CULTURAL-HISTORICAL ACTIVITY THEORY (CHAT) AND CASE STUDY DESIGN: A CROSS-CULTURAL STUDY OF TEACHERS’ REFLECTIVE PRAXIS

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Abstract

Teachers’ reflective actions are argued to be socially constructed, culturally mediated, and dialogical in nature [Lampert-Shepel, 2006]. This paper discusses the research design that combines cultural-historical activity theory (CHAT) and case study design and presents the findings of a cross-cultural study that explores teachers’ reflective actions in two Russian and American Dewey schools. The paper also examines how CHAT research methodology complements the case study design. It is argued that embedded unit of analysis within a case study is a powerful research methodology that allows study of the dynamics and qualitative transformations of the emergent process.

KEY WORDS: teachers’ reflective praxis, cultural historical psychology and activity theory, mediational means, unit of analysis, case study research design, cross-cultural case study analysis.

INTRODUCTION

The purpose of this paper is to describe the research design that combines cultural-historical activity theory (CHAT) and multiple-case study design and to present major findings of the cross-cultural qualitative study that widens an understanding of the complex and dynamic reflective actions of two groups of teachers. Six individual teachers were studied in the course of their everyday practice in two different socio-cultural contexts of Dewey schools [Tanner, 1997]: the School of Self-Determination [Moscow, Russia] and the Manhattan Country School [New York, USA]. The study examined, described, documented, and compared: (a) the content of teachers’ reflective practice; (b) the process of reflective action; and (c) the mediational means employed in teachers’ reflective actions.

CALL FOR REFLECTIVE PRACTICE

Advocacy for the value of reflection and the need for preparing more reflective teachers are not new in educational literature [Calderhead, 1989; Dewey, 1991; Greene, 1978; Grimmett & Erikson, 1998; La Boskey, 1994; Smith & Hatton, 1993; Van Manen, 1977; Zeichner & Liston, 1987]. There has been increasing recognition that teachers and their knowledge gained from their everyday work with children should be at the center of reform efforts and professional development activities [Ayers, 1992; Darling-Hammond, Klein & Wise, 1995; Lieberman & Miller, 1984, 1991]. Pre-service and in-service teacher education programs have faced the need to: (1) educate teachers to be critical examiners of their practice [NCATE, 2002], (2) to be able to weigh conflicting demands of their school culture, (3) to reflect on their own practices, and (4) to professionally construct their own understandings and theories [Williams, 1996]. However, current test-driven reforms and “teacher-proof” pre-packaged curricula often focus teacher
reflection on efficiency and technical implementation rather than on meaning making and inquiry. Teachers are more often than not alone in their classrooms with little outside feedback as to their progress. If they are unable to constantly question and use the process of self-assessment, the students could become rapidly at risk. Yet, reflection is most often treated as an isolated technical skill [Giroux, 1985; Hoffman-Kipp, Artilies, Lopez-Torres, 2003; Lindsay & Mason, 2000]. In addition, the view of teachers’ reflection as a technical skill necessary for mere implementation rather than for self-emancipation and inquiry [Freire, 1997] is insufficient to support meaningful educational practice. This is particularly true in the situation of growing diversity and shift of moral and intellectual paradigms when equity issues, multiple contradictory reforms, and power differentials abound [Ladson-Billings, 1999]. The craft of teaching, more than ever, requires the toleration of ambiguity and the ability to engage in active meaning making.

That reflection has for at least three decades been foregrounded in discussions of both pre-service and in-service education [Gore, 1987; Richert, 1992b] is attributable to a number of factors. The first factor is represented in the changed professional contexts of working and learning and as a teacher. The characteristics of today’s economic situation have influenced fundamental assumptions about the teaching profession. The general economic tendency of replacing heavy manufacturing by flexible technologies in smaller units of enterprise [Harvey, 1989; Robertson, 1992] is calling for flexible, contextualized, rather than standardized, schooling systems and patterns of teaching [Schlechty, 1990; Reich, 1992]. “…Accelerating change, intense compression of time and space, cultural diversity, economic flexibility, technological complexity, organizational fluidity, moral and scientific uncertainty, and national insecurity” [Hargreaves, 1994, p.13] are reflected in various models of decentralized decision-making and blurring of roles and boundaries [Leinberger & Tucker, 1991]. Hargreaves [1994] considers some of the realizations of these emerging tendencies to be self-managing schools and professional development networks.

The traditional and presently recurring view of teaching as semiskilled work, requiring little more than basic literacy skills and the ability to follow guidelines encapsulated in texts and curriculum materials has failed to be effective in today’s context. In recent decades teachers are viewed more often as sources of knowledge themselves or active participants in their own growth and development rather than “the passive recipients of someone else’s knowledge” [Lieberman & Miller, 1984]. Reflection is considered to be an important aspect of complex pedagogical decisions teachers make each day [Calderhead, 1989] and a fundamental process of teachers’ research and learning [Greene, 1991; Richert, 1991].

The second important factor that has influenced advocacy for reflection in teacher education is an increasing concern about the moral and political dimensions of teaching [Gore, 1987; Goodlad, 1990; Griffin, 1986; Tom, 1984]. Teaching has been traditionally considered a “moral craft” [Durkheim, 1961; Tom, 1984]. However, “one of the central challenges to teachers in the postmodern age is that of working within contexts of pervasive moral uncertainty” [Hardgreaves, 1994, p. 15]. In contexts of cultural and religious diversity, it is impossible to pin down moral absolutes. Moral certainties grounded in tradition are collapsing, and teachers must rely on their own reflective resources as a basis for moral judgment [Giddens, 1991]. The considered moral life of teaching becomes a matter of resolving multiple moral dilemmas [Berlak & Berlak, 1981; Hargreaves, 1994].

