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AUTHOR Dana, Nancy Fichtman
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ABSTRACT

This paper reports a study on how prospective elementary school teachers make sense of teaching social studies through conceptual mapping, and therefore provide an opportunity for teacher educators to assess the value of conceptual mapping as a pedagogical tool. Pre- and post-course concept mapping was incorporated into three sections of an elementary school social studies methods course. The general research questions included: (1) How do preservice teachers make sense of teaching elementary school social studies? (2) How do preservice teachers experience the sense making process of constructing a concept map to organize and represent their thinking about teaching elementary school social studies? (3) In what ways are concept maps a viable tool for teacher educators to use to assess student thinking about elementary school social studies? The data obtained was used to generate two assertions. The first assertion is that concept mapping is a viable tool to help prospective teachers reflect on their memories and conceptions of elementary school social studies. Concept maps constructed by prospective elementary school teachers as they enter methods courses indicate that they view social studies as a body of facts that exists independent of the individual. The second assertion is that final course concept mapping engages prospective teachers in the process of constructing personal knowledge regarding the teaching of elementary school social studies, as they reflect on their experiences in light of what they have learned throughout the semester. During map construction, prospective teachers reflect on their beliefs regarding knowledge as they pass through four stages: (1) comfort; (2) trepidation and frustration; (3) resolution; and (4) elation and pride. (DK)

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Elementary School Preservice Teachers' Conceptions of Social Studies Teaching and Learning: A Report on Concept Mapping

Nancy Fichtman Dana

The Pennsylvania State University
Department of Curriculum and Instruction
155 Chambers Building
University Park, PA 16802

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Elementary School Preservice Teachers' Conceptions of Social Studies Teaching and Learning: A Report on Concept Mapping

In recent years, there has been a move to reconceptualize teacher education from a set of technical skills prospective teachers must master and subsequently demonstrate during field experiences to more reflective and critical examination of one's own teaching practices (Angell, 1991; Carter, 1992; Dana & Tippins, 1993; Kennedy, 1988). Therefore, many teacher educators are presently structuring programs and classes in order to create opportunities for prospective teachers to reflect on their own experiences as students and teachers as well as their own beliefs about teaching and learning (Tabachnich & Zeichner, 1991).

One challenge facing teacher educators of social studies is to design new and innovative approaches to traditional "methods" classes. One example of alternative teacher education pedagogy in the social studies is described by Adler (1991). Adler discusses the use of imaginative literature in an elementary education social studies methods class as a way to "provide preservice teachers with alternative perspectives toward human history and social interaction" (p.79). Adler reflects on the challenge facing teacher educators.

the pedagogical problem presented to the teacher educator is that of finding the stimuli which will open students to asking questions, to taking new perspectives, to examining alternatives . . . The problem of teacher education is . . . how can we emancipate students from mindlessness; how can we free them for the difficult task of making choices. (p. 79)

Faced with the pedagogical problem described by Adler, many teacher educators have joined Adler in the search for pedagogical approaches that will foster critical reflection on the part of prospective teachers. One promising strategy teacher educators may employ to help prospective teachers practice thinking about teaching social studies is concept mapping (Novak & Gowin, 1984). Concept maps are defined as "a visual representation of knowledge; a picture of conceptual relationships; a pulling together of thoughts" (Antonacci, 1991, p. 174). Concept maps are constructed by selecting and writing major concepts and ideas in a circle or oval, and then joining related concepts with lines and connecting verbs that explain the relationships between concepts (Tippins & Dana, 1992). Although Angell (1991) suggests that "because social studies . . . invites so many differing interpretations and is often vaguely understood by preservice teachers, . . . mapping may be critical to understanding the kinds of experience and beliefs preservice teachers bring to a methods course," there exists little research that addresses how prospective teachers experience the process of sense-making through concept mapping. This study was conducted in order to gain insights into how prospective elementary school teachers make sense of teaching social studies through conceptual mapping, and therefore provide an opportunity for teacher educators to assess the value of conceptual mapping as a pedagogical tool teacher educators may employ in order to foster reflection.

Procedures and Methods

To examine how prospective teachers make sense of the social studies through concept mapping, the investigator incorporated the technique of pre- and post-course concept mapping into three sections of an elementary school social studies methods course taught at two universities over a period of three consecutive semesters from 1990 through 1992. Pre- and post-concept mapping was incorporated into the three credit hour methods course in the following way. On the first day of class, the investigator introduced concept mapping as a way that teachers can assess student prior knowledge before beginning or planning a unit. The investigator asked students to think about their own experiences with elementary school social studies and create a concept map that represents their thinking about elementary school social studies. Individuals discussed their concept maps in small groups which was followed by whole class discussion of common themes that were evident across all maps. Concept maps were

collected. Three weeks prior to the end of the methods course, the investigator asked students to create a post-course concept map for their final project for the course. Directions read:

Based on your readings (textbook, reserve readings at Curriculum Resource Center, and other), class sessions (instruction and discussion with your peers), notes you've taken during class, classmates' presentations, reflections you've written this semester, and assignments you've completed this semester, concept map your learning and your conception of elementary school social studies. Begin with elementary school social studies or social studies in the elementary school as your main concept. Keep a brief dated log that documents your thinking as you complete this assignment.

After students shared their final concept maps with class members at the last class session, the investigator handed out students' original maps constructed on the first day of the semester, and asked students to add a final entry to their log reacting to the original concept map in relation to the final map.

