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DISCOVERING TEACHERS' PERSONAL BELIEFS IN POLAND: RESEARCH INTERVENTION USING ACTIVITY THEORY

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ABSTRACT

Teachers' beliefs and personal theories have held a significant place in pedagogical discourse for a long time, and they are among the "pulsating" categories within the sphere of the so-called new professionalism. Insight into teachers' beliefs and personal theories is not only an element of constructing teacher professionalism; these theories constitute resources which may open a new direction of developmental change in the school's culture, or, by contrast, they may be a source of resistance, or limitation, and form barriers to development. In the education of teachers, we may observe disintegration of cognition, a dissonance between theoretical and practical knowledge.

*The **aim** of the present paper is to show teachers' personal theories and beliefs as important, yet frequently unused, resources in teacher education.*

Methodology. *The theoretical and methodological framework of the considerations in this article is formed by the cultural-historical activity theory (CHAT). The intervention-research methodology of Y. Engeström was used to analyze the processes of changing the teachers' thinking which occurred during the sessions in the Laboratory of Educational Change.*

*The **results** are as follows: Discovering the teachers' convictions and the basis for the success of bottom-up changes in the school's culture, leading*

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to an improvement in the quality of education. As confirmation of this thesis, examples (case studies), the article provides examples of bottom-up changes in education, achieved with active participation of teachers and the activity of the Laboratory of Educational Change, where teachers experience potentially new ways of working and experiment with them.

Conclusions. In order for teachers to “re-think” the school anew, undertake the challenge of opening the school’s culture to a new quality, and engage in the process of change, it is necessary to prepare the “grounds” for them to work with their personal beliefs and theories. This article presents the experience gained from the cooperation of teachers, aimed at creating a critical space for dialogue on the issue of learning processes, in order to foster understanding of complex situations faced by teachers in their day-to-day reality. What proved essential was providing the teachers with conceptual tools enabling them to participate in dialogue contributing to their re-interpretation and modification of their own practice.

The examples of projects described here showed that teachers, by creating a community of learning individuals, and by analyzing and participating in similar practices, worked out habitual agreement, team-based styles of thinking and acting, and developed a sense of agency. These days, examination of one’s daily educational reality, joint involvement and construction of knowledge, and confrontation of one’s own methods of work with those of others constitute a teacher’s “professional necessity”, a key to improving the quality of the school’s work, “a professional’s way of being”, “a mind’s habit”.

KEYWORDS: *Teachers’ Beliefs and Personal Theories, The Change Laboratory, Intervention-Research Methodology, CHAT (Cultural-Historical Activity Theory)*

INTRODUCTION

Teachers’ beliefs and personal theories have held a significant place in pedagogical discourse for a long time, and they are among the “pulsating” categories in the sphere of the so-called new professionalism. Insight into teachers’ beliefs and personal theories is not only an element of constructing teacher professionalism; these theories also constitute resources which may open a new direction of developmental change in the school’s culture, or, by contrast, they may be a source of resistance, or limitation, and form barriers to development.

In the education of teachers, we may observe a disintegration of cognition, a

dissonance between theoretical and practical knowledge. Teachers tend to downplay the pedagogical competence they obtained, and they see little sense in making use of the theories they learn.

Their opinions indicate that they view their own qualifications as powerless and unusable in the face of new events and complicated experiences they go through in their practice, and thus they need a new principle of acting in order to deal with them effectively. (Kwiatkowska, 2012).

In the present article, I would like to show teachers’ personal theories and beliefs as important, yet frequently unused, resources in teacher education. I also accept the assumption that discovering

teachers' beliefs, working with their convictions, and equipping them with "a cognitive toolbox", form the basis of the success of bottom-up changes introduced into the school's culture, and lead to an improvement in the quality of education.

To corroborate this assumption, I will present examples (case studies) of bottom-up changes in education introduced with active participation of teachers and the activity of the Laboratory of Educational Change, in which teachers may experience and experiment with potentially new ways of working.

This paper **aims** to show teachers' personal theories and beliefs as important, yet frequently unused, resources in teacher education.

METHODOLOGY

The research project of the Laboratory of Educational Change uses the intervention-research methodology of Y. Engeström. This approach allowed investigating both the interactions of teachers during the "Learning Studio" session, as well as studying the senses and meanings teachers attributed to significant events and their own activity.