The third factor of the current educational context that has influenced the development of reflective teachers’ practice is the recognized importance of teachers’ professional collaboration. Following the tradition of John Dewey and Paolo Freire, teacher educators such as Elbaz [1991] have emphasized various aspects of strong connections between thoughtful understanding, inquiry-based activities, and building the community of inquiry. Reflective action [Greene, 1978; Richert, 1991] has proved to be a fundamental process in the development of peer collaboration. Others argue that reflective action is a fundamental process in attaining a sense of self and a sense of community. And finally, interest in reflection as a powerful means of teachers’ theorizing [Williams, 1996], or constructing multiple conceptualizations of their practice, opens a new perspective in the research on reflection.

Thus, the notion of reflection embraces a wide range of concepts and strategies and is often grounded in different theoretical frameworks. To avoid oversimplification and to demystify the phenomenon of teachers’ reflection, it should be studied in the midst of teachers’ practice in schools where reflection-as-meaning-making and inquiry are nurtured. With this in mind, researchers sought an environment conducive to this philosophy. The culture of Dewey schools is based on ongoing reflection within the school community. Dewey schools have a tradition of ongoing reflection for both students and
teachers and of providing a rich context for research on reflection [Brown, Finn, & Brown, 1988; Tanner, 1997]. In such schools, where teachers’ reflective inquiry is a tool to assist resistance against constrained action, it offers great promise because it provides all the members of the learning community a means by which to critically engage the self [Lawn, 1989].

With the above issues in mind, it also became important to think about how different settings could result in different (but no less beneficial) ways of reflection. It is difficult to overestimate the role that the socio-cultural setting and participation in various discourse communities plays in the development of the multiple meanings of reflective practice [Wertsch, 1998]. With acknowledgement of the importance of multiple meanings of reflection that emerge in different socio-cultural settings, it is also valuable to identify some cross-cultural tendencies in teachers’ reflective practice. Cross-cultural comparison of two similar Dewey schools operating in different national and socio-cultural contexts—one in Russia and one in the United States-- gave the opportunity to compare and identify tendencies in the content, process, and mediational means of teachers’ reflective practice. These may, of course, be reflective of national histories as much as the cultures of particular schools and of individuals.

The cultural-historical psychology of Lev Vygotsky and the philosophy of John Dewey have been very influential in the analysis of the origins and processes of human thought and the influence of a socio-cultural context on its development. The philosophical and theoretical frameworks of reflective thinking developed by both Dewey and Vygotsky (and their followers) have significantly influenced educational practice. The multiple meanings of reflection developed in teaching practice have become powerful voices in the conceptualization of reflection.

The previously identified problematic areas and factors of socio-cultural context influencing the development and further questioning of teachers’ reflective practice helped to formulate specific research foci of the study. These include: (1) the content of teachers’ reflection in the Manhattan Country School in New York, USA, and the School of Self-Determination [PS #734] in Moscow, Russia [What do teachers reflect on in these two schools? What is the connection between the content of teachers’ reflection and the school culture?]; (2) the process of teachers’ reflective action [How do teachers identify their problems in practice? How do teachers construct meanings of their practice in the process of reflection?]; and (3) mediational means of teachers’ reflective action [What mediational means do teachers use in the process of reflection? What mediational means do teachers use to reflect on their practice? How is the choice of mediational means related to cultural, institutional, and historical context?].

These questions allow considering reflective practice as a professional learning activity. As any human activity, reflective practice is a complex system that has its specific goals, structure, philosophical dispositions, and mediational means. Those who are interested in engaging in or creating the conditions for professional practice as reflective practice should consider its complex nature and specific demands it places on the organizational culture. This paper builds an argument that as professionals need to be educated in the process of reflective action and choice of mediational means of reflective practice, such organizational culture should be inquiry-driven and allow collaboration and shared goal-setting and decision making.

THEORETICAL FRAMEWORK

This study is grounded in social constructivism [Lambert, Walker, Zimmerman, Cooper, Gardner, & Szabo, 2002], a philosophy of learning founded on the premise that, by reflecting on our experiences, we construct our own understanding of the world in which we live. Learning is understood as a search for meaning. Constructivist learning is based on the assumption that communities of learners construct meaning from personal values, beliefs, and experiences [Brookfield, 1995; Dewey, 1966; Rogoff & Lave, 1984]. The development of personal schemas in the course of shared inquiry and the ability to reflect on one’s experiences are key theoretical principles of social constructivism [Lambert et al., 2002]. Two major theoretical frameworks informed the study: the philosophy of John Dewey and cultural-historical psychology and its allied activity theory [Bruner, 1986; Cole, 1996; El’konin, 1971; Leontyev, 1981; Vygotsky, 1982; Wertsch, 1998].
REFLECTION AS MEDIATED ACTION

In this study, reflection is understood as a higher psychological function developed in individual consciousness in the course of socially constructed and culturally mediated human activity. Vygotsky [1982] argues that human action is always a mediated one. However, not every mediated activity can lead to the development of higher psychological functions: Vygotsky clearly differentiates tools from signs. Tools, for Vygotsky, are external and can be thought of in connection with the human hand. With the help of the tools we can transform the external objects or processes. For example, using spoons, forks, and knives as tools changed the activity of eating. Signs, in contrast, are internal “instruments” supporting psychological activity in the same way tools are used in labor. Signs, used as mediational means, Vygotsky claimed, are means of internal psychological activity. They support an internal mastery, a mastery of oneself. The example of a sign as a meditational means that support the internal psychological activity can be mnemonic techniques, language systems, etc. By mastering mnemonic techniques and using them for memorization, we change memory to voluntary memory, we our own thinking to control internal psychological activity. Zinchenko [1996] argues that variety in mediational means is important noting that: “… polyphony of mediators develops the polyphony of consciousness” [p. 27].