The general research questions for this investigation included: (1) How do preservice teachers make sense of teaching elementary school social studies? (2) How do preservice teachers experience the sense making process of constructing a concept map to organize and represent their thinking about teaching elementary school social studies? (3) In what ways are concept maps a viable tool for teacher educators to use to assess student thinking about elementary school social studies? *

The methods employed in this research project were interpretive (Erickson, 1986), that is, they involved the collection and interpretation of qualitative data through document analysis. A constructivist epistemology (Bruner, 1986; Vygotsky, 1978) was embodied into the collection and interpretation of data and the generation of assertions. Constructivists view learning as an interpretive process in which individuals engage in unique constructions of knowledge as they make sense of their experiences. Therefore, particular attention was given to the sense making process prospective teachers engage in as they construct their conception of elementary school social studies.

Data consisted of 92 pre- and post-course concept maps as well as 92 logs of prospective teachers' thinking during the construction of their final concept maps. Concept maps were constructed by prospective teachers from three separate elementary methods classes during three separate semesters from 1990-1992 at two universities. Data were analyzed using the "cut and paste" method as described by Glaser and Strauss. I began by reading the entire data set. During the initial reading, themes began to emerge from the data. I noted themes and conducted a second systematic reading of the data, this time looking for confirming and disconfirming evidence to support themes. During the second reading, data were rearranged and organized into categories representing the themes. A final read of the organized data led to the generation of assertions. These assertions constitute a grounded theory (Glaser & Strauss, 1967).

Data collected from the three separate classes were employed to triangulate findings. Triangulation, a tool basic to interpretive research, serves "at the heart of ethnographic validity, testing one source of information against another to strip away alternative explanations and prove a hypothesis" (Fetterman, 1989, p. 89).

Assertions

Assertion 1. Concept mapping is a viable tool to help prospective teachers reflect on their memories and conceptions of elementary school social studies. Concept maps constructed by

prospective elementary school teachers as they enter methods courses indicate that they view social studies as a body of facts that exists independent of the individual.

Four pre-course concept maps were selected to portray the dominant theme that emerged from an analysis of the 92 maps. These maps are reproduced in Figure 1 through Figure 4 at the end of this paper. Two versions of the same map are included in each figure—original student work and a computer reproduction of the work. The computer generated version is included to facilitate reading.

The most striking theme that emerged across all maps was the strong association prospective teachers made between social studies and meaningless memorization. This analysis confirms Adler's assertions that "to many students in an elementary teacher education program, social studies is boring and lifeless. The images they too often hold are those of memorizing lists of names and dates for tests (Adler, 1993, p. 79). This view of social studies can be interpreted as being grounded in an objectivist epistemology, as knowledge exists "outside of the individual" and the individual acquires knowledge through the memorization of "the facts" that exist "out there." For most preservice teachers in the study, "the facts" of social studies include memorization of dates, people, and places, as indicated in the concept map reproduced in Figure 1. The concept map reproduced in Figure 2 is also indicative of memorization related to presidents, states, and regions. In addition to the memorization of "names, dates, and places," the concept map in Figure 3 also portrays an objectivist view of knowledge. Knowledge is seen as existing in a textbook through the connection made between "elementary school social studies," "teachers" and "teach from the book" and "follow unit." This same map indicates that students are to "follow along with the teacher." The student, therefore, is not active in the construction of knowledge.

The creators of these concept maps, as well as the majority of preservice teachers engaging in the creation of the pre-course concept map, indicated that the view of social studies grounded in an objectivist epistemology was unpleasant and meaningless. For example, a direct connection is made between elementary school social studies and "difficult for me" and "memorization" in Figure 2. Perhaps Figure 4 best illustrates meaninglessness through the connections made between "elementary school social studies," "American History", and "Had to memorize the 50 states and their capitals—only remembered them long enough for the test," and "Elementary school social studies," "Field trips," and "Since I live 30 minutes from Gettysburg we had many field trips to the battlefields—after a while we didn't even want to hear about G-burg."

The view of social studies that preservice teachers bring with them to their college study of learning to teach is not surprising as studies completed during the time period when most preservice elementary school teachers were in elementary school report the following: (a) Almost all elementary school teachers use one or more text books; (b) 60% of the time allocated for social studies instruction in the elementary school is spent using printed materials such as the text, (c) teachers employ lecture and discussion as their main instructional strategy when teaching social studies, and (d) teachers expect students to learn "the facts." (see, for example, Shaver, Davis, & Helburn, 1979 and Superka, Hawke, & Morrissett, 1980). This is a view, however, that many teacher educators have desired to change. The construction of pre-course concept maps help preservice teachers explore their conceptions of the teaching and learning of social studies. Therefore, pre-course concept mapping offers the teacher educator a tool to help prospective teachers articulate their images of social studies. Once images exist as a visual representation in the concept map, teacher educators can lead students in the questioning of the image throughout the course. From an analysis of the maps constructed in this study, in order to change the image of social studies as "memorization of names, dates, and facts," teacher educators may wish to develop pedagogical strategies that help students question their

conceptions of where knowledge exists. As will be demonstrated in the next section of this paper, concept mapping itself holds promise for being one of these strategies.