The methodological cycle of expansive developmental research (Engeström, 2015, p. 252-262) was applied. The first step consisted of "(a) gaining a preliminary *phenomenological insight* into the nature of [the] discourse and problems as experienced by those involved in the activity and (b) *delineating* the activity system under investigation" (Engeström, 2015, p. 253). The second step consisted of rigorous analyses of the system of activity.

The third step involved the formation of new instruments ("finding a springboard, formulating a general instrumental model, constructing a microcosm for

taking over the responsibility of elaborating further the instrumental models and turning them into new forms of practice"). The next step was a practical application of the new instruments to change the activity through strategic tasks. The last of these steps was not easy, as it consisted in reporting and evaluation (Engeström, 2015). The cycles of expansive learning were observed, documented, reconstructed and analyzed.

RESULTS

Relationship between theory and practice: "to think with theory about practice"

The relationship between theory and practice constitutes a fundamental connection determining the effectiveness of educational processes. Academic theories underlying the pedagogical knowledge of the teacher, expressed in the language of generalizations and abstractions, by definition are not "complete" or certain, i.e., they do not "proclaim" arbitrarily how a teacher is to act in a particular situation. Neither do they provide grounds for explaining a given situation or resolve complicated educational issues.

Theory is necessary for teachers, but its impact on practice is not direct, and it is not always recognized by teachers – after all, theory is not a collection of regulations, even though it has its power. The strength of a theory is the possibility of introducing guidelines for acting, creating interpretative frameworks and filters which form the basis for understanding, interpreting and defining reality. In the academic education of teachers, grounds must be prepared and teachers need to be equipped with tools enabling them to undertake the strategy of "thinking with theory about practice".

The link between theory and the teacher's practice is personal knowledge. The category of "a teacher's personal knowledge" is explained by constructivism, deriving its inspiration in particular from the works of L.S. Vygotsky, J. S. Bruner, and the continuators of their thinking on the mediated nature of human cognition, construction of knowledge in social action, and assigning sense and meaning to experience.

Personal theories are a specific type of a teacher's knowledge acquired through acting and knowledge of acting. They are a part of a teacher's professional biography as well as its product. The substance of a teacher's personal theory is individual experience, gained in the course of real practice, and an internalized system of values.

These theories draw attention to the personal, individualized dimension of a teacher's work, and they show the reflexive approach to understanding the teaching-learning process, understanding one's own job. This teacher's knowledge about educational reality and the ability to use it has a stronger impact on what is happening in the classroom than does academic theory (Kwiatkowska, 2012).

Personal knowledge makes teachers realize that the basis of their professional practice is not only academic theory but also the theory created by the teachers themselves through studying their own praxis (Kwiatkowska, 2012; Kemmis, 2010; Elliot, 2010).

The colloquial, commonsensical theories of teachers require reconstruction. Their influence on educational practices is essential. J.S. Bruner observed many years ago that [...] "the way of viewing the student by the teacher determines the teaching method s/he chooses [...]" (Bruner, 2006, p. 77). Bruner's claim that

[...] "educational practices in classrooms are underlain by commonsensical beliefs on learners' brains, part of which acts in an intended way in the child's favor, whilst the other part inadvertently against the child. They must be openly expressed and rectified" (Bruner, 2006, p. 78) provided inspiration for teachers to look into their own commonsensical theories as they determine the character of educational practices employed in the classroom in multiple cultural contexts.

Personal theories vs. reforms and changes of school culture

Characterizing and analyzing the processes which determine and promote changes open and closed (Zamorska, & Krzychała, 2012), and considering the educational reforms that are being implemented, it is difficult to overlook the category of teachers' personal educational theories. In publications accompanying the school under reform, teachers and school culture are frequently presented as victims of the process of change. It is not only a picture of the Polish school under reform. There are numerous reports critical of schooling and teachers, mistakes are pointed out, as is ineffectiveness of the introduced changes. (Departament nauki ..., 2019; Śliwerski, 2015; Bogusław, 2013; Dudzikowa, & Knasiecka-Falbińska, 2013; Klus-Stańska, (2008).

Recommendations and instructions of change proliferate. At the same time, new initiatives are undertaken, changing the previous courses of action and recommending implementation of new tasks. Debates on education are becoming public media events.

