Identifying instructional methods of teaching critical thinking: A systematic review and analysis of three decades of literature.

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The purpose of this historical research is to identify instructional method(s) of teaching thinking that was suggested by social studies scholars in three major National Council for the Social Studies (NCSS) journals. To do so, Barr, Barth, and Shermis’s seminal book “Defining the Social Studies” in 1977 was established as a starting point and articles published between 1977 and 2006 were analyzed. A total of 132 articles were analyzed to answer following questions: What instructional method(s) did scholars support for teaching thinking? Is there a common instructional approach? Is there a cohesion or conflict in scholars’ view of teaching thinking? In relation to teaching method(s), how did scholars perceive the content, role of students, and teachers? Analysis of the data indicated that scholars consistently emphasized direct method of instruction. Additionally, they perceived thinking as a content dependent activity and believed real life issues, problems, and controversies more promising for teaching thinking.

The term critical thinking has buzzed in social studies literature and echoed in social studies scholars’ ears for a long time now. The message is loud and clear: the teaching of thinking has a distinct value in preparing citizens. The primary purpose for teaching thinking in social studies is to “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, 2002, p. 3). Despite the general agreement over citizenship as the primary purpose of social studies, scholars’ perception of thinking has evolved and progressed over the years. In fact, a fundamental shift came with the publication of Barr, Barth, and Shermis’s (1977) Defining the Social Studies. In their seminal book, Barr et al. defined social studies on the basis of its citizenship objective and conceived thinking and decision making as primary objectives of citizenship, thus of social studies. In essence, they not only conceived of thinking and the achievement of citizenship goals differently but also opened up a new debate with increased emphasis upon the kind of thinking to be developed in social studies. Eventually, the publication of Defining the Social Studies created a “the ripple impact” concerning the proper ways to organize social studies content and instructional methods to attain its citizenship objective. With the citizenship purpose in mind, social studies scholars tried to explore new ways to promote thinking, and the literature and scholarly interest grew over the years.

Despite the amount of accumulated literature and the attention that critical thinking received, available literature indicates that its application in social studies classrooms has been problematic. In fact, many scholars stated that a prevailing characteristic of the social studies classroom has been the absence of thinking or the teaching of thinking (Cornbleth, 1985; DiCamillo, 2010; Martorella, 1991; McKay & Gibson, 2004; Olsen, 1995; Parker, 1991; Patrick, 1986; Wilen, 1996; Wright, 1995). McKee (1988) discovered that teachers of social studies spent only four percent of classroom time on activities aimed to facilitate reasoning. Several extensive reviews of the literature reached similar conclusion: thinking was generally neglected in social studies classrooms (Cornbleth, 1985; McKay & Gibson, 2004; Parker, 1991).

In her review of research, Cornbleth (1985) further underlined that since the publication of the 13th NCSS Yearbook in 1947 on teaching critical thinking, social studies instruction has
remained largely the same with the absence of critical thought. Similarly, Parker (1991) noted that thinking and decision-making objectives in social studies classrooms remained “more wish than practice” (p. 354). In parallel lines, McKay and Gibson (2004) concluded that critical thinking is valued on paper, but not addressed adequately in social studies classrooms. More recently, DiCamillo (2010) pointed out that critical thinking skills in the social studies classroom has lacked for over a century.

To explain the absence of thinking in social studies, some scholars argued that the persistence of diverse and even conflicting perspectives on how to teach it have impacted the place of thinking in the classroom (Beyer, 1985a; Taba, 1967; Wright, 1995). With this study, I aimed to find an answer to that claim: Are there diverse and conflicting perspectives on how to teach thinking in social studies? What instructional approaches did scholars suggest for teaching thinking?