Building on Vygotsky’s premise that the higher psychological functions (i.e., higher forms of human consciousness) are internalized from mediated practical human activity, Wertsch [1991] proposes the notion of the “toolkit.” A toolkit, he explains, is the organizational system of mediational means employed by individuals in their practical activities. Such a toolkit could include various social languages, speech genres, metaphors, accepted forms of charts and schemas to objectify teachers’ thinking and/or experience, and so forth. The established toolkit developed by an individual teacher or group of teachers, and accepted within the school culture would represent the participants, the context, and the activity. Therefore, to study teachers’ reflection as mediated activity, one needs to document the toolkit of mediational means of reflection. Thus, this author investigated teachers’ choice and use of cultural tools to mediate reflective action.

Wertsch [1991] also argues “mediated action can undergo a fundamental transformation with the introduction of new mediational means” [p. 45]. It is therefore possible to suggest that the whole process of reflective action would be transformed, depending on whether teachers use graphic representation rather than a narrative that they used before (or vice versa).

With all of this in mind, the study views reflection as a higher psychological function—a dialectical, socially constructed and culturally mediated metacognitive activity of meaning making through a continuous exploration of the experience by the agent of the action. This understanding of reflection has been developed on the grounds of the theoretical framework of cultural-historical psychology and psychological cultural-historical theory of activity (CHAT). CHAT is not only a system of views but also a particular methodology. Therefore, it also provides specific lenses on the methodology of research. To study reflection within this theoretical framework, one must define a unit of analysis.

REFLECTIVE ACTION AS A UNIT OF ANALYSIS

Vygotsky [1987] believed that the study of cognitive functions in human development was “the study of the complex whole” [p. 47]. He distinguished between unit and element analysis. In element analysis, it is important to know a number of elements and their specific features. In unit analysis methodologically, one needs to find the basic concept, or the so-called “germ cell”, and follow the history of its development within a system of concepts. Even the genesis of a concept should be considered within a system of developing, mediated contradictions. Zinchenko [1985] emphasizes the importance of the unit’s capacity for development. He claims that units “must possess the appropriate inherent properties and potential for being transformed into something that differs from their initial form. The inclusion of units in the process of real-life activity and, consequently, in the processes of active contact with the surrounding environment, is a necessary condition for development.

Wertsch [1998] claims that tool-mediated activity of an agent in a particular socio-cultural setting must be considered a unit of analysis. To focus on the socio-cultural analysis of the teacher’s reflection as a higher psychological function is to understand the relationship between human action, including psychological functioning, on the one hand, and cultural, institutional, and historical contexts on the other.
Thus, Wertsch suggests that the mediated action or “agent-acting-with-mediational means” [Wertsch, Tulviste, & Hagstrom, 1993] would be an appropriate unit of analysis to study higher psychological functions.

Both John Dewey and Lev Vygotsky consider reflection to be an inseparable part of human action. In addition, the previous line of argument shows the reasons to believe that reflection should be studied in the midst of a teacher's action, being inseparable from it.

The following model (see Figure 1) is a graphically represented conceptualization of reflective action as a unit of analysis. The model presents two planes of reflective action: the “real” and the “ideal.” The “real plane” describes practical actions, and the ideal one corresponds to higher psychological functions. This model presents only one cycle of reflective action, which starts with experiencing the situation of perplexity in the midst of practical action (Al) and finishes with a transformed practical action (A6). The journey from Al to A6 includes reflection, analysis, modeling, and planning in the ideal plane of action. Every step of the reflective action described is a possibility—and is not pre-determined.

**REFLECTIVE ACTION**

![Figure 1. Reflective Action. A1 - practical action; V - a “developmental gap” or situation of perplexity: realization of the deficiency of means to perform a practical action; A2 - reflective stop: transition to the ideal plane of action, A3 - analysis of the situation of action: choice of mediational means; A4 - modeling: considering multiple ways of future action, making inferences; A5 - transformation of the model into practical action; A6 - reflexive control over the performance of a new practical action.](image)

The study explored how these steps of reflective action appeared in teachers’ reflective practice in Dewey schools. Reflective action as a unit of analysis allows exploration of the continuity of teachers' experiences without breaking such experiences into discrete elements for the observation and analysis.

The teachers from Manhattan Country School and School of Self-determination who participated in the study described different situations of how reflective process starts in practice when a teacher experiences a problem that he/she can’t solve. The teachers mentioned that, in practice, initial puzzlement leading to experiencing the “developmental gap” [V] and future reflection on the situation can be triggered as a result of different reasons: the students’ actions, observations, parents’ questions, group discussion, and/or courses they take as teachers at the university. Not every situation will necessarily lead to experiencing a developmental gap; sometimes a quick conversation with a colleague can help to solve the problem in practice. However, as teachers admit, there are situations when consistent reflection and analysis would be needed to bridge the gap. In this study, these problems and puzzlements were considered to constitute the content of reflection. The “developmental gap” encourages a teacher to start questioning the grounds of his/her actions (i.e. to stop doing and start thinking about his/her practice). The content of the future reflection depends on how teachers identify the issue causing the gap.