These debates focus predominantly on the results and norms of education. In the actions undertaken in the process of the reforms, attention is paid to increasing

licensed competencies of schoolteachers and principals, which results in a growing number of mandatory training sessions for them. What is still left out, however, is something crucial, namely the salience of understanding the character of educational change by the very teachers who ought to implement it, but also their understanding of the nature of the teaching-learning process and its social context (Filipiak, 2019). It is difficult to disagree with the frequently cited opinion "So many reforms, yet so few changes". As early as the 1980s, J.S. Bruner noted that no reform of education can start without active participation of teachers, who need to be invited to debates about the design and shape of the changes. After all, it is they that will implement the reforms (Bruner, 2006, p. 123). Teachers are skeptical about reforms and top-down instructions when they do not feel that they are the "owners" of the changes, and when they are not convinced as to their purported benefits. Over the past years, many such events concerned Polish teachers and reforms implemented in Poland.

It is possible to open the school culture to a new quality, transcend previously established pragmatic patterns of acting, and change the style of teachers' thinking and acting. However, a critical space must first be created for changing the learning community of the teachers. Foundations must be laid for their openness to accept "unforeseeable novelty", for their agreement to discovering new contexts, and sufficient time must be provided for them to come to terms with the changes (Zamorska, & Krzychała, 2012). The remaining part of the article presents case studies in which teachers were enabled to "rethink the school anew" and develop new ways of perceiving and acting in the school space.

Case study 1

Change in the approach of early education teachers to teaching mathematics

An example of a thematic (problematic) network with active participation of experts which contributed to changing the teachers' reasoning is the local micro-net *Bydgoski Bąbel Matematyczny* [*The Bydgoszcz Mathematics Bubble*]. The genesis of the network is to be found in the local government activity of the Department of Education of the Town Hall of Bydgoszcz and in the concerns caused by the results of the Polish national study of third-graders' abilities (OBUT). The initiating group consisted of 19 early education teachers from eight primary schools, who started their work under the supervision of a scientific leader and a group of experts (early education teachers, mathematics teachers, sociologists, and psychologists) in cooperation with the Institute of Educational Research (IBE). The aim of the cooperation was to effect a change in the approach to teaching mathematics to children at the first stage of education, by changing the teachers' beliefs and developing a new work inventory.

By means of peer tutoring, an analysis was conducted of the teachers' problems, identified on the basis of ethnographic analysis of the classrooms. The aim was to develop the children's mathematical abilities, thus an attempt was made to develop a strategy of stimulating intellectual activity and organizing activities in the *zone of proximal development*, as understood by Lev Vygotsky. Between November 2012 and July 2013, a self-educating group of teachers was formed, who met on a regular basis (once a fortnight on average). This group (network) analyzed,

discussed, and interpreted problems in cooperation with the experts.

The teachers working in the network developed new strategies of working with children, rethought the goals of mathematical education as well as their own working styles, and organized a new space and new conditions for learning. The teachers' narrations demonstrated self-reflection regarding their participation in the network of *Bqbel Matematyczny*, and a change in their own philosophy of thinking about and perceiving the child (Nowakowska et al., 2014). Each of the narrations was a peculiar biographical story revealing a change in the teachers' reasoning. *Bydgoski Bqbel Matematyczny* is an example of *negotiated knotworking*, enabling the teachers to experience teaching by expansion, as understood by Engeström (Engeström, & Sannino, 2012) as transcending boundaries and, as a consequence, developing a new inventory for teaching mathematics during the first stage of education. The project entitled *Bydgoski Bqbel Matematyczny* began in 2012, it is continued to this day, and it has expanded beyond the local boundaries. It is now being implemented in many regions of Poland.

Case Study 2

Top-down change of a school into a culture of reciprocal learning and building a system of teacher support

(Gorzeńska, 2017, and <http://eduentuzjasci.pl/nauczanie-wczesnoszkolne.html>, the construction of the process of becoming a school with the power of the changing world is presented in the book "*W szkole wcale nie chodzi o szkołę*" by E. Radanowicz (2020)).

The School in Radowo is a public village school in an area of formerly state-owned farmlands, troubled by numerous socioeconomic problems, situated in the peripheral part of the province of Zachodniopomorskie. The region has very high unemployment and a decreasing number of residents. The school has nearly 400 students and over 40 teachers, and is housed in a large building built at the turn of the 1980s.