To do so, I examined articles published in three NCSS journals – Social Education, Social Studies and the Young Learner, and Middle Level Learning. I specifically focused on NCSS journals because NCSS has constantly contributed to the existing literature and disseminated information with its three practitioner journals, and it has an audience of more than 25,000 members from a variety of educational backgrounds across the world. Besides, these journals are the practitioner journals of NCSS; thus, reading these journals are one of the ways for scholars and practitioners to be exposed to both theory and research concerning thinking. Furthermore, to my knowledge, no study has reviewed three decades of information disseminated by three NCSS publications regarding instructional methods of thinking until now. This study was guided by the following research questions:

1. What instructional method(s) did scholars support for teaching thinking? Is there a common instructional approach? Is there a cohesion or conflict in scholars’ view of teaching thinking?
2. In relation to teaching method(s), how did scholars perceive the content, role of students, and teachers?

Method

In this study, I used historical analysis approach to analyze articles published in three NCSS journals. My purpose was to identify instructional method(s) of teaching thinking suggested by social studies scholars within a thirty-year-period and to pinpoint prevailing views. By doing so, I also intended to provide a comprehensive resource for scholars concerning the method(s) of teaching thinking.

I preferred historical method primarily because it provides a unique way of looking at such a broad phenomenon (methods of teaching thinking), for over a long period of time (three-decade period) (Tosh, 2000). Besides, this method allowed me to look at these various resources with a degree of freedom and to draw conclusions based on a variety of articles by a number of authors. So, this study is based on published articles. I analyzed journal articles published in Social Education, Social Studies and the Young Learner, and Middle Level Learning between 1977 and 2006.

Although historical approach provided me some degree of flexibility, I followed systematic procedures in identifying and analyzing published articles. I examined previously published literature reviews on thinking and critical thinking (e.g., Parker, 1991) and identified words thinking, critical thinking, decision-making, and problem solving as search keywords. I accessed back issues of three journals and examined each article in each journal one by one; first I looked for the each keyword within title of the each published article then carefully read first couple of paragraphs and skimmed the rest to determine whether the article contained any or some of the keywords. If it did, I examined the article content critically to identify its relevance for the purpose of the study. Then I read each published article thoroughly and carefully, looked specifically for
information regarding instructional methods of teaching thinking, answers to the research questions and noted pertinent information.

I recorded each piece of information, such as bibliographical information of an article, as well as related patterns seen or identified in the article, important ideas or quotes from the article to Microsoft Excel sheet. In this process, as described by Marius (1995) and Shafer (1967), I exclusively looked for meaningful patterns in suggested instructional method(s) of teaching thinking and paid attention to regularities as well as irregularities reflected in the data. Additionally, I decided to distinguish methods for teaching thinking by examining three characteristics as well: content, student behavior, and teacher behavior. I identified that a total of 223 articles from the 30-year period dealt with thinking in some way or another. I excluded 91 of them because their content was not related to the purpose of this study and used only 132 of them for the final analysis.

Results

The findings of this study are reported in two sections. In the first section I present the findings regarding suggested instructional method(s) of thinking in social studies literature. I specifically focus on the patterns concerning content, student behaviors, and teacher behaviors in relation to instructional approaches of teaching thinking in the second section. However, this study is limited in several ways.

Specifically, this study is limited by its data source of the three NCSS journals (Social Education, Social Studies and the Young Learner, and Middle Level Learning), by the identified searched words (thinking, critical thinking, decision-making, and problem solving), and by the time period (the years between 1977 and 2006). It is also limited by the journal availability. The journal of Social Education was the only journal available between 1977 and 2006. Social Studies and the Young Learner was available from 1988 and Middle Level Learning was available from 1998.

Instructional Method(s) for Teaching Thinking

I identified the direct instruction method of thinking as the most recurring and dominant approach that social studies scholars supported and suggested in all three decades. Table 1 shows the summary of identified methods of teaching thinking on a decade-by-decade basis.

