

THE NATURE OF REFLECTIVE THINKING AND ITS IMPLICATIONS FOR IN-SERVICE TEACHER EDUCATION

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ÖZET

Bu çalışmada John Dewey'in hocası ve Amerikan pragmatizminin en meşhur sözcüsü olan Charles Sanders Peirce'e atıfta bulunarak yansıtmacı düşünmenin mahiyeti hakkında bilgi vermeye çalıştık. Yansıtmacı düşünmenin felsefi tarafını başlıca Dewey ve Habermas oluştururken, uygulama tarafında ise en çok Schön ve Kolb'un isimlerini görürüz. Ayrıca, bu çalışmada yansıtmacı düşünmenin vasıtalarını göstererek, yansıtmacı düşünmeden hizmet içi öğretmen eğitiminde nasıl yararlanılabileceğini göstermeye çalıştık.

Anahtar Kelimeler: Yansıtmacı düşünme, öğretmen eğitimi, yansıtmacı düşünme vasıtaları, yansıtmacı yaklaşım, problem çözme.

ABSTRACT

In this study we have investigated the nature of reflective thinking giving reference to Charles Sanders Peirce, Dewey's teacher and one of the most famous proponents of American pragmatism. The philosophical part of reflective thinking is mainly provided by the famous philosopher Dewey and Habermas, and on the practice side of reflective thinking we see the figures of Schön and Kolb. By explaining some of the reflective tools we also have tried to demonstrate how to make use of reflective thinking in in-service teacher education.

Key Words: Reflective thinking, teacher education, reflective tools, reflective attitude, problem solving

A- THE NATURE OF REFLECTIVE THINKING

Charles Sanders Peirce (1839-1914) and John Dewey (1859-1952), who was a student of Peirce at John Hopkins University, are two of the eminent exponents of pragmatism, the most influential philosophy in America in the first quarter of 20th Century (Thayer, 1982). Unlike his teacher Peirce, who studied chemistry and "received the first Sc.B. degree in chemistry in Harvard *summa cum laude*" (Thayer, 1982) and began his career as a chemist, Dewey was a social scientist throughout all his life. His main interests were pragmatic philosophy and education.*

Although Dewey was both a philosopher and a pedagogue, he is more famous in the latter subject. William James and Charles Sanders Peirce were the most famous of

* In the first years of our Republic, Dewey was invited to Turkey. In order to guide the modernization struggles of Turkish education system he prepared a report in 1924. His education theory was based mainly on pragmatism.

the American pragmatists whereas John Dewey, the third influential figure in American pragmatism, is one of the most famous educators of America. Since the 1890's, he wrote and lectured to a large extent on central issues in education; he was dealing especially with questions about the ideals, aims and means of education. The main point Dewey emphasized in education was democracy. To him, unless the students were taught at democratic schools they would never acquire problem solving skills, the skills not only children but also adults need (Shook, 2003).

Besides democratic schools, another prerequisite for acquiring problem solving skills is to develop reflective thinking ability. Dewey is one of the most mentioned authors in books and articles written on reflection, teacher education, and student learning. Actually, he is considered to be the originator of the concept of reflective thinking as an aspect of learning and education (Kember, Leung, Jones, Loke, McKay, Sinclair, Tse, Webb, Wong, Wong, Yeung, 2000). According to Dewey, reflection helps our personal growth because it is the means how we free ourselves from a single point of view and the possible negative effects of one point of view. Via reflection we could reframe problems in a variety of ways, think of alternative point of views and change our perspectives (Roberts, 1998). Dewey emphasizes the importance of reflective thinking giving an example from the nature.

An animal without thought will go into the hole when rain threatens, because of some immediate stimulus to its organism. But a *thinking* being will perceive that certain given facts are probable signs of future rain and will take steps in the light of this anticipated future. To plant seeds, to cultivate the soil, to harvest grain, are intentional acts, possible only to a being who has learned to subordinate the immediately felt elements of an experience to those values which these elements hint at and prophesy (qtd. in Milner, 2003: 173).

Dewey's definition of reflective thinking considers actions to find and solve problems (Nottingham, 1998). Rodgers (2002) lists the six phases of reflective thinking she derived from Dewey's writings:

1. an experience;
2. spontaneous interpretation of the experience;
3. naming the problem(s) or the question(s) that arises out of the experience;
4. generating possible explanations for the problem(s) or question(s) posed;
5. ramifying the explanations into full-blown hypotheses;
6. experimenting or testing the selected hypothesis.