Over the past decade it has changed from an unknown school to a symbol of "a school with a difference" in which many dimensions of distinctiveness have occurred (a different space, teachers, principal, methods and strategies of work, educational offerings, relationships between people, as well as the school's vision and mission). The school's unique character results from a long-lasting bottom-up process of change initiated by principal Ewa Radanowicz.

The school's community has undergone a developmental process of change; it has overcome crises, while all members of its community achieved autonomy and independence in their thinking and acting. In 2016, the school obtained the status of a school with the power of changing the world and was incorporated into the elite network of Ashoka Changemaker Schools. In what way was the change introduced, what contributed to opening the school culture to a new quality and transcending the former fixed patterns of acting and orientation of the school's community?

The initiator, leader and moderator of these changes was the school's principal, who, being aware of the main idea, vision, and mission (but also the barriers and limitations within the environment), prepared the grounds for the team's work. She adopted two strategies of action. The first was related to

overcoming resistance (to the educational system, educational law, formal and informal requirements set for the school, the bottom-up resistance of the school's culture itself), while the second was aimed at building a support system for the teachers, encouraging motivation and involvement, and strengthening their faith in themselves and in the team. She built a team of "Educational Changemakers" who converted *ItCannotBeDone* into *ItCanBeDone*.

The key to changing the school's culture was habitual agreement, developing new social and cultural patterns, and new generative forms which set out the new logic and framework for the school's culture. The grounds for the change were the cognitive and motivational processes of the school community. The teachers' passions and interests were put to use in order to create new tools and forms of activity, thematic (project) laboratories and workshops. Such aspects as involvement, relationships between participants, and readiness vs. resistance to participation were monitored.

Above all, the changes that were introduced or planned were put under discussion. The teachers had the feeling of being the "owners of the changes", while the changes themselves were not imposed top-down, enforced externally by decree, pedagogical supervision or ministerial ordinance. The teachers jointly defined the problems, sought solutions to them, created new tools of action, pragmatic and habitual knowledge (as understood by Karl Karla Mannheim, pragmatic and habitual knowledge is produced in practice, and constitutes itself under the practical mode and becomes updated as practice; it is part of the smoothness of action, fluency of practice, everyday mastery), new

conceptual, pragmatic, and material artifacts in cooperation with one another. The school in Radowo Małe continues to evolve. Seeking new solutions is an everyday element of its culture.

The principal set up a social enterprise functioning smoothly in an unfavorable environment. She is also an initiator of the national project Spring of Education, whose main aim is to effect bottom-up educational changes with active involvement of teachers.

Case Study 3

Academic Center of Creativity – discovering Vygotsky's approach to development and education
(www.ack.ukw.edu.pl)

The Academic Center of Creativity project was carried out from 15.09.2014 to 15.11.2015. Its main aim was to develop (test and popularize) an innovative model of work of a teacher or student with a child at the first stage of education, based on the assumptions derived from L. S. Vygotsky's sociocultural theory. The innovative method of work with a learner consisted in building a scaffolding for theoretical thinking, reasoning, reflectiveness, and developing a sense of effectiveness and agency.

The experiment included monitoring of the process of solving developmental tasks given to children in five experimental classes in their natural environment, at the first stage of school education. The studies were conducted in three primary schools, in five classes (grades 1 to 3), including a total of 96 children.

Nine researchers participated in the project (including three external experts), five early education teacher-interventionists, and 22 students of early education. The triad project group consisted of three diversified teams: (1) a

team for science and research of the Division of Didactics and Studies on the Culture of Education of Kazimierz Wielki University [UKW] in Bydgoszcz, (2) a team of teacher-interventionists, (3) a team of Early Education students. Each team included one teacher-interventionist, one UKW expert-researcher and four to five students. Ten sessions of developmental teaching were carried out.

Vygotsky's theory and method is taught to students of education in the course of their studies. Yet, there is no room then for converting this fairly complicated theory into the language of educational tasks designed for children. Introduction of experimental activities required expanding the necessary professional cultural competences, knowledge, and abilities of the early education students and teachers (internship supervisors), in order to prepare them to construct knowledge with the child, provide assistance in cooperative solving of problems, and create a social situation conducive for development.