Table 1. Summary of Methods of Teaching Thinking

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(* Indicates the most frequently suggested method)
Although the direct instruction approach was not always defined, it was generally perceived as a specific method that progresses step by step in which teachers explicitly provide clear explanation of what is to be learned, necessary knowledge and skills of thinking within the social studies content with appropriate practice and feedback. While some scholars specified the direct instruction method simply by its name, others basically emphasized its characteristics or referred it differently; such as explicit instruction or the infusion of thinking skills approach. By doing so, scholars generally articulated the direct method of instruction with bottom up, from simple to complex, or step-by-step instruction and emphasized its three characteristics in particular. Scholars pointed out that:

- Direct instruction focuses on teaching students the specifics of thinking skills explicitly, its components or essential mechanism, or simply all of what constitute the skill,
- Direct instruction aims to incorporate clearly explained skills of thinking into a wide range of content,
- Direct instruction is not applicable in all situations (e.g. direct instruction method was suggested to be more beneficial when students lacked the skills of thinking or at an early stage in learning it (Beyer, 1977; Glenn, 1977; Parker, 1991).

Perception of Content

In relation to content, scholars widely described thinking as a content dependent activity. That is, the development of thinking skills and content learning reinforce each other and occur concurrently. They explained this interdependence on two levels.

On one level, scholars indicated students’ background knowledge on the subject was an essential element for them to be able to think critically (Gillard & Morton, 1981). Specifically, students’ background knowledge on the subject is considered essential for further analysis and synthesis of the content, thus for thinking and learning. On another level, scholars indicated that engaging in content and mentally manipulating it was a key factor for learning it as opposed to memorizing. In fact, Rudin (1984) argued that students who intellectually manipulate the content, for instance analyze or recognize unstated assumptions, are more likely to think critically about the information they receive thus retain it longer periods of time.

What does all this mean for teachers? This interdependence between the content and thinking simply recommends teachers to infuse or incorporate thinking skills into existing social studies curriculum meaningfully such a way that their developments go hand in hand (Edgington, 2001; O’Reilley, 1998). Besides, social studies teachers who want to foster thinking not teach discrete thinking skills (e.g. observing, or data gathering) but teach to interpret and analyze with the content (Newmann, 1990). Then, considering the multidisciplinary nature of social studies a number of questions emerged, such as, which content or subject focus(s), if any, was considered more beneficial than the other(s) for the purpose of or for facilitating thinking in social studies classrooms?

I found that scholars’ perception of content shifted from a discrete or single subject focus toward more interdisciplinary and / or relating students interests into content perspective. Specifically, for the years between 1977 and 1986, some scholars viewed teaching of a particular subject (e.g. history, economics) more beneficial to the development of thinking skills than the others (Gillard & Morton, 1981; O’Reilly 1985). One of the possible reasons for this view might be the impact of back to basics movement. The New Social Studies movement in the 1970s was criticized, numerous publications showed declining test scores, and the publication of A Nation at Risk in 1983, reflected, to a certain degree, pressure to improve teaching and learning in discrete subjects, e.g. history, geography, and economics, not in social studies.
On the other hand, scholars frequently described an interdisciplinary view of content between 1987 and 1996. Unlike some scholars in the previous decade, scholars of this and following decades repeatedly emphasized a more integration of subjects (e.g. social studies and math, or science, language arts), history through a thematic curriculum, or interdisciplinary perspective of content (e.g. environmental education) (Ciaccio, 1998; Johnson & Janisch, 1998; O’Brien & White, 1999; Saye, 1998).

In fact, this change in scholars’ perception of content coincides with the publication of Curriculum Standards for Social Studies in 1994, in which NCSS defined social studies as “integrated study of the social sciences and humanities” and united history, geography, economics, civics and government with sociology, anthropology, psychology, etc. (Saxe, 1992). Also, the NCSS curriculum standards of 1994 specifically emphasized integration of numerous subjects under the roof of social studies. In relation to the scholars’ perceptions of content focus, I identified two patterns: application of real life problems in a wide range of subjects and controversial topics.

Real problems, issues, and dilemmas.

Over the years scholars specifically preferred real problems, issues, and dilemmas to teach thinking. Many perceived that real problems and issues, which can easily be found within a wide range of social studies subjects as opposed to a single focus. This, in fact, perceived by many scholars as purposeful way to learn content and skills of thinking in the social studies classrooms (e.g., Alleman-Brooks & Ellis, 1977; Chilcoat et al., 2002; Ciaccio, 2002; Glenn & Ellis, 1982; Mackey, 1977; Parker et al., 1991; Rappoport & Kletzien, 1997; Soley, 1996). As the years progressed, scholars showed a growing amount of attention to students’ needs and interests when selecting a problem or a controversy or an issue (Hickman, 1999; Johnson & Janisch, 1998; O’Brien & White, 1999).