Assertion 2. Final course concept mapping engages prospective teachers in the process of constructing personal knowledge regarding the teaching of elementary school social studies, as they reflect on their experiences in light of what they have read and learned throughout the semester. During the construction of maps, prospective teachers are forced to reflect on their beliefs regarding knowledge as they pass through four stages during map construction: (1) comfort, (2) trepidation and frustration, (3) resolution, and (4) elation and pride.

Stage 1: Comfort. When the prospective teachers first received the instructions to concept map "elementary school social studies" for their course final assessment, they were asked to immediately enter a reflection in their log to describe their reaction to the project that was ahead of them. Overall, the prospective teachers' logs indicated that they felt quite comfortable with the assignment. For a few prospective teachers, that comfort was generated by being given the opportunity to personally make sense of what they had learned throughout the semester. For example, one student wrote:

It appears as though the process for this project can be done by reflecting on the past semester. The end product will provide a thorough analysis of my thoughts about elementary school social studies. This project will allow me to organize my thoughts, plans, and goals as I prepare to teach.

For a few students, like the one cited above, comfort was experienced because they had already begun to make a paradigm shift from viewing knowledge as existing outside the individual to viewing knowledge as constructed by individuals as they make sense of their experiences. These students often made reference to "where knowledge exists" in their initial journal entries:

Today we received our final exam assignment and I feel very relieved that it is not a traditional exam in the sense that it is asking us to draw answers from a "pre-determined pool of knowledge" that we have no use for in the future . . . We have learned useful information that can be made meaningful to us in the future. We all experienced the same class, but took different things from it that we can apply to future teaching. Everyone's personal experiences were different.

One student even articulated the paradigm shift through an analogy to the movie she watched during the time period in which she was constructing her final map:

As I started my concept map, I was thinking of how much education has changed or is changing. I believe this change is needed . . . I was flicking thought the TV channels and I stopped at AMC (American Movie Classics). I love old movies so I decided to wait and see what was coming on. Well, the presenter, who introduces movies came on and gave a synopsis about "An Apartment for Peggy. It was about the GI Bill and the soldiers going to college. I rationalized that I should watch it considering it did have to deal with education . . . The relevance it has to my log is the one scene where Peggy's husband is talking of quitting college so he could work in order to provide her with a better life. Peggy asks him to give her a quarter. He does. She holds it in front of his face and asks him what he sees. He responds by saying "a quarter." She pulls it farther and farther away and keeps asking the same question, while he replies with the same answer. She keeps doing this till she reaches the other end of the room. She then gives him back the quarter and says, "If a quarter is all you saw, then just think about how much you are missing." I believe that education when I was little tried to only have one focus on the coin (which stands for facts) . . . Now education has finally met Peggy and is looking

beyond the quarter now. We came from "just the facts, ma'am generation. We did not have any control over our learning because it was defined for us. Knowledge was given to us in an objective approach. We, as students, were sounding boards or "satellites" that took in information and then sent it back. We were taught stereotypes about "Indians" holidays, families, etc. Basically, we were taught to see the world in an unrealistic, sheltered way. Everything controversial was hushed, avoided and not talked about. They kept us wondering. There was no relevance or connection to the outside world in what we were taught. Why did we need to know . . . because we were told "you will need it later on."

These students' logs indicated that they were comfortable with the assignment because they viewed it as a way they could make personal sense out of elementary school social studies. These students, representing discrepant cases in this analysis, progressed through concept map construction with ease in comparison to the majority of their peers.

The majority of prospective teachers also experienced the initial stage of comfort, but their logs reflected no critical thought about the reflective nature of the assignment or the epistemological implications of the assignment. Instead, comfort arose from a sense of relief that this was not a traditional test and therefore, would not require studying, would not be time consuming and subsequently would be "easy." The following excerpts from logs illustrate this experience of relief and comfort:

I am relieved! I expected this final project to be a very time-consuming, research-oriented assignment. I anticipated that the task would require extensive time periods.

When I first learned of this project, I thought it would be so simple. Ideas crossed my mind and I thought in no time, I will be finished. I was very wrong.

Other students acknowledged that it would take time to complete, but expressed relief that it was not the traditional test:

I was really worried when I first thought about this final project because I did not know what to expect. Now that I see what it is, I am still worried but relieved that it is not a multiple choice test, a 20 page research paper or something else like that. It will still require a lot of work, but this should be fun.

I am pleased (that our final) is a concept map rather than a multiple choice test. We would have just had to memorize facts if it was a test.

These students' sense of comfort grew from a relief that the project was something different than the normal mode of assessment they had previously experienced as meaningless. However, they stopped short of reflecting on the epistemological meaning of the assignment they were about to complete. For these students, comfort was quickly replaced by trepidation and frustration.

Stage 2. Trepidation & Frustration. As students began to work more on their final concept maps, fear and panic replaced the feelings of comfort initially expressed. This trepidation was borne out a realization that because constructing a concept map was quite different from the traditional forms of assessment students were used to, they did not know the "rules of the game." In traditional assessment such as the multiple choice test so many students made reference to, there exists one right answer. Students began to imagine that there was one right way to construct a concept map, but did not have a clue as to what the "right way" could be. In this stage, students understood concept mapping as representing the "right way" to think about elementary school social studies, and that "right way" existed somewhere outside of themselves. For many students, that "somewhere" was inside the instructor's head:

I now think this final is confusing. What are we exactly supposed to do? From the looks of it we are to make sort of a semantic web or map of what we have learned this semester. I hope Dr. Dana explains this final more clearly or shows us examples of what she wants. Are we supposed to fit everything on one piece of paper?