To begin the teaching experiment, it was necessary to work with the teachers' and students' beliefs and their personal understanding of how children think and learn. Constructing their understanding of these problems provided a basis for creating the appropriate conditions for conversations, which facilitated their understanding of practice, analysis, and reflection on the sessions of developmental teaching conducted within the cultural space of the classrooms.

Most importantly, the meetings preceding the experimental activities were meant to sensitize the participants to the ways in which children structure their own learning, memorizing, guessing, and reasoning. The research teams created a space for constructing a social

learning network thanks to which the participants experienced authentic co-creation of knowledge in educational action, deepened the transfer of knowledge between the Novices (students), the Experts (teachers), and the Researchers (representatives of academia). Active participation of students in the project contributed to changing their personal theories of learning, and understanding educational change, as they took on the roles of promoters of change.

The students' experiences were documented in a blog and in electronic portfolios kept by the students. The teachers and the students had the possibility of developing cultural competence by participating in workshops preceding the sessions of developmental teaching.

An important element of the project was a feedback-type session, which aided monitoring the process of crystallizing each teacher's educational philosophy; this session provided an opportunity to confront one's personal ways of thinking about problems identified in everyday educational reality. During the session, the participants of *negotiated knotworking* (Engeström, & Sannino, 2012) discussed the process of completing developmental tasks and in such a way created a space for discursive crossing of various boundaries.

These sessions led to mutual exchange and redefinition of meanings in the participants' minds. Both the "ad-hoc" as well as "deferred" feedback showed how significant it was for being and becoming a teacher to engage with others in joint reflection on specific events from one's daily educational reality, on learners' and teachers' reactions, and on possible solutions to problems. Research on these issues is continued in the Laboratory of

Educational Change – Centre for Research on Learning and Development, a research unit created at the Division of Didactics and Studies on the Culture of Education.

Laboratory of Educational Change – a critical space of assigning meanings and constructing understanding of what is happening in the classroom

The Laboratory of Educational Change came into being in the wake of many years of studies and implementation of projects of E. Filipiak related to the reconstruction and application of the assumptions of Lev Vygotsky's cultural-historical theory and to applying developmental learning in educational practice (Filipiak, 2018; Filipiak, & Lemańska-Lewandowska, 2015).

The aim of the Laboratory's activity is creating a space for a community of learning professionals, exchange of experience by researchers and educators, co-creation of knowledge in social action, reflection on everyday educational reality based on real situations and pedagogical actions "cut out" from everyday practices, questioned and subjected to analysis.

A challenge for this type of activity and space of learning was to bring about a change not only at the level of declarations, but to effect real change in the teachers' daily practices by creating and introducing new objects, models, and tools into the school's culture.

The main goal of the actions undertaken in the Laboratory was identifying the teachers' beliefs and personal educational theories related to the "theory of the child" and changing their educational philosophy.

The first stage of the Laboratory's work was related to the project "Developmental teaching in early education according to Lev S. Vygotsky"

and to preparing teachers for adopting the role of an interventionist, ready to build a scaffolding for a child's thinking and reasoning, and organizing educational situations aimed at the zone of proximal development, the ability to assign developmental tasks to children, in line with Davidov's theory (developmental teaching sessions, Filipiak, & Lemańska-Lewandowska, 2015).

This stage revealed obstacles and resistance to the new model of working with children. In the second stage of the Laboratory's activity, the Learning Studio sessions were expanded with meetings during which "burning educational problems" were dealt with, and where work on ethnographic data brought from different school cultures, "excerpted" from teachers' educational practices, was undertaken.

These problems provided a stimulus for work in the Laboratory – to use J.S. Bruner's language – "the problem drove the narration", stimulated the participants' involvement in teaching conversations, and contributed to creating new conceptions of the teachers' actions. The paradigmatic framework of the Laboratory's activity and the organization of meetings (sessions) of teachers who created a sort of community of learning specialists were based on the assumptions of Lev Vygotsky's cultural-historical theory (learning in the zone of proximal development).

The Zone of Proximal Development (ZPD) is one of the best-known terms associated with Vygotsky's cultural and historical theory of development. It is not only an expression of the original dynamic approach to studies (diagnosis) of the child's development (the method of double stimulation), but its recognition

becomes the basis for constructing developmental teaching.