The transition from real plan of action into ideal plan of action is a necessary condition for the beginning of the reflection, and future steps are the process of reflection. In the ideal plan, a specific cultural artifact mediates the reflective process. These artifacts vary through cultures of thinking: conceptual models, metaphors, images, drawings, other people’s actions, observations, discussions,
narratives, etc. After that, the action returns to the real plan and the teacher acts again, but her action is modified by A1, A2, A3, and A4 transformative actions. The person who acts at the fifth stage (A5) becomes a different person. Teachers from both schools were talking about this transformation associated with reflection:

Elena: When the understanding of your teacher’s self is growing inside you, when this awareness is being clarified for you, the work in this school is eternal joy [Interview 1, p. 4].

Laura: There is not meaningful experience without reflection on it. You suddenly see the situation as a whole and can create conditions to transform it [Interview 1, p. 16].

The ability to reflect is one of an acting self. To reflect means to stop acting, but at the same time it is one of the most powerful actions. Before you start thinking about the beginning, you wait for the uncertainty to glimmer. Reflection is a "becoming space" for new thinking and imagining. It is a living force of consciousness. In reflection, the consciousness not only addresses itself as acting but also the reasons for acting -- the ability itself.

OVERALL RESEARCH DESIGN: CHAT AND CASE STUDY RESEARCH METHODOLOGIES

This study’s overall research design combined CHAT (cultural-historical activity theory) research methodology and multiple-case study design. The rationale for using case studies as a research method was to explore teacher perspectives on reflective praxis, and, in addition, case studies allow the display of the social organization of activities, as they are revealed through involvement in the natural setting of the activity. Multiple-case study design also provides an opportunity for studying reflective action “within its real-life context, when the boundaries between the phenomenon and context are not clearly evident” [Yin, 1994, p. 13]. The research questions determined the nature of the case studies as being both exploratory and explanatory.

The use of diverse methods in education research and evaluation has received substantial support, and methodological eclecticism appears to be very appealing to a large number of researchers. CHAT has become one of the methodological voices used quite often in eclectically designed studies. Interestingly enough, CHAT is more often referred to as theoretical framework than research methodology. One can encounter a number of cases when some CHAT principles or models are used for data analysis or data collection. With respect to the proponents of methodological flexibility and movement beyond rigid traditional paradigms and one-method-fits-all approaches to research, there is still a question of the rationale of combining CHAT with other research methodologies. With a rationale in place, such combination can be quite effective for the research study design as CHAT methodology offers research instruments that can complement qualitative research methodology.

Each methodology stems from particular philosophical foundations and, when combining different methodologies, it is important to examine the underlying ideas, values, and assumptions each methodology brings to the study. Ignoring the philosophical foundations of the research methodology can lead to distorted findings and can be hardly considered as a valid research practice. With this argument in mind, the rationale for using unit of analysis as a CHAT methodological principle while developing case studies was considered. The combination of these two methodologies was necessary to study reflection as a higher psychological function [Vygotsky, 1982], while exploring teacher perspectives on the content, process and mediational means of reflective actions in the context of their everyday practice.

The emphasis of CHAT on the need to identify the unit of analysis as the irreducible whole of the phenomenon and to study such unit’s origin and the history of development is complemented with the phenomenological case study emphasis on the particular and unique contexts in which such a unit of analysis occurs. In the course of data collection and data analysis the theoretical construct of reflective action as a unit of analysis described earlier provided the opportunity to explore historic evolution and dynamic invariance of teachers’ reflective actions as they emerged in practice. Case study analysis was helpful in constructing the explanation of reflection as meaning making as well as capturing the emerging meanings.

Case study design offers the phenomenological lens on teachers’ reflective actions--as free as possible from conceptual presuppositions. Phenomenological insight, constructed through case studies that comes from the existence common to both the researcher and the researched [Heidegger, 1972] and based on “thick description” [Geertz, 1973], has the potential of challenging the initial theoretical construct of the unit of analysis and influencing its development. This specific aspect of the embedded unit of analysis is crucial because it allows for a deeper understanding of the reflective process.
analysis in the case study allowed exploring the complexity of the process of reflective action and identifying its three levels (See DISCUSSION).

In addition, this study’s research design was constructed to be flexible and emergent (i.e. the changes in the initial design depended largely on the interaction of the researcher with the context and with the analysis and interpretation of this context). One of the challenges was to explore qualitative research methodology, phenomenological interviewing, and the theoretical framework of cultural-historical psychology and activity theory as tools for cross-cultural research.

**SETTINGS: MANHATTAN COUNTRY SCHOOL AND SCHOOL OF SELF-DETERMINATION**

One of the most important criteria for choosing the settings for this study was to select schools that were not only supportive of teachers reflection but were places where reflective practice would be vital for the school existence. The search for appropriate settings brought attention to Dewey schools in general, and, specifically, to the Manhattan Country School (New York) and the School of Self-Determination (Moscow). While different from each other in many ways, both schools were identified through a survey as Dewey schools that were dependent on an emergent curriculum and relied on the continuity of reflective practice. Both schools are organized as an ongoing experience of human association; that is their curriculum is tailored to a larger view of nature, growth, and development of children and requires continuous reflection on multiple levels – curriculum, teaching, school administration — for all the members of human association. The fact that both schools were identified as Dewey schools made the data on the teachers’ reflection collected in these schools comparable cross-culturally.

**METHODS OF DATA COLLECTION**

Multiple sources of data collection -- a combination of participant observations, videotaping of staff meetings, interviewing, and review of documents was planned to build the case studies and to validate and crosscheck findings. Two foci of observations--group reflection and classroom teaching--provided the essential information necessary for the interviews. The initial informal conversations and document analysis helped to validate questions for the first interview. In addition, the review of documents provided a behind-the-scenes look at the school philosophy.