I am kind of confused now . . . I'm not sure what you are looking for in a good concept map.

What does Dr. Dana want me to do? What is expected in a concept map? What am I to be writing in this log?

In this stage, students did not believe or trust in themselves as viable constructors of knowledge regarding the teaching of elementary school social studies. Rather, they feared that in their organization of knowledge about the teaching of social studies they might "leave something out." This caused a great deal of frustration as students reviewed their notes, the textbook, and other sources:

I am frustrated! I have reviewed my notes—lots of material—including handouts and copies of the reserve material and text. How do I relate all this material? Very frustrating.

Man, I really had no idea what I was in for in thinking about what social studies is . . . I am very frustrated about what I will do and how I will do it. Every time I start thinking about doing it I start getting brain overload and say "Oh! what am I doing!?"

My brain is beginning to ache from thinking so much.

So I've just looked over all of my notes, reflection papers, and book, and now I am thoroughly confused, or maybe scared. I don't even know how I feel! There seems to be so much information here. I don't think I'll ever be able to make it fit in a logical, organized manner. It's just that I'm the kind of person who panics about stuff like this. I mean, what do I include—all of it?

For some students, this fear and frustration led them to do a 180 degree turn from their initial comments about the ease of the task because it was not a multiple choice or essay exam:

I wish this was an essay exam! . . . I guess this is mainly about what I learned and what I got from the course, but I'm so afraid of leaving some crucial aspect out.

Trepidation that there was one right way to construct a concept map led to a fear about how the concept map would be graded:

Everyone is worried about this project. I wonder what kind of grade I will receive. I feel confused and I'm not really sure about how I will do this.

For these students, being able to regurgitate the "right answers" that existed in a text or in the teacher's head was equated with the external reward of a good grade. In this stage, students had not yet realized that the answer to what elementary school social studies was and how it would play out in their classrooms as they began to teach did not exist outside of themselves. In order to construct a final concept map, students would have to make sense of their experiences over the course of the semester and construct a visual representation of what was inside their own heads. Once students made this realization, they progressed to a stage of resolution.

Stage 3: Resolution. This stage is characterized by the students' realization that their personal construction of elementary school social studies is viable. One student wrote:

I think one of the greatest things I realize is that this concept map is MY OPINION. Boy, does that seem to make a world of difference. I feel a little bit better about it this way. I am able to include what I feel social studies education in the elementary school is. I don't have to worry about having everything, too little or too much. It is surely what I think it is. What a novel idea! This could actually be fun—(Well—NO!) (Weak moment). I guess I just need to do some brainstorming.

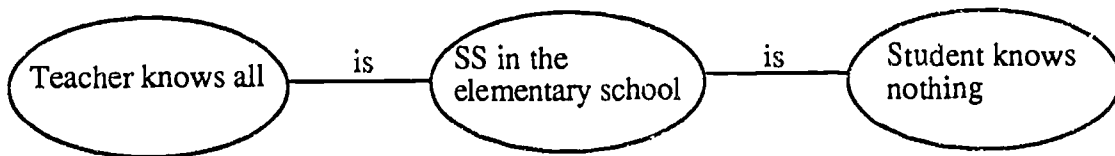
As students began to trust themselves and their personal constructions of what it means to teach and learn social studies in the elementary school, many articulated experiencing a sense of power.

I like the idea that this final project is based on my opinion, because it gives me the power to include what I see as necessary and important.

I am on the final steps of conglomerating my map. I feel confident with the progress I have made with it. It is a great accomplishment to see all these ideas that were and still are up in your head. This feels like power, It is so powerful to know that you have this knowledge and can use it to your benefit. This is what education is all about. Making a reinforcement, a bond, to what you know and what you have just learned. I find myself constantly questioning what I "know," why I know it, how I know it, and try to make sense of it.

Hence the realization that there is no such thing as one correct concept map representing what it means to teach elementary school social studies and that a concept map was a way for each student to personally make sense of what they were thinking empowered prospective teachers. This realization also helped prospective teachers reflect on the nature of knowledge, and how one knows what they know. According to final concept maps and logs, prospective teachers' reflections on the questions of what is knowledge and where does it exist transferred to how these prospective teachers would teach social studies:

Now I am finally seeing a beginning to what I feel my concept map will resemble:



Joke! Just to see if you're paying attention. Yet this is a wonderful example to demonstrate what I don't feel social studies education is. I strongly believe in teacher and students working together to help and teach each other. Paulo Freire calls them "critical co-investigators," which I feel explains the relationship precisely.

Prospective teachers' empowerment to construct their own image of elementary school social studies was followed by feelings of elation once their project was completed.

Stage 4: Elation and Pride. As students completed their maps, they reported a shift in the way they thought about the process of learning. Unpleasant conceptions of learning characterized by the memorization and regurgitation of facts were replaced with positive thoughts about the learning experienced through conceptual mapping:

Holy guacamole! I am very engaged in this project. There is flow occurring. Challenging. Not in a state of anxiousness. Optimal arousal. Research papers and tests always put me in that negative state of learning—*anxiousness*. I feel good about the process of learning I am experiencing now.