Just as the irritation of thought is the prerequisite of reaching a belief according to Peirce, presence to an experience is the starting point for reflective thinking according to Dewey. Dewey was to postulate a six phase approach to inquiry in the article "The Pattern of Inquiry" in 1938. The six phases of inquiry were very similar to those of reflective thinking:

1. The Antecedent Conditions of Inquiry: The Indeterminate Situation
2. Institution of a Problem
3. The Determination of a Problem Solution
4. Reasoning

5. The Operational Character of Facts' Meanings
6. Common Sense and Scientific Inquiry (Dewey, 1982)

Experts in education have pointed to some problems concerning Dewey's definition of reflective thinking and its interpretations. The first is whether reflection is limited to thought processes about action, or is more inextricably bound up in action. In other words, it is disputed whether reflective thinking is a proactive or reactive action in nature. The second relates to the time frames within which reflection takes place, and whether it is relatively immediate and short term, or rather more extended and systematic, as Dewey seems to imply. The third has to do with whether reflection is by its very nature problem-centered or not. Finally, the fourth is concerned with how consciously the one reflecting takes account of wider historic, cultural and political values or beliefs in framing and reframing practical problem to which solutions are being sought, as a process which has been identified as 'critical reflection' (Hatton and Smith, 1996).

In fact, it seems that there are two levels of reflective action: reflective thinking and critical reflection. Critical reflection refers to the deeper, more thoughtful and more profound reflection. Dewey argued that a person who is not sufficiently critical could reach a hasty conclusion without examining all the possibilities. The term critical reflection stands for this more profound level of reflection (Kember *et al*, 2000).

Critiques of reflection often make use of the hierarchy composed of three levels which are derived from Habermas, the second most famous philosopher of reflective thinking. The first level, *technical reflection*, is concerned with the efficiency and effectiveness of means to achieve certain ends. The second, *practical reflection*, allows for open examination not only of means, but also of goals, the assumptions upon which these are based, and the actual outcomes. This kind of reflecting, in contrast to the technical form, recognizes that meanings are not absolute, but are embedded in, and negotiated through, language. The third level, *critical reflection*, as well as including emphases from the previous two, also calls for considerations involving moral and ethical criteria, making judgments about whether professional activity is equitable, just and respectful of persons or not. In addition, critical reflection locates any analysis of personal action within wider socio-historical and politico-cultural contexts (Hatton and Smith, 1996).

Griffith and Frieden (2000) differentiate between three types of reflective thinking: a) pre-reflective b) quasi reflective c) reflective thinking (the highest level of reflective thinking). In pre-reflective thinking level, knowledge is either gained by direct observation or from an authority figure and is absolutely correct and certain. The persons using pre-reflective thinking see problems in concrete but simplistic ways. At the quasi reflective level, individuals begin to reason and recognized that handling ill-structured problems can be complicated, and knowledge is uncertain. Quasi-reflective thinkers could not rely on themselves dealing with complicated problems. At the highest level of reflective thinking individuals recognize that knowledge is obtained from a variety of sources and is best understood in relationship to a specific context. Although it may be impossible to reach a perfect judgment about a given problem, some judgments might be more accurate than others.

Dewey has suggested that presence to an experience is the prerequisite for reflective thinking. Yet, besides being presence to an experience what we need is reflective attitudes to trigger a reflective action. These reflective attitudes are a) open-mindedness, b) directness, c) whole-heartedness and d) responsibility (Rodgers, 2002; Spalding and Wilson, 2002). Now I would like to discuss these attitudes.

- a) Open-mindedness: is not a blind acceptance of all ideas without perspectives, coupled with an acceptance of the possibility of error even in the beliefs that are dearest to us. It means your being free from all prejudices.
- b) Whole-heartedness: means a genuine enthusiasm towards what you are dealing with. If, for example, you are a whole-hearted teacher you devote yourself to the task of teaching regardless of the inconveniency of the conditions.
- c) Directness: You should trust in your own experience and ignore what others say. “It is what beginning teachers often lack. Because they are so identified with the content and their teaching of it, they often totally miss what is going on around them—most important, the learners and their learning” (Rodgers, 2002: 860)
- d) Responsibility: In fact, the fourth attitude has meta-explanatory power. As the word suggests, the fourth rule require us to consider all the possible consequences of our projected steps and be ready to bear the results of these steps. Being responsible also means acknowledging that the meaning we are acting on is our meaning and not a disembodied meaning that is out there (Rodgers, 2002; Spalding and Wilson, 2002).