**Teachers’ Group Reflection**

Three teachers’ group meetings were videotaped in each school: two were school-scheduled meetings and one was initiated and organized by the researcher. The staff of the two schools organized the first two group meetings. The researcher organized the third meeting, and its purpose was to observe and videotape teachers’ discussion of another teacher’s teaching practice. The same videotape was shown to a group of teachers in both schools. The tape was translated into Russian and dubbed for the Russian teachers by the researcher. Teachers were asked to discuss the videotape. The researcher facilitated teachers’ reflection and the discussion was videotaped. Showing the same tape in both schools provided the opportunity to compare the content, process, and mediational means of reflection teachers used in the group reflection.

**Teacher’s Observations**

The purpose of the observations was to identify how reflection was embedded and emerged from an individual teacher’s practice. The observations provided the grounds and questions for the second phenomenological interview. Teachers were asked to identify critical incidents of their practice and discuss them with the researcher during the second interview.

**Teacher’s Interviews**

Each teacher participated in three phenomenological interviews in the course of data collection. The rationale for using the phenomenological interviews was to illuminate the specific, to identify the content, process, and the mediational means of reflection through how they were revealed and conceptualized by the teachers in the specific contexts of their schools. These interviews were to emphasize the importance of each teacher’s personal perspective and interpretation of reflective practice, cutting through the clutter of taken-for-granted assumptions and conventional wisdom.
In-depth, phenomenological interviewing involves conducting a series of three separate interviews with each participant [Seidman, 1998]. The purpose of the first type of interview was to establish the context of the participants’ experience and to initiate the process of reflection. The second type of interview concentrated on immediate experience, with the focus on the content of reflection. In addition, there was also the intention of reconstructing the details of past experience through the lenses of teacher’s perspectives on the content, as well as on the process of reflective action. In the third type of interview, teachers were encouraged to reflect on the meaning of their experience and reflective actions.

METHODS OF ANALYSIS

Methods of data analysis in this study stem from two theoretical frameworks: CHAT (cultural-historical psychology and activity theory) and grounded theory. CHAT informed the data analysis by providing a theoretical framework for considering reflective action as a unit of analysis. Grounded theory as a method of data analysis was chosen because of the intention of this study to capture the complexity of teachers’ reflection as a socio-cultural phenomenon emerging and being conceptualized in the midst of teachers’ practice. As defined by two of its major proponents [Strauss & Corbin, 1990], “...the grounded theory approach is a qualitative research method that uses a systematic set of procedures to develop an inductively derived grounded theory about a phenomenon” [p. 24]. Inductively derived from the study, it represents a grounded theory data analysis that gives the opportunity for the researcher to act as an instrument, employing both her own theoretical and social understandings and experiences.

Data collection and analysis were deliberately fused, and initial data analysis was used to shape continuing data collection. This was intended to increase the "density" and "saturation" of recurring categories—as well as for following up unexpected findings. Interweaving data collection and analysis in this way was held to increase insights and to clarify the parameters of the emerging theory. To ensure that the analysis was based in the data and that pre-existing constructs did not shape the analysis and subsequent theory formation, if utilized, the existing theoretical constructs were justified in the data. However, the conceptualizations from the theoretical framework were not omitted but were regarded as forming an important part of theory development.

An in-depth analysis was conducted twice in each country (after the three stages of data collection were completed) and then cross-culturally. Broad potential categories for coding were created based on the research questions as outlined below prior to data collection; however, they remained flexible and some were changed when it was necessary (based on categories that had emerged in the process described above).

Single-Case Analysis

The purpose of the single-case analysis was the gradual building of an explanation of the individual teacher’s perspective on the meaning, content, process, and mediational means of reflective action. The strategy of pattern matching [Yin, 1994] was applied to the analysis of the process of reflection. The teachers’ perspectives on the process of reflection were used against the suggested model of reflective action as a unit of analysis built on the ideas of Dewey and Vygotsky.

Six individual case studies were created as a result of data analysis. They described reflective practice of three teachers from the Manhattan Country School (Laura, Sarah and Jay) and three teachers from the School of Self-Determination (Veronica, Anastasia, and Elena). The data for the case studies were drawn from the interview transcripts, teachers’ group meetings, school documents, texts provided by teachers, and classroom observations.

The transcribed data had three stages of interpretive coding. In the course of the transcribing, interpreting and coding of the data obtained in the interviews, documents, and videotapes about each of the six teachers, the following structure of the individual case studies emerged: (1) journey into teaching, (2) content of reflective action, (3) process of reflective action, and (4) mediational means. In addition, the fifth component of each case study under the subtitle “lessons learnt from (teacher’s name),” was included to emphasize the specific aspects of individual teacher’s reflective praxis.
Cross-Case Analysis

Cross-case analysis enabled the comparison of multiple cases in many divergent ways that would be impossible within a single-case analysis. The case comparison was made cross-culturally against predefined categories of content, process, and mediational means of reflection in search of similarities and differences or by classifying the data according to the new emerging categories in the course of research. The cases were compared against the content, process, and mediational means of reflective action. The similarities and differences were first identified within three case studies of the same culture and then cross-culturally. As a result of cross-case analysis, an additional core category was added (the dialogical nature of reflective action). This core category, unlike the three first ones (content, process, and mediational means of reflective action), emerged from the data analysis and was explained in the findings.

DISCUSSION

The major argument of the study was that teachers’ reflective practice is socially constructed, culturally mediated, and dialogical in nature. The findings were summarized under four core categories that emerged from six case studies of reflective teachers: (1) content, (2) process; (3) mediational means of reflective action, and (4) the dialogical nature of reflective action.