As prospective teachers completed their maps, their journal entries were filled with reflections of elation:

About 3 am. God, it's beautiful. Flawed, but I don't think seriously or irreversibly . . . I can't stop looking at it. It's as if I've given birth.

As indicated by the "birth analogy" above, feelings of elation were coupled with feelings of accomplishment and pride in their personal creations:

I am finally finished with my concept map . . . I did not include all that we discussed, read, and learned this past semester in class . . . I did this concept map for me, so that I could leave this class with an idea of how to approach teaching social studies education in the classroom—and I am very happy with the map I created from my reflections.

For many students, this feeling of pride initiated a rejection of the academic game they had played during most of their lives as students, the same game that characterized their memories of elementary school social studies—*memorization of "facts", tests, and grades*. Students were empowered to construct maps that made the teaching of social studies meaningful to themselves, rather than searching for the "one correct" construction that would earn them a good grade:

I've completed my map. . . It's the best activity, I think, that we did all year. The project was left up to me. I was able to do anything I wanted and I think my map is really good and even if I would get a lower grade than expected I still liked the feeling I got while doing it.

The experience of constructing concept maps helped prospective teachers think critically about what it means to teach and learn social studies in the elementary school. Critical reflection was furthered as students compared their initial concept maps with their final concept maps:

Looking back at what I thought of social studies at the beginning of the semester shows me how much I learned and have grown. I knew I learned a lot this semester and changed my opinions because of it, but I never realized the extent of changing I'd done till I looked at the two concept maps. Looking back on this I feel wonderful because I've grown and changed in positive ways. Doing this project has helped me to think critically about how I want to teach social studies and what I want to teach!

In addition, the comparison of the initial and final map created a feeling of confidence and advocacy with the teaching of social studies:

WOW! what a difference. I am astounded at all that I have learned and studied and discussed through this semester. I was so narrow minded in January—it is amazing how much you can grow over fifteen weeks. I really feel that I now have a solid base of applicable information that I will be able to use and refer to when I teach social studies in the classroom. I am so amazed as I look at this first concept map I drew—I wonder how or if I would have ever "taught" anything of importance in my classroom social studies class. Thank goodness I did this map. I really feel comfortable now in teaching social studies.

Telling me how to teach social studies would not have left much of an impression on me. Allowing me to figure out how to teach social studies through this final has made this course the most rewarding course I've ever taken. I'm grateful for that, but more importantly, I've acquired a much more exciting attitude toward teaching social studies in the elementary school. It is a subject I will not slight.

Implications for Social Studies Teacher Education

Pre- and post-course concept mapping appears to be a viable tool to help prospective teachers reflect on their experiences and conceptions of the teaching and learning of elementary school social studies. Pre-course concept maps provide an opportunity for prospective teachers to articulate their memories and pre-course understandings of elementary school social studies. This, in itself, may be a valuable activity as Adler (1991) states:

Preservice teachers have been students of teaching for most of their lives; they begin their teacher preparation program with many preconceptions about teaching and learning, and with many clear images which seem to confirm those conceptions . . . They carry with them, for the most part, images of schools as they are and few of them question these images or consider, to any great extent, alternative possibilities. (p. 78)

Certainly, teacher educators can use pre-course concept mapping as a way to evoke existing images of social studies and to subsequently lead prospective teachers in consideration of alternative possibilities to those images. Analysis of pre-course concept maps indicate that the image that dominates most prospective teachers' images of social studies is grounded in the belief that knowledge is objective and exists outside the individual, obtained through the memorization of names, dates, and facts. For prospective teachers, social studies was a quest to memorize that knowledge. Therefore, teacher educators may wish to incorporate into methods courses discussions focused on the nature of knowledge. Raising questions such as what is social studies knowledge, how do we know what we know, and where does knowledge of social studies exist can be one way prospective teachers begin to examine alternatives to their preconceptions about teaching and learning social studies. The construction of final course concept maps can also aid prospective teachers in the examination of alternative notions of where knowledge of social studies exists as they progress through four stages during final map construction.

The stages prospective teachers experience during final map construction include: (1) Comfort, (2) Trepidation and Frustration, (3) Resolution, and (4) Elation and Pride. As prospective teachers begin to think about constructing an image of elementary school social studies through concept mapping, they leave initial thoughts of the simplicity of map construction behind when furious searches through their textbook, their notes, other sources, and the instructor's head for the "the correct way to construct a map" end in frustration. Out of frustration is born the realization that they must turn inward rather than outward in the search for knowledge about what it means to teach and learn elementary school social studies. Hence, the process of final course concept mapping itself leads students to ponder the questions of what is knowledge and where does it exist. If social studies teacher educators incorporate final map construction into their methods courses, however, they must realize that the construction of concept maps may evoke emotions of fear and frustration as prospective teachers struggle with conceptions of knowledge as existing outside of themselves. Therefore, social studies teacher educators may need to create a supportive and non-threatening learning environment so that prospective teachers may pass through the stages of trepidation and frustration to achieve resolution, elation, and pride in their understanding of what it means to teach elementary school social studies.

It is in the stages of resolution, and elation and pride that prospective teachers realize that knowledge about the teaching and learning of elementary school social studies exists inside their own heads as they reflect on and make sense of their experiences. Many prospective teachers describe this realization as empowering, and are proud of their final concept map. These final maps represent each prospective teacher's vision for the teaching of social studies. Having this personal vision represented visually through a concept map gives prospective teachers confidence in their ability to teach social studies and leads them to become social studies advocates.