A child's zone of proximal development creates a space of teaching possibilities, specifies the difference between the level of solving tasks available under the guidance and with the assistance of an adult (i.e. competence supported from the outside) and the child's real developmental level on which the child demonstrates independent unaided performance of tasks (i.e. reveals true competence with no support from an adult) (Vygotsky, 1989, p. 254; Filipiak, 2011, p. 16-17).

We may also add here Jerome S. Bruner's social and cultural theory (creation of the culture of learning communities and narrative construction of reality), theory of expansive learning, Yrjö Engeström's learning through expansion (2012), Jack Mezirow's transformative learning (1997; 2000), the concept of situated learning and Etienne Wenger and Jean Lave's communities of practice (1991).

To create the concept of organization of the learning space immersed in everyday practice, some theoretical elements from the Reggio Emilia approach (Dahlberg et al., 2013) were also employed. These theories made it possible not only to understand and explain what happens when a team of professionals (teachers) is learning, but they also contributed to the recognition of key "pulsating" categories and engage in a discussion with them.

The perspective of social constructivism was adopted, based on such categories as: zone of proximal development, social situation of development, construction and co-construction of knowledge, building a scaffolding for the child's thinking and learning, formative instruction.

Construction of the methodology of work in the Laboratory was inspired by Y. Engeström's project related to studies on expansive learning (Engeström, & Sannino, 2012). This theory provided conceptual tools enabling discussions on vocational practice in a new way, but also methodological instruments for studies on interpreting and changing practice. In Engeström's opinion, "people have potential possibilities of learning by exceeding conditions which created earlier learning situations if they manage to make an insight into them and to detach from them" (Illeris, 2006, p. 65).

The process of expansive learning is oriented toward bringing about change in the area of collective activity, which, as a result, leads to a qualitative transformation of all the components of the system of activity. Knowledge is not only a property of an individual. It lies in social relationships between people, with the process of learning being a part of the actions and social interactions of people partaking in practice.

This process is understood as "creating and dissolving gradually evolving communities" (Engeström, & Sannino, 2012). Communities are a necessary but not sufficient driving force of expansive learning. In the process of expansive learning, both parties create a new, shared entity and a new conception of shared activity (Engeström, & Sannino, 2012). The experience and joint participation in creating an expanded goal and a new model of activity leads to the creation of collective and individual agency.

Essential in the newly created space and conditions of expansive learning are skillful transitions between the ideas included in the systems and individual ideas of the participant. The leader adopts the status of an interventionist

researcher, whose task is to situate oneself within the systems of activity of the participants of dialogue – a peculiar space of participating conversation.

The session's participants sometimes assume the role of leaders in the course of an intervention, dismissing or modifying the originally accepted tasks and actions, which results in a change of the interventionist's actions and processes of innovation and learning. During the sessions organized in the Learning Studio, participants developed new conceptual tools, moving through cycles of practical action, in which they questioned their previous ways of coping with problems.

The model proposed by Engeström is a heuristic conceptual tool derived from Davidov's logic of moving from the abstract to the concrete. Such organized learning of teachers in the Laboratory, based on working with teachers' personal theories and beliefs allowed a construction of a mental bridge between Theory and Practice. This contributed to the teachers' self-awareness, awareness of what they were doing, how and why, development of critical reflection and the ability to conduct negotiations.

However, it was necessary to conduct "teaching conversations", and jointly arrive at understanding and explaining the "targeted" concepts and assigning meanings to them. The point was not only to develop new conceptual tools, but to discuss, negotiate, and question them in practice (Dahlberg et al., 2013). In our Laboratory, we work on the basis of Vygotsky's theory, refined and not easily translatable into the language of practice.

Authentic work with the categories of Cultural-historical activity theory (CHAT), negotiating their understanding and not only adopting the "names of new

categories" is a very important stage of the activity. CHAT is a theoretical framework which helps us understand and analyze the relationship between the human mind (what people think and feel) and the activity of an individual. Its beginning dates back to the founders of the cultural-historical school of psychology of L. S. Vygotsky and Aleksei N. Leontiev. Since the 1990s, CHAT has been increasingly popular among scientists all over the world, who created the International Network of Researchers ISCAR (International Society of Cultural-Historical Activity Research).