B- IMPLICATIONS FOR IN-SERVICE TEACHER EDUCATION

It is suggested that incidental or occasional retrospection is not as valuable as a habit of reflective thinking. Recognizing that developing a habit of reflective thinking takes time and depends upon a number of cognitive, contextual, and ethical issues, teacher educators give prospective teachers a variety of activities designed to promote reflective thinking (Brown, 1999). Improving teaching could be achieved through reflective thinking. Reflection is more than “thinking” and focuses on the day-to-day classroom teaching of the individual teacher as well as the institutional structures in which teacher and students work (Posteguillo and Palmer, 2000).

Before carrying on discussing the functions and goals of reflective thinking need to be mentioned. Roberts (1998) drawing on certain ‘parent theories’ of reflective thinking, lists the functions and goals of reflective thinking as follows:

1. Dewey: disciplined deliberative thinking is a basis for personal development and citizenship.
2. Schön: When professionals engage in reflective conversations they can reframe the problems and test out their interpretations and solutions.
3. Kolb: The individuals personalize public knowledge through experience and reflection.

4. Constructivism (George Kelly): The key message of the Personal Construction Theory is that the world is 'perceived' by a person in terms of whatever 'meaning' that person applies to it and the person has the *freedom to choose* a different 'meaning' of whatever he or she wants. In other words, as suggested by George Kelly, the original proponent of the theory, the person has the 'freedom to choose' the meaning that one prefers or likes. According to constructivism new learning requires the reconstruction of current knowledge.
5. Lortie: Student-teachers need to remember their personal images of teaching because they may be wrong and are tacit as well. Working from tacit images confines the teacher's abilities. So it is necessary for a teacher education program to raise the awareness of teachers. Raising awareness is one form of reflective thinking.

How does reflective thinking help teachers? The answer to this question could be found in the words of Kathleen Sharp, an African American English teacher who could probably have met some problems with white students due to cultural differences and who is giving courses in predominantly white student classrooms:

Thinking deeply about my work has increased my effectiveness and allowed me to assist my students in learning. My constant reflection facilitates my thinking as I consider instructional materials, activities, and the lessons I prepare and assign (Sharp, 2003: 243).

The need for reflective thinking by novice teachers is a fact which could not be ignored. According to Lana Danielson (2002), however, novice teachers often underconceptualize what teaching is. Although they have spent many years in an "apprenticeship of observation", watching what teachers do is not sufficient training for knowing why they do it. To see something done does not necessarily mean to be aware of the reasons for it. To be effective teachers, novice teachers should articulate the purpose behind their behaviors. They must be able to explain to students, parents, and school personnel not only why the content they teach is important but also why the methods they use are appropriate. They must understand the connections between what was taught yesterday, what is taught today, and what will be taught tomorrow so that they can understand how individual lessons fit in the greater curriculum picture. With good supervision from field-based teachers and university professors, student teachers can begin to develop a deeper understanding of their work, but left to their own devices in the early years of teaching, they are unlikely to grow. Any early satisfaction with their work, too often the result of trial and error, has little chance of being sustained (Danielson, 2002).

Good teachers are often thought to be good mentors. However, it takes preparation and professional development for most teachers to become an efficient mentor. Some of the skills requisite for quality mentoring include the following:

- Knowing what to observe and how to provide feedback
- Understanding how to keep communication open and resolve conflicts

- Being able to study one's own teaching and to communicate our own processes so others can learn from them
- Providing appropriate challenges for the novice
- *Fostering reflective thinking*(emphasis mine) (Danielson, 2002)

“Just as Dewey has been fundamental to understanding the nature of reflective thought, Donald Schön has been fundamental to understanding the nature of reflective practice (Spalding and Wilson, 2002: 1395). Actually, in the literature on reflective thinking depending on the emphasis on theory or practice, definitions of reflective thinking vary from philosophical articulation, as in John Dewey and Jurgen Habermas, to formulations from practice-based perspectives, such as the research-in-action constructs developed by Schön, or Kolb’s use of reflection in the experiential learning cycle (Langer, 2002). Schön defined several kinds of reflective behavior. The first, “knowing in action”, refers to the ability to respond automatically to the unexpected. Knowing in action refers to the smooth and familiar routines of action. It relates to routine actions that are done skillfully. A second is “reflection in action”, the ability to change course in the middle of one's teaching because more or less than what has been planned is needed. Teachers could sometimes meet a surprise which triggers his/her attempt to make sense of this surprise. The teacher considers alternatives immediately and makes necessary transitions/changes seamlessly. The third kind of reflective behavior, “reflection on action” occurs after the teaching when the teacher identifies critical moments concerning what went well and what needs refining. This stage prompts “reflection for action” when a teacher analyzes instruction, reconceptualizes his/her assumptions about the learners and their understandings, and plans to refine or reinforce the previous lesson during the next class (Danielson, 2002; Roberts, 1998). Roberts (1998) argue that Schön’s view on reflective thinking is in accord with Dewey’s description of reflection but according to Schön reflection in action is a necessary condition to become a professional educator.

