.S. history topics, such as Christopher Columbus, typically taught in K-6 classrooms. Themes were coded and compared among and between the students’ initial responses on their pre-surveys and the initial conversations that occurred in the first focus group interview. The post-interview survey questions were coded and examined for common themes. The second focus group interview was analyzed for themes as well, and the codes were compared for commonalities. Finally, the initial themes were transposed against the final themes to result in conclusions. Pre-and post-surveys were designed as part of a larger study and could be a limitation here. Items on the pre-survey asked participants to respond to prompts related to
their content knowledge about Christopher Columbus. One item asked participants to select pictures from online sources that they might use when teaching about Christopher Columbus. Sample survey items included directions such as, “Briefly summarize your knowledge and beliefs about Christopher Columbus in American History” and “Describe your beliefs about teaching historical events and people to K-6 students”. Items on the pre- and post-surveys were not all explicitly linked to the topic of Columbus and only to the area of content knowledge. Information was culled from questions that explicitly linked to the research questions so, therefore, this could be considered as a limitation of the study.

Other pre- and post-focus group interviews items asked participants to discuss their prior content knowledge about Christopher Columbus and their personal experiences as an elementary student learning about these topics. Several items on the pre-focus group interview questions asked participants to discuss their beliefs and content knowledge about the significance of Columbus in teaching K-6 students. Participants in the focus group also initiated their own conversations and questions that pertained to the teaching of Columbus. Their conversations took avenues that broached these topics as well. Sample interview questions from pre- and post-focus groups that were analyzed from this study included: “Are there certain concepts about Christopher Columbus and/or historical events related to this man that you believe to be true or false? If so, please describe these and why you believe them to be true or false.” Limitations of this instrument could be that the conversations from the focus group interviews were not solely isolated to the topic of Columbus or content knowledge associated with that topic, and the questions were taken from a larger study that could have influenced the reporting and analysis of the data. Coding of pre-survey responses was conducted to identify specific themes that emerged in the pre-surveys and first focus group. Items were analyzed for specific similarities and outliers were noted. Particular themes not included were noted as well for their absence. Thematic coding of post-survey responses was compared with the thematic coding of transcriptions from the second focus group responses. The purpose of comparing the responses on the pre-surveys and then from pre-focus group interviews was to take an initial review of the findings and compare it for similarities and differences with the results from the post-surveys and post-focus group interviews with the pre-service teachers.

Findings

The findings of the initial responses from the participants’ pre-surveys and from the initial focus group interviews indicated that these pre-service teachers held many myths and misconceptions about Columbus and his transatlantic journeys. Two major themes were identified in the pre-service teachers’ prior content knowledge reflecting myths. The pre-service teachers focused on (1.) Columbus and his legacy and (2.) the reasons Columbus had for his transatlantic journeys toward what are now areas near the mainland of the United States. The pre-service teachers included traits of Columbus and his legacy indicating Columbus was: “a hero, an expert explorer, and the first to discover and/or found America” (pre-survey/first focus group responses, January 2013). On the pre-survey, the pre-service teachers made particular notice of Columbus and his reasons for his transatlantic sailing including, “proving that the world was not flat [and being] asked by King Ferdinand and Queen Isabella, [and] looking for spices in India” (pre-survey/first focus group responses, January 2013).
Misconceptions or outright mistakes noted in the responses on the pre-surveys and in the pre-focus groups were many and varied, but some included were that the date of sail varied, “Columbus sailed all seven seas, Columbus reached Indiana, and that Columbus was from Portugal” (pre-survey/first focus group responses, January 2013). Also noted was an absence of any mention of Native Americans other than saying that “the Native Americans were called Indians because Columbus believed that he had reached India” (pre-survey/first focus group responses, January 2013). A few students (n=4) indicated they believed that Columbus was not the first to reach the mainland of America, that he did not reach the mainland (n=3), and that the treatment of the Native Americans was cruel (n=1)” (pre-survey/first focus group responses, January 2013). These responses were outliers rather than typical. Also, the pre-service teachers overwhelmingly indicated that they were “unsure, unclear, or not confident in their own content knowledge” (pre-survey/first focus group responses, January 2013).

Post-surveys found that students benefited from the experiences with the constructivist modeling method when they responded to teaching and knowledge about teaching history with K-6 students. The pre-service teachers focused on ideas such as, “multiple perspectives, primary sources, multiple sources, and against sole reliance on a textbook” (post-survey/second focus group, April 2013). In contrast to the first themes noted in the pre-surveys and pre-interviews, the pre-service teachers in their post-responses about Columbus addressed, “the treatment of both his crew and the Native Americans, power and greed, and slavery” (post-survey/second focus group responses, April 2013). Particularly, the appearance of a concern for others involved in Columbus’ explorations was noted in contrast to their earlier statements and responses. The students continued to relate gaps in their own content knowledge, but in the post-interviews showed an awareness of a need for, and an interest in, increased study about the information they were presenting to their students about historical figures. Also, in post-focus groups, the pre-service teachers indicated a need for continued exposure and practice with introducing what they called “controversial topics” (second focus group responses, April 2013) with their students. Further, respondents described a need for help in navigating how to examine multiple sources and perspectives without “upsetting parents and administrators” (post-survey/second focus group responses, April 2013).

**Conclusion**

This action research study suggests that this constructivist-based lesson was effective in allowing the growth of content knowledge for pre-service teachers in the area of American historical icons. This small study indicates that these findings potentially might occur for other areas of elementary social studies as well. In answering the research questions, this action research study indicates that the modeling and participation with these pre-service teachers in constructivist inquiry has the potential to influence pre-service teachers and their knowledge about American historical “heroification” (Loewen, 2007, p. 30). The study also indicates that these subjects have different perceptions of Columbus as an American icon pre- and post- lesson. This suggests a need for constructivist, inquiry-based lessons in the teaching of, and modeling with, pre-service teachers in order to provide more accurate content knowledge and also an awareness of the need for multiple sources and multiple perspectives in the teaching of historical figures. Modeling of active lessons in American history for elementary social studies pre-service teachers might be worthwhile and should be further investigated, as these pre-service teachers’ answers indicated that their content knowledge grew and diversified over time through an inquiry-based constructivist lesson.
References