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Figure 1

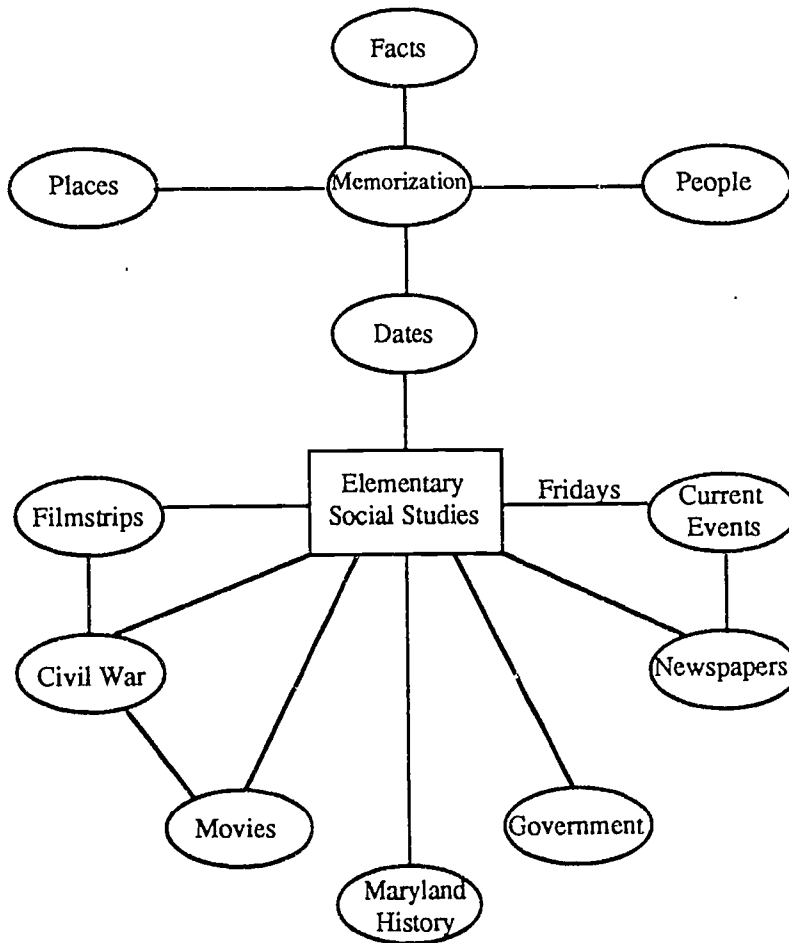
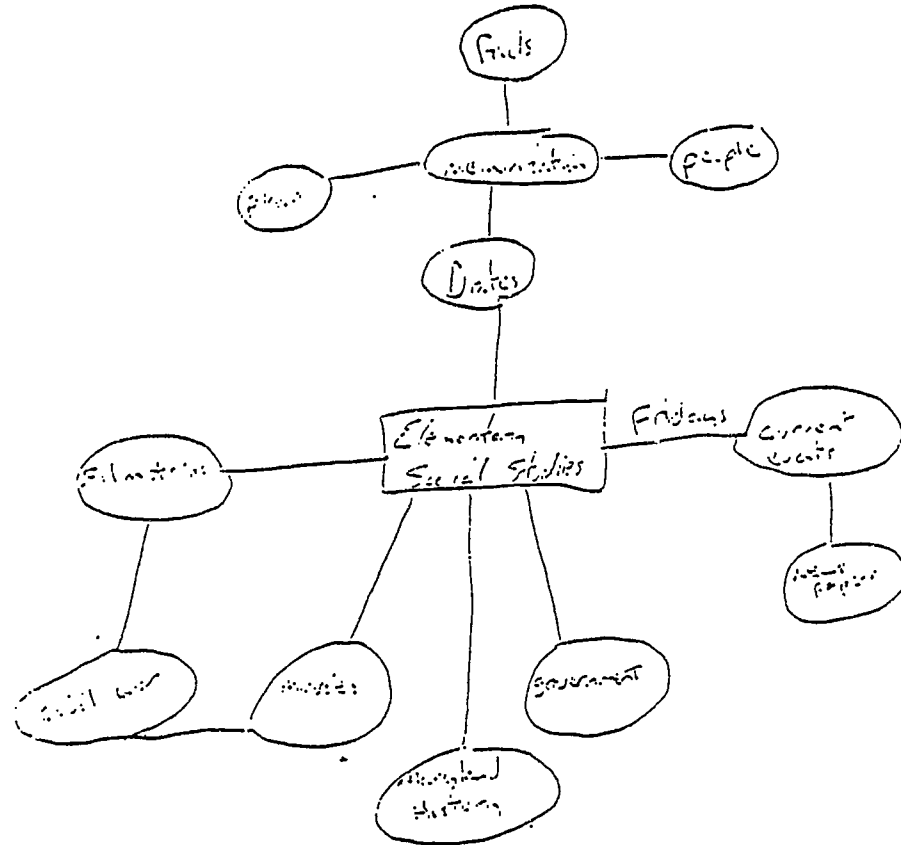