Teachers who want to improve their reflective processing may ask themselves the following questions or they could discuss their answers with a mentor or a colleague:

- 1) What worked well in the lesson? How do I know? Why did it work?
- 2) What would/should I change? Why?
- 3) How do I feel about what I am doing? Why do I feel this way? How do these feelings govern my actions and the decisions I am making?
- 4) How are my students responding? What might be contributing to their actions?
- 5) What information do I need to make an informed decision about this situation?
- 6) What did I intend to accomplish by the instruction? Did I achieve my goal?
- 7) What inhibited effective teaching and learning? How can I address this next time?

- 8) What are my strengths as a teacher? What are my students' strengths? Are we working together or at odds?
- 9) How can I capitalize on our strengths and address areas for growth? (Danielson, 2002).

Techniques to Improve Reflective Thinking

A variety of techniques has been employed in attempts to foster reflection in student teachers and other professionals (teachers). These techniques are:

- a) writing tasks (keeping journals)
- b) compiling portfolios
- c) Socratic questions
- d) IPR (Interpersonal Process Recall)
- e) reflecting teams
- f) action research

In recent years journal writing (keeping journal tasks, autobiographical journals) has become an important tool for individual and collaborative reflection in ESL/EFL settings (Dantas-Whitney, 2003). Journal writing has benefits not only for teachers but also for students. For students:

1. journals serve as a permanent record of thoughts and experiences.
2. journals provide a means of establishing and maintaining relationship with instructors.
3. journals serve as a safe outlet for personal concerns and frustrations.
4. journals are an aid to internal dialogue.

For teachers:

1. journals serve as windows into students' thinking and learning.
2. journals provide a means of establishing and maintaining relationship with students;
3. journals serve as dialogical teaching tools (Spalding and Wilson, 2002).

Asking a good question on occasions might be better than providing a good answer, which is the basic principle behind Socratic questioning. "The Socratic method is a process by which educators use questions to probe the philosophical and value-based decisions that students have knowingly or unknowingly used as a basis for therapeutic judgments" (Griffith and Frieden, 2000).

Interpersonal Process Recall (IPR) is an instructional method using videotaped sessions to help student reflect on a previous counseling session. By this way students have the opportunity to bring to awareness the internal processes (feelings and attitudes) they were experiencing during the session. Since the student has complete control in stopping the tape when he or she recalls any thoughts, feelings, impressions, conflicts,

confusions, images, internal dialogues, that occurred during the session. (Griffith and Frieden, 2000).

Action research, the last of the reflective techniques in our list, is not a new methodology but it is receiving increased attention and value around the world. The fact that it is called reflective practice (besides other name such “teacher as the researcher”, “collaborative inquiry”, or “self-study”) in some parts of the world suggests the clear relationship between reflective thinking and action research. Through action research, a teacher could get direct feedback from his/her students and could better evaluate what s/he has done in the classes, which give him/her the opportunity for a more sufficient course planning.

It is very interesting what Elizabeth Spalding and Angena Wilson (2002) concluded after working with pre-service secondary teachers. At the end of their article the authors confess rather disappointingly that:

We teacher educators must teach—not simply assign—reflection, if we want pre-service teachers to become more reflective. In our zeal to cover the content of teacher education, we are tempted to assume that our students possess the skills they need to be able to do what we ask them to do. As English and social studies educators, we emphasize to pre-service teachers the importance of depth over breadth, yet this study made clear to us that we may not have been practicing what we have been preaching (p.1415).

A study carried out by Munby and Russell (in 1993) verifies the judgment we have quoted above. Munby and Russell after reviewing seven teacher education programmes that claim to be reflective found that there were not any common feature between the programmes and even the term reflection meant different things in the programmes (cited in Roberts, 1998).

As a conclusion I would like to add that in our age of high technology we can experience the power of change more profoundly than past generations. The term “update” has become one of the catch words of this new era. Governments, institutions, companies, universities are continually “updating” themselves to develop the quality of their services. We, the teachers, are not exempted from this highly competitive situation, so we should also try to develop ourselves and improve the quality of our job. In this context, reflective thinking provides us with a very practical, efficient way of development.

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