As to explain why application of real life problems and issues is essential for facilitating thinking in classrooms scholars argued different yet unique reasons. First, the essence of problems or issues was identified as being real, not hypothetical. Therefore, what students learned in social studies classrooms would have real life applications, be more interesting, be more relevant, and simply be part of the real world (Mahood, 1978; Poling, 2000; Rea, 1999), which ultimately prepares them for their citizenship roles. In fact, arguing from John Dewey’s democratic problem solving point of view, some of these scholars perceived that by their nature, real problems and issues help students to see themselves as social and political beings, make informed decisions about social issues or problems, and take proper action when necessary (Ciaccio, 2002; Gallava, 1997; Joseph & Windschitl, 1999; Ukpokodu, 2002).

Secondly, by their nature, problems and issues are ill structured, complex, and value based. They simply represent multiple viewpoints and perspectives. Thus, their analyses do not basically lend students to a unified action, or simple solution but to the possibility of reexamination (Chilcoat et al, 2002; Rappoport & Kletzien, 1997).

Controversial topics.

The second pattern I identified in relation to content and thinking was controversial topics. Scholars who suggested use of controversial issues in classrooms indicated that, when it comes to social studies content controversy is everywhere it is inevitable. In fact, at the heart of each significant historical event or social or economic concern lays a controversy. For instance, when the subject of focus was economics learning its concepts depended on students’ understanding of different and conflicting interests associated with it; e.g. how to allocate resources or how to prioritize the resources.

Scholars emphasized that controversies are inherently complex simply because they are based on values, more than one point of view exists, and most importantly there is no one right way
to solve them. Therefore, they require students to challenge each other’s understanding, examine the information beyond provided and, explore multiple perspectives, be aware of and analyze values, and ultimately provide opportunities for discussion, reexamination, reflection and thus for developing thinking skills (Duis & Duis, 1998; Gallenstein, 2000; Golden, 2006; Henning et al, 2006; Wheat, 2004).

Actually, the emphasis on problems and controversial issue aspects of content progressed together with the previously identified interdisciplinary perspective of content. As numerous scholars pointed out, social issues and problems tend to be multi logical, and to cut across subjects, so they are not generally found within the boundaries of a single discipline (Simmons, 1995; Wright, 1995a, 1995b).

**Perception of Students**

In relation to teaching thinking, I found *active student involvement* as the most recurring pattern. Scholars widely agree on the fact that *active student involvement* was essential to learn, to practice and to develop skills of thinking. Specifically, they identified that acquiring social studies content, developing thinking skills, making decisions, and developing attitudes were all dynamic, reflective, yet self-paced activities. So, scholars simply viewed active student involvement as a means to learn both the content and the necessary skills of thinking (Saye, 1998).

Although scholars described thinking as an individual, self-paced activity to a certain degree, they never disregard the role of social interaction. On the contrary, the essential contribution of social interaction on development of thinking skills was stressed so much that *small or large group work, and cooperative learning* were perceived as essential for learning to think in all three decades (Beyer, 1977; Fouts & Hermeier, 1979; Hunkins, 1985).

It is through interaction that students share ideas, confront different and even conflicting perspectives, challenge others’ views or to be challenged, and defend their perspectives. They simply learn from each other, collaborate, and deliberate, all of which ultimately contributes to their thinking (Duis & Duis, 1998; Fertig, 1997; Fouts & Hermeier, 1979; Gabelko, 1988; Pallante & Shively, 1999; Parker, 1988; Rea, 1999; Saye, 1998; Walsh, 1988). By doing so, interaction simply creates a constructive avenue for them to learn and experience democratic way of living (Guyton, 1991; Sesow et al, 1992; Wilen & Philips, 1995).