Figure 2

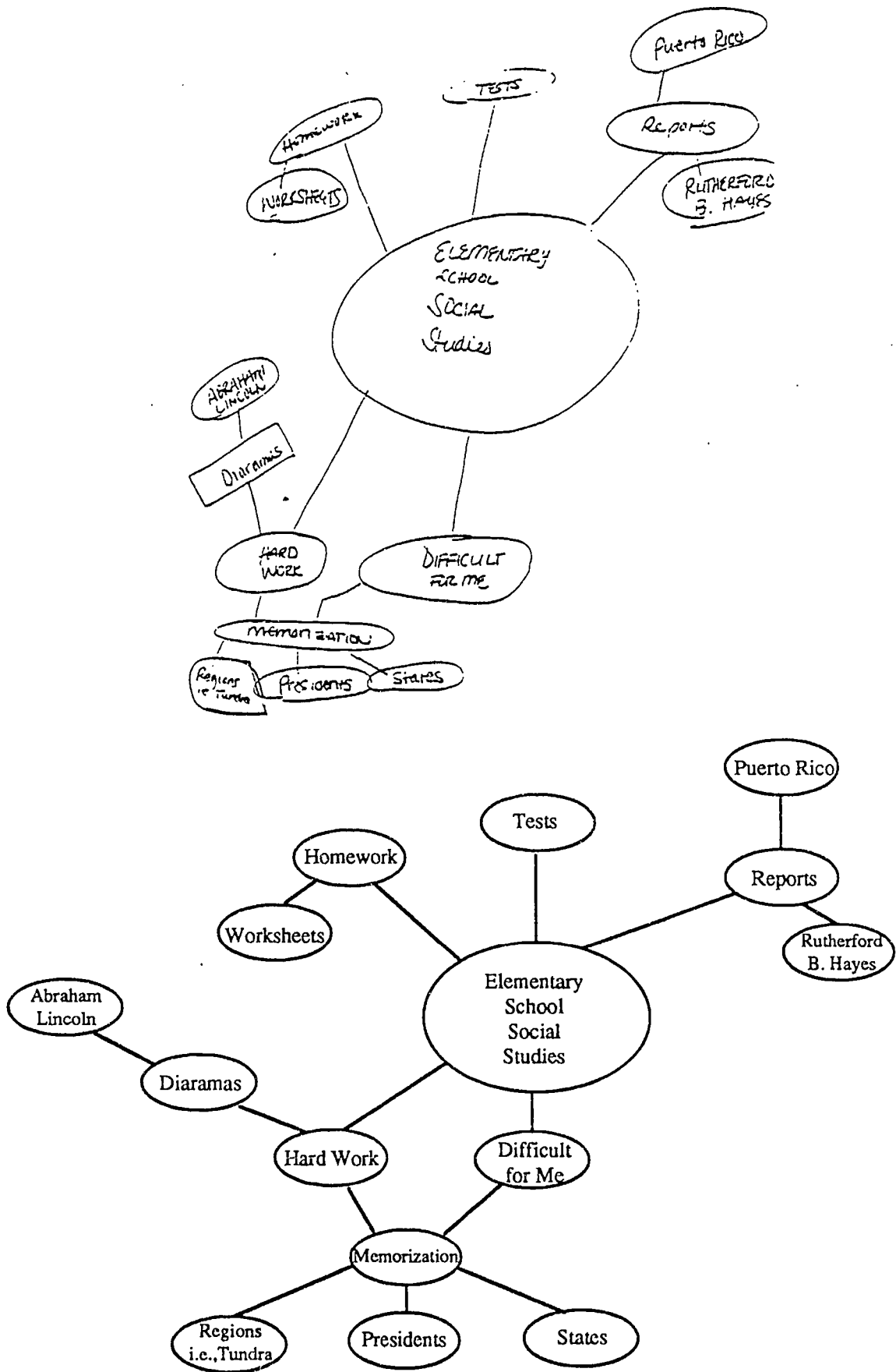
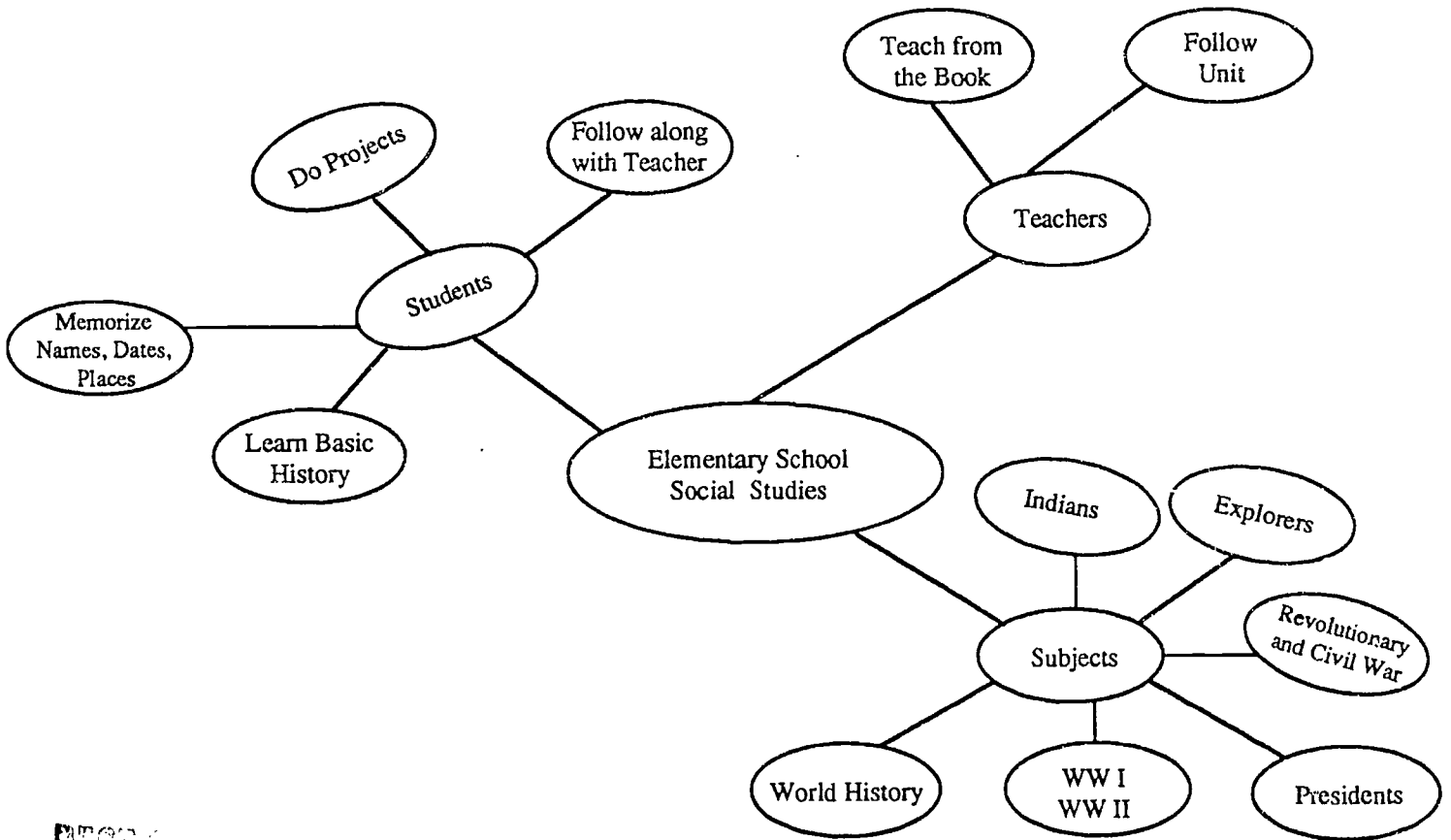