This study defined mediational means as psychological tools through which a mediated action of reflection is carried out. In this definition, “psychological tools” are intended to convey not just abstract or cognitive systems of representations, such as language forms or systems of visual representation (e.g. narrative, guided dialogue, signs, theoretical and empirical concepts, metaphors, charts, cognitive maps, symbolic representations, graphic visualization of teacher’s group work, etc.) but also any and all material objects in the world that are appropriated for the purpose of reflection as meaning making. The participating teachers employed the following mediational means: (1) reflective dialog; (2) text/narrative/story; (3) schema/plan-book/note-pad; (4) inquiry/observation/example; (5) performance/creative activity, and (6) metaphor. The study presented the argument that the quality of teachers’ reflective practice depends on their mastering the “library” of mediational means of reflective action and on their understanding of the possibilities and limitations of such means. Mediation means of reflection are multiple and inherently situated culturally, institutionally, and historically. They can be construed as the carriers of social, historical, and cultural transformations. Mediation means serve to transform the flow of the reflective action, changing, too, the action itself and participants’ interactions.

Here are some examples of how teachers’ thinking about reflection itself is mediated by metaphor and/or image:

Cristina: …the image that formed in my mind when thinking of this process (reflection) is that of a number of people holding up a flexible mirror in front of me, twisting the reflection so that my experience can be seen with a new potential for change...

Oksana: Reflection is a brush of the archaeologist with the help of which he manages to remove the dust of time from the discovered object to reveal the meanings concealed by many occasional happenings. Reflection is a thinking tool of discovering the essential meanings of your professional activity and meaningful connections with the other people and events… It may change over time, so it should be an ongoing process...

Jay: Reflection is similar to children’s carbon paper… transfers… when one has to gently remove the obvious to reveal the essential ideas, objectify your practice. If you are not skillful, the image is ruined and has no meaning, and then you are in crisis and have to overcome yourself…and to start again…and again.

Anastasia: One image I always have on my mind is that of life as a river, then reflection is like looking at this river from the bank of the river, or jumping above. I see reflection…and I observe it with children too… I will jump from the river, make a picture, a quick shot, and jump back (laughs).

Elina: And when you “jump back,” are you the same?

Anastasia: I do not know… Maybe I am the same, but the river is changing. Well, you see that the complex nature of the metaphor, when it leads your thinking…you see, in this metaphor it would be difficult for me to reflect on the changes…what changes in the river… It should be a different metaphor. This metaphor is helpful to realize that I leave the practice to reflect on it and that it is kind of “uneven,” “jumpy” process [Interview 3, p. 23].
The consistent themes in the content of teachers’ reflection were: (1) the values and ideas that made up their personal teaching philosophy, (2) the importance of project-based curriculum as a condition of meaningful and continuous child experience, (3) emphasis on individual child learning and development, and (4) the impact of school culture on the teachers’ individual teaching philosophies. In the following example Laura struggles with the importance of empowering children to become independent learners and the value of continuous and meaningful experience. Sarah, a Spanish teacher from Manhattan Country School, discusses the impact of school culture on her teaching philosophy:

Laura: I’m usually looking at my interaction… “Am I interrupting the learning process?… Usually it is about my difficulty in standing back from their learning. I mean, I feel like, “I am just so involved and engaged. I need to step back in many ways.” You know? And that has to do with, um, this is what I’ve come to, it has to do with trust. Do I trust to what goes on in the classroom… but it is so important that their experience would flow and be meaningful… I’m very into helping kids be prepared for what is going to happen next… a lot of conversations, a lot of scaffolding. And what happens when there’s none of that, when that’s taken away? [Interview 1, p. 7]

Sarah: I think just the whole idea of community— that we’re all part of the learning of each other … we’re all part of these children’s lives, and they’re learning. And I love the idea of having parents come in and be a part of some of classroom experiences and sharing things that maybe I don’t know about, or with their child sharing some other cultural things… That is so part of what MCS is about, which is that multicultural dimension…so being able to really use that in the classroom. [Interview 1, p.14]

It was argued throughout the study that reflective action is a unit of analysis of reflection as a higher psychological function. The use of reflective action as a unit of analysis in the body of the case study allowed in-depth analysis of the process of reflective action. The study’s findings discuss the process as well as three levels of reflective action: (1) problem identification, (2) problem exploration/transformation, and (3) meta-reflection. Reflection on the first level is driven by an unexpected course of events in the classroom and the need to construct the understandings of complex situations in practice. The second level of reflective action begins from questioning the previous conceptualizations and may lead to transformations in personal teaching philosophy. The third level, meta-reflection, is characterized by the teacher’s ability not only to consider multiple modes of action but also to situate them in a variety of philosophical and theoretical frameworks. The object of meta-reflection is reflective action itself. It allows teachers to reflect on reflective action in all its complexity. In the following examples teachers discuss various origins of reflective actions:

Elina: What usually encourages you to reflect?

Anastasia: First of all, children’s needs…my frustrations, when I am desperate and I do not know what to do…When I feel helpless, I do not know how to help the child. For example, remember, when Angela was very aggressive, started acting out when working in small groups because I did not pay enough attention to her. I could not find a creative solution; I just gave her another task. That did not solve a problem—just distracted her from acting out. I spent the whole evening reflecting on possible reasons for her behavior. [Interview 2, p. 321]

Laura: It’s a very open curriculum and having to rethink, having to introduce things, the timing of curriculum and, kind of, letting go of some of my expectations. Um, and thinking about what they really need instead of what I want them to be ready to do [Interview 1, p. 205].

Elena: …I even remember the moment when we felt more or less flexible with our practice. Both Tatiana and I started reading a lot of philosophy books and intuitively we started doing something with children that we thought was right…and we went to multiple workshops and seminars to discover the philosophical foundation for our practice [Interview 2, p. 134].