Only at this stage can one engage in designing developmental tasks, creating formative instructions, or attempting to create a social situation of development.

Following the experience of developmental teaching, the "theory of the child" held by the teachers changed. Without the stage of working on beliefs, and without numerous discussions and negotiations, any attempts at transferring the projects of developmental teaching into the classrooms would merely amount to implementing conceptions rather than creating or jointly participating in a social situation of development.

DISCUSSION

The process of learning and examining educational reality requires application of specific strategies and abilities. These include abilities which constitute expanded professionalism of the teacher, in particular the ability to communicate and discuss educational issues "in" and "with regard to" a wider audience, the ability to conduct studies relating to school practice and perfecting this practice, the ability to learn "in" and "from" day-to-day educational reality (taking ethnographic samples, creating

critical events (research in action, critical participating research in action, transformative research in action, participating and collective research (Kemmis, 2010), the ability to make one's own contribution to collaborative learning in professional communities (sharing of knowledge), the ability to translate the results of educational studies into innovations undertaken at school/in the classroom (Gołębniak, 2014), the ability to create and act in collaborative knots, the ability to co-act within Episodes of Joint Involvement (*"Joint Involvement Episodes as Context for Cognitive Development"* by H. Rudolph Schaffer), reaching beyond the school's framework (*"Childhood Social Development: Contemporary Perspectives"* by H. McGurk (Ed.)), and readiness to meet others, confronting one's own experience with that of others – in the micro- and macro-network.

Teachers learning in a professional collective network should demonstrate the ability to make a special type of reflection which Donald Schön wrote about: *reflection-in-action* and *reflection-on-action*. The ability to reflect, inquire, self-reflect (show personal insight), wonder "about", think "over" a problem, restructure one's thinking strategies, understand action, and reframe problems is necessary in the process of learning understood in this way.

A reflexive approach to one's own actions activates thought processes accompanying cognition in action – *"knowing in action"*. An important ability of a teacher is the ability to problematize, and to study a problem by discovering its depth; the ability of transformative learning, in particular critical evaluation of the sources one's own knowledge, reflexive assignment of meanings, transformation of the frame of reference

in a situation of interpreting new experiences (re-framing as understood by Mezirow) (Mezirow, 1997). As well readiness to engage in extensive learning (Engeström, & Sannino, 2012); the ability to participate actively in the discourse of assigning meanings; recognizing, analyzing, and interpreting critical events, working with data, the ability to pose questions and "marvel" at them.

Another ability developed with the teachers was the ability to keep pedagogical documentation as understood under the Reggio Emilia approach and to document critical events. In the Laboratory, the AnAlySE sheet for observation of critical events was developed (Szymczak, 2018).

In order to become members of a learning community, the teachers needed to learn to listen, be open to new experiences, participate in the "teaching conversation", develop the ability to hold and participate in dialogue.

The critical dialogue in the Laboratory enabled them to go beyond the boundaries of individual thinking; it consisted in creative examination of complex and subtle problems, deep listening to the arguments and positions of other participants, exercise restraint in formulating judgments and presenting one's point of view.

By building the culture of critical dialogue, we enabled the participants to reach a level of understanding of the problem that could not be reached individually.

The activities of the Laboratory are continued to this day. The teachers are invited to take part in sessions during which their cases, problems, and situations are discussed. We jointly develop a new type of reasoning which begins with shared understanding of

meanings so as to reach a pool of common meaning. The participants engaged in dialogue become observers of their own thinking.

Analysis of recorded sessions enables us to reconstruct the evidence of creating negotiated meanings, observing the collective nature of thinking and reasoning, and fostering the narrative sensitivity of the participants engaged in the dialogue.

The Laboratory of Change offers significant potential for changing teacher education (Filipiak, 2019). The triological approach in professional teacher education (the triad of culture-dialogue-activity) is based on the assumption that the interaction between people and cultural artifacts plays an important role in their learning and development (Gołębniak, 2021).

CONCLUSION

In order for teachers to “rethink” the school anew, undertake the challenge of opening the school’s culture to a new quality, and engage in the process of change, it is necessary to prepare the “grounds” for working with their personal

theories and beliefs. This article presents experience gained from the cooperation of teachers aimed at creating a critical space for dialogue on the issue of learning processes, and understanding of complex situations faced by teachers in their everyday reality.