Scholars further indicated that students need to be more skilled at *asking and pursuing their own questions* to learn how to think critically (Hunkins, 1985). In fact, some scholars identified the first step of becoming a critical thinker as skepticism (O'Reilly, 1985). Students’ questioning behaviors were considered essential and strongly equated with their ability to think, to inquire, to explore content further, and to construct knowledge as well (Fulwiler & McGuire, 1997). Asking a broad range of questions including analysis and evaluation questions, either for the purpose of identifying the evidence (e.g. is this a form of evidence or factual information), or questioning the information source perceived essential for learning to think (O'Reilly, 1985; Singleton, 1979).

Some scholars also highlighted the importance of certain *dispositions or attitudes* regarding thinking. Although this view emerged toward the end of the first decade, it evolved and progressed specifically in second decade. These scholars believed that being a critical thinker or developing as one required more than performing certain skills successfully but gaining and developing particular attitudes or dispositions such as respect, cooperation, ability to listen, or deliberate. Unique to second decade, the development of metacognitive awareness – self-monitoring behavior, awareness of what the learner knows about the subject, his or her thinking process and ability to monitor the learner’s own understanding and progress – was discussed and considered the essence of being an effective and efficient thinker by some (Eeds & Wells, 1991; Wilen & Philips, 1995).

Toward the end of the second decade, a growing number of scholars emphasized not only teaching students thinking skills but also empowering them so that they take further action on
social issues and get involved in the community. This pattern continued into the third decade as well, with more emphasis; that is, student empowerment specifically for the purpose of social and civil action (Joseph & Windschitl, 1999; Rappoport & Kletzien, 1997; Rowell et al., 1999). They indicated that empowering students by helping them to develop necessary knowledge bases and skills of thinking were essential for their development as future citizens.

Perception of Teachers

Analysis of data regarding teacher behavior and involvement indicated that providing deliberate, systematic, and explicit instruction to students were considered important for promoting the skills of thinking. Scholars primarily suggested defining and explaining the skills of thinking, systematically highlighting processes, and steps involved in it through a bottom – up or simple to complex instruction (Glenn, 1977). This is, in fact, what the direct approach recommends: provide thinking instruction systematically and as explicitly as possible, offer opportunities for students to practice over an extended period of time with a corrective feedback (Beyer, 1985b; Fleming & Weber, 1980; Fouts & Hermeier, 1979).

However, in regards to teachers’ explicitness in thinking skills instruction, scholars pointed that students’ levels should be considered. For example, if the students are at an early stage of learning the skills of thinking or lacked the skills of thinking, more explicit and direct teacher instruction was considered beneficial. Besides, some others suggested teachers to prompt students to thinking, which was based on the assumption that students possessed the knowledge but for some reason, were not showing it (Parker et al., 1991). On the other hand, as the students learned the skills of critical thinking and improved by practicing it over time, decrease in teacher direction was considered necessary (Beyer, 1977; Glenn, 1977).

Along parallel lines, scholars perceived that teachers were commonly suggested to be models, facilitators, and guides in all three decades. Teachers primarily were expected to model the desired student behaviors by illustrating and showing students how someone thinks through the problems, so that students observe and learn (O’Reilly, 1998). One of the useful strategies recommended for teacher modeling was the thinking aloud strategy. Although suggested teacher behaviors require teachers to be active, active teacher involvement was emphasized more especially within the last two decades (Mattioli & Drake, 1999; Mayer, 1998).

Scholars elaborated more on teacher modeling or guidance between 1987 and 2006, in particular. The emphasis was more on teachers’ listening, questioning, and discussion skills. It was also indicated that teachers need to guide their students, encourage them to talk and express their feelings, ask them numerous but high cognitive level questions (e.g., discussing and explaining why and how) and lead classroom discussions (Duis & Duis, 1998; Fulwiler & McGuire, 1997). Some even emphasized teachers’ questioning technique as one of the essential ingredients of conducting quality instruction in thinking (Atwood & Wilen, 1991). So, teachers’ role was described as more of a process facilitator than a classroom manager (Gallavan, 1997).