Cross-cultural analysis of cultural meanings

One of the purposes of this study was to compare Russian and American teachers’ perspectives on the content, process, and mediational means of their reflective actions. As both schools, School of Self-Determination (SSD, Moscow, Russia) and Manhattan Country School (MCS, New York, USA) self-identified themselves as Dewey schools, there were seen to be strong similarities in school cultures in school philosophy, value systems, and curriculum design. This similarity of school cultures made it possible to observe and conceptualize the cross-cultural differences in a number of core categories: freedom, approaches to addressing individual child’s needs, community, and inquiry. Teachers
consistently referred to these in both their personal interviews and group discussions. The meanings of these categories are historically situated in Russian and American socio-cultural contexts. They are being created and developed in socio-cultural, political, and educational discourse communities that are larger than a school. In the course of study it was possible to examine cross-cultural differences in these core categories.

Freedom often emerged as a value for both Russian and American teachers. Teachers referred to this core category in reflection on children’s choices in their learning, general abilities children need to develop for critical and independent decision-making, and responsibility for their choices and decisions. In addition, teachers were constantly aware of the degree of scaffolding they offer their students in learning, being concerned about how to transition their students to the greater independence from their help in offering the structure, knowledge, and communication in learning experience.

Along with the above-mentioned similarities, there were also significant differences in the understandings of freedom for Russian and American teachers. For SSD teachers (Russia), the initial association with freedom was a free thought, but for MCS teachers (American) it was a free action. MCS teachers believe that no matter how young the children are, they have to have the direct experience of being socially responsible and informed action recognized as important by members of either the school or the larger community, such as their neighborhood. It seems possible to draw a conclusion that the Russian Deweyan teachers believe that agency constructed in the academic areas has the potential to be transferred to the area of social action, whereas American Deweyan teachers believe that agency is constructed in the course of the direct experience of social action, where academic subjects are important only as informing this action.

In addition, when reflecting on the connection between freedom and learning, teachers in both schools often associated a free learning environment with a teacher’s ability to teach in the situation of uncertainty, allowing the classroom experience to unfold in unpredictable ways. Although all teachers valued this ability to manage uncertainty in the classroom, it had different meaning for Russian and American teachers. Russian teachers believed that if a teacher has a metacognitive, conceptual vision of the learning experience unfolding in the classroom, then it was possible to follow the emergent contexts. These teachers were comfortable conceptualizing specific situations in the classroom by referencing various theoretical concepts and philosophical categories.

In the situations of uncertainty, American teachers relied mostly on the specific strategies and routines that they generalized empirically as valuable for children’s meaningful learning experiences. It is possible to reconstruct those specific philosophical and metacognitive frameworks underpinning those strategies, but they were not part of the American teachers’ reflective discourse. Their metacognitive frameworks were often articulated in a form of values, moral, political, and spiritual beliefs rather than theoretical psychological, pedagogical, and philosophical constructs.

These meta-frameworks were also drawn from different fields of study. The Russian teachers’ reflection on practice stemmed from philosophical, psychological, and pedagogical theories and, for American teachers, these meta-frameworks were most often systems of socio-political views and values. Such frames of reference for teachers’ reflection are not neutral, as they stress the importance of specific contexts of teaching and learning in the classroom and influence the process of meaning making in the situations of uncertainty.

Both Russian and American teachers referred to their experience of teaching at their schools as being a member of the school community (i.e., belonging to a group of people that share school philosophy and abide by the rules created by the members of the community). Both schools share a school culture that values active parents’ involvement in school life as equal members of the school community. Teachers in both schools reflected on dependence and interdependence of members of the community and individual freedom of being a member of the community.

However, there were some meanings of the community that were either different or not relevant for one of the cultural groups. For example, historically, the cultural meanings of community are different for Russian and American teachers. For American teachers, the initial meanings of the community are associated historically with a group of people living in a particular local area, possibly sharing religious beliefs and were self-governed with some form of equality in rights and duties. For Russian teachers, community is, first of all, the group of people with common interests not necessarily united by living in a particular local area. Although Russian teachers reflect on the role of the School of Self-determination in the neighborhood in which the school is located, it is mostly to explain how their school is different from
neighboring schools. For American teachers, the study of the immediate (as well as other) neighborhoods
with the communities in which they are located is an important part of the curriculum. American teachers
stress: (1) the interdependence of members of various communities, (2) the responsibilities of individual
members toward the community and the community toward the individual members, and (3) the value of
every voice in the conversation and the importance of the representation of various ethnic groups.

Another meaning of community that is hardly experienced by Russian teachers is that of the “art of
giving” by American teachers. They explore this with children through the project of Penny Harvest, as
both teachers and children share the experience of giving. The whole concept of donations and social
“giving” is relatively new to Russian society; therefore, Russian teachers do not hold this meaning as
important for the community building.

Finally, “community as an ethnic group” is not discussed by Russian teachers, as they do not reflect
on the experience of linguistic and cultural diversity in their classrooms. Thus, although teachers in both
schools emphasize community and community building as vitally important for their schools, they share
only two meanings of the community: (1) communities of inquiry, and (2) school community that includes
parents.