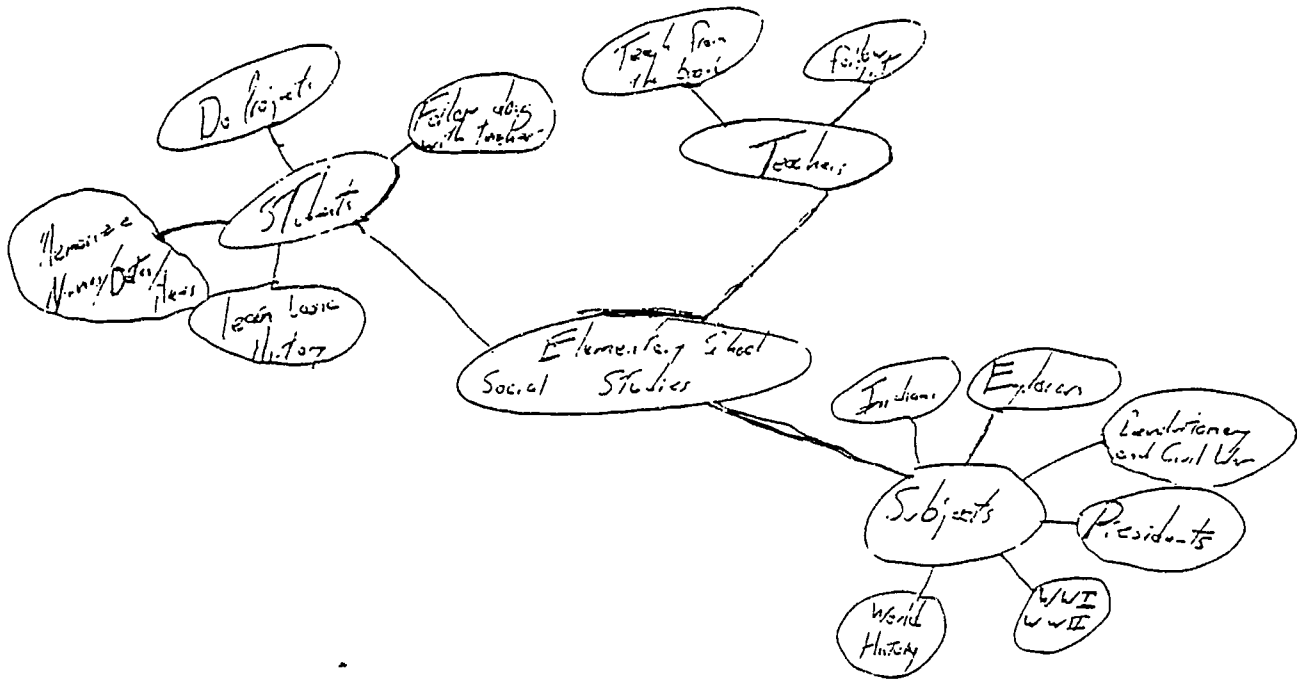


Figure 3



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Figure 4