In regard to promoting thinking, scholars emphasized the importance of providing constant opportunities for students to employ and sharpen their skills of thinking; using them in different settings, with different data and context, providing classroom activities that were challenging and meaningful, and which lead to further opportunities for decision making, problem solving, and discussion (Beyer, 1985a; Mattioli & Drake, 1999; Suiter, 1998). Teachers were also advised to employ alternative methods of instruction and classroom materials (Fleming & Weber, 1980).

Teacher collaboration and team teaching were especially emphasized for the years between 1987 and 2006. As I discussed previously, scholars viewed social studies content as more holistic and interdisciplinary between 1987 and 2006. They also noted that topics of social issues and problems cut across the subject lines. As scholars viewed content to be more integrated, they encouraged teachers from diverse content areas to interact, to collaborate, and to perform team
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teaching (Gallavan, 1997; Pallante & Shively, 1999). Table 2 on the previous page shows the summary of findings identified in the three journals on a decade-by-decade basis.

Discussion and Conclusions

Available literature indicates that teaching of thinking in social studies was unsuccessful. As to explain why, some scholars identified persistence of diverse or conflicting perspectives on teaching thinking as one of the possible reasons for lack of thinking in social studies. This was the primary purpose of the current study: to identify instructional method(s) scholars supported for teaching thinking, if there are conflicting views on teaching thinking, and accordingly pinpoint perception of content, students, and teachers related to methods of thinking.

The emerging story concerning method of thinking contradicts with the existing view in which persisting diverse and even conflicting views on methods of teaching thinking identified as one of the reasons of unsuccessful teaching thinking in social studies. Analysis of published articles between 1977 and 2006 revealed the opposite is true. A coherent view on method of teaching thinking namely direct method was the identified pattern in all three decades. In relation to direct approach, I also identified a consistent view of the content, student or teacher behaviors in all three decades.

The direct method suggests explicit or step-by-step instruction on thinking within social studies content. In relation to content, two patterns emerged: thinking is content dependent and real life issues, problems, controversies are essential for teaching students thinking. Thinking, as a content dependent activity, was explained as holistic or interdisciplinary than separate. This pattern, dominant in all three decades, was in parallel lines with the identified direct method and as well. Thus, teaching thinking be promoted by infusing thinking skills instruction into numerous real life issues, problems and controversies. Besides, direct approach considers active student involvement, - as an individual or in a group- and students’ level of thinking as important elements in leaning to think. Particularly, when students are lacking the thinking skills or at the beginning stage on learning how to think, they benefit more from the direct approach.

So, if the published articles in three NCSS journals send a coherent message to its readers, then what could be possible explanations for the problematic and unsatisfactory nature of teaching thinking in social studies? Although I did not identify any conflicting perspectives, two issues are worth mentioning here. The first one was lack of information on published articles concerning “how to”s of direct method of teaching thinking. Most of the times, in the published articles scholars did mention direct method, but they did not provide a definition or more explanation to clarify how to use it. Only a handful of scholars highlighted the basic premises of direct method. In that sense, it might be argued that three decades of literature was consistent but lacking information concerning the mechanics of direct approach.

Secondly, it was clear in published articles that teachers are at the center of direct approach. Teachers are expected to do a lot of things to successfully teach thinking. Plan for activities, provide step by step instruction, identify students’ level and balance thinking instruction to fit students’ level, identify content, infuse thinking instruction into content, model thinking behavior, facilitate discussions, ask questions, are just to name a few. So, employing the direct method requires teachers to have necessary knowledge and skills. This simply turns our attention to teacher preparation programs. Whether or not social studies teacher education programs provide necessary knowledge and training on thinking to future teachers is probably the future research question needs an answer.

More research needs to be done to address this and the successful practices of teaching of thinking. Although this study found a coherent perspective on teaching thinking, second step should be translating this coherent perspective into practice possibly via through teacher education programs or in-service. Further studies need to examine the years after 2006 to get a complete view of the literature regarding teaching thinking.
References


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