**IMPLICATIONS**

A number of implications for the practice of teachers and teacher educators were generated on the
basis of study’s findings. First, it is argued that reflective action is at the core of teaching that values
addressing children’s needs and creating conditions for learning as experience. As reflective action is
socially constructed, teachers need to be members of a community of inquiry that supports an ongoing
reflective dialog to construct meanings, challenge existing understandings, and conceptualize practice.
The more developed such a community of inquiry is, the more meaningful is the individual teacher’s
reflective practice. There is also a dialectical relationship between the level of the development of
reflective practice as a professional learning activity and the level of development of self as a teacher, her
“agency” in teaching. The more developed reflective practice is the greater is the degree of agency. For
the institutions and communities of practice that pursue the goal of continuing learning and development,
reflective practice is a means to achieve it. By creating communities of inquiry and engagement into
collaborative meaning making the members of the organization develop the genuine ownership and
responsibility for the development and learning.

Teachers can use the three levels of the process of reflective action summarized in this study for
different purposes: (1) to identify initial problems, (2) to summarize the ongoing “patterns of difficulty,” and
(3) to question their ways of reflection, the reflective action itself. Each of these levels of reflective action
requires the development of specific skills and abilities of reflective practice. On the problem identification
level, teachers need to be educated regarding how to interpret the experienced difficulty in their practice
and how to articulate it as a problem area. At the level of problem exploration/ transformation, teachers
need to learn various philosophical and theoretical frameworks and how to use them to be aware of
different stances they can take in the process of meaning making. The development of the ability to
articulate puzzling situations in practice as problem areas and to take different stances to address them is
as important as the ability to translate the conceptual ideas into classroom experience to complete
reflective action.

Finally, teachers benefit from developing a “library” of mediational means of reflective action. In the
course of the study, it was important for teachers to come to the understanding that mediational means of
reflective action are multiple and that they influence the process of reflection.

The major implications for practice of teacher educators--as teachers themselves and in their work to
prepare teachers -- are drawn from this study’s argument that reflective practice is teachers’ professional
learning activity. As with human activity, reflective practice is a complex system that has its specific goals,
structure, philosophical dispositions, and mediational means. Teachers need to master the tools of
reflective practice to create their philosophical stance, construct their theory of practice, and navigate
multiple contexts of current educational discourse. Teacher educators themselves need to have mastery
of these areas.

It is also possible to offer a number of implications for theory of reflective practice. The model of
reflective action designed in the theoretical part of this study and modified as a result of the data analysis
proved to be a helpful tool in the analysis of teachers’ reflective practice and, thus, offers a wide range of possibilities for a theory of reflective practice.

This study’s documentation of different mediational means that participating teachers used in their practice helped to create a “library” of mediational means of reflection. Documentation and analysis of the variety of mediational means can offer teachers theoretical tools for the conceptualization of their practice.

Another contribution to a theory of reflective practice is the argument that reflective action is dialogical in nature. Reflection, as a dialogical enterprise, requires multivoicedness [Bakhtin, 1981] for the ongoing examination of practice, either in critical communities of inquiry or in the individual consciousness of teachers.

The study’s findings also offer the opportunity to articulate a set of recommendations for future research on teachers’ reflective practices. First of all, the findings suggest that there is an important connection between the content of teachers’ reflection and school culture. Future studies should be conducted to identify more specific connections between school culture and teachers’ reflective practices and to identify what aspects of school culture are necessary to create the conditions for the development of reflective practice.

Future research is needed to explore communities of practice and various forms of intersubjectivity that encourage the development of reflective practice. As the study provided a general description of three levels of the process of reflective action, future research studies need to focus on exploring each of these steps--as well as the nature of the connections among them. Further research is also required to explore whether every mediational means that teachers use to mediate their reflective action can be a psychological tool that can transform the reflective action to develop reflection as a higher psychological function. In addition, there needs to be future examinations of the nature of the transformation of the reflective action with introduction of the new mediational means.

As reflective dialogue was identified as an important mediational means for teachers’ development as reflective practitioners, a future study should focus on reflective dialogue as a special type of discourse, as well as a form of intersubjectivity that is beneficial for the development of reflection as a higher psychological function.

Future studies specifically in teacher education should focus on the teacher education program design, in general, as well as multiple formats within teacher education programs that address the need to develop teachers as agents of reflective practice as a professional learning activity.

The experience of this study proved the effectiveness of using unit of analysis, the concept that stems from CHAT, while constructing case studies. Such research study design combines the benefits of the theoretical model that reflects the essential, fundamental relationships of the phenomenon and allows in-depth examination with the case study design that captures the contextual emerging meanings. As a result, the researcher achieves a more comprehensive view.

As much as we all want to believe that reflection is a natural ability of the mind, professionals need to be educated to: (1) perform reflective practice as a professional learning activity to experience membership in inquiry-driven professional learning communities, (2) identify and transform the problem areas of their practice and to analyze reflective action as a whole, (3) master the “library” of mediational means, (4) use various philosophical and theoretical frameworks in the process of meaning making, and (5) create and develop their own philosophy of their professional activity. These are necessary attributes of a professional as an agent of reflective practice. As reflective practice is socially constructed (i.e. in the process of joint activity), professionals need to be members of a learning community of inquiry. As the agency is in the core of reflective practice as a professional learning activity, it would appear that the development of such agency is a critically important part of professional education programs.

ENDNOTES

1. This study defines mediational means as semiotic means, psychological tools through which a mediated action of reflection is carried out. In this definition “semiotic” is intended to convey not just abstract or cognitive systems of representations such as language forms or systems of visual representation (e.g. narrative, guided dialogue, signs, theoretical and empirical concepts, metaphors, charts, cognitive maps, symbolic representations, graphic visualization of teacher’ group work, etc.), but also any and all material objects in the world, which are appropriated for the purpose of reflection
as meaning-making. Mediational means of reflection are multiple and inherently situated culturally, institutionally, and historically. They can be construed as the carriers of social, historical, and cultural transformations. Mediational means serve to transform the flow of the reflective action, changing too, the action itself and participants’ interactions.

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