It proved important to provide the teachers with conceptual tools which enabled them to participate in a dialogue that aided them in re-interpreting and changing their own practice.

The examples of completed projects provided here showed that teachers created a community of learning individuals who analyze and participate in similar practices, and developed habitual agreement, team-based styles of thinking and acting, as well as a sense of agency.

These days, examination of everyday educational reality, shared involvement and construction of knowledge, confronting one’s own methods of working with those of others are a teacher’s “professional necessity”; they are essential for improving the quality of the school’s work, and constitute “a professional’s way of being”, and “a mind’s habit”. (Filipiak, 2019).

CONFLICT OF INTERESTS

There is no conflict of interest for this study.

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АНОТАЦІЯ / ABSTRACT [in Ukrainian]:**ВИЯВЛЕННЯ ОСОБИСТИХ ПЕРЕКОНАНЬ ВЧИТЕЛІВ ПОЛЬЩІ: ПРОВЕДЕННЯ ДОСЛІДЖЕННЯ З ВИКОРИСТАННЯМ ТЕОРІЇ ДІЯЛЬНОСТІ**

Переконавання та особистісні теорії вчителів протягом тривалого часу займали значне місце в педевтологічному дискурсі, і вони належать до

«пульсуючих» категорій у сфері так званого нового професіоналізму. Розуміння переконань і особистих теорій учителів є не лише елементом побудови професіоналізму вчителя; ці теорії являють собою ресурси, які можуть відкрити новий напрямок змін розвитку в шкільній культурі, або, навпаки, вони можуть бути джерелом опору чи обмеження та створювати перешкоди для розвитку. У навчанні вчителів можемо спостерігати дезінтеграцію пізнання, дисонанс між теоретичними і практичними знаннями.

Мета цієї роботи – показати особисті теорії та переконання вчителів як важливі, але часто невикористані, ресурси в навчанні вчителів.

Методологія. Теоретико-методологічну базу поглядів у цій статті складає культурно-історична теорія діяльності. Для аналізу процесів зміни мислення вчителів, які відбувалися під час занять у Лабораторії освітніх змін, було використано інтервенційно-дослідну методологію Ю. Енгестрем.

Результати. Виявлено переконання учителів і основи успіху змін знизу вгору у культурі школи, що сприяє покращенню якості освіти. Для підтвердження цієї тези у статті наводяться приклади (кейси) змін в освіті знизу, які досягнуто за активної участі вчителів та діяльності Лабораторії освітніх змін, де вчителі набувають досвід потенційно нових способів роботи та експериментують з ними.

Висновки. Для того, щоб вчителі «переосмислили» школу заново, взялися за виклик відкриття шкільної культури для нової якості та залучилися до процесу змін, необхідно підготувати «підґрунтя» для їхньої роботи зі своїми особистими переконаннями та теоріями.

У цій статті представлено досвід, отриманий у результаті співпраці вчителів, спрямованої на створення критичного простору для діалогу з питань процесів навчання, щоб сприяти розумінню складних ситуацій, з якими стикаються вчителі у повсякденній реальності. Важливим виявилось надання вчителям концептуальних інструментів, які дозволяли їм брати участь у діалозі, сприяючи переосмисленню та модифікації власної практики.

Описані тут приклади проектів показали, що вчителі, створюючи спільноту окремих людей, які навчаються, аналізуючи й беручи участь у подібних практиках, здійснили звичайну згоду, сформувавши командні стилі мислення та дій, розвинули почуття прояву волі. У наші дні перевірка власної повсякденної освітньої реальності, спільне залучення та конструювання знань, зіткнення власних методів роботи з методами роботи інших є «професійною необхідністю» вчителя, ключем до підвищення якості роботи школи, це «спосіб життя професіонала», «звичка розуму».

КЛЮЧОВІ СЛОВА: переконання вчителів та особисті теорії, лабораторія змін, методологія досліджень втручання, ТКІД (теорія культурно-історичної діяльності).

ABSTRAKCYJNY / ABSTRACT [in Polish]:**ODKRYWANIE OSOBISTYCH PRZEKONAŃ NAUCZYCIELI W POLSCE:
INTERWENCJA BADAWCZA Z WYKORZYSTANIEM TEORII AKTYWNOŚCI**

Przekonania i osobiste teorie edukacyjne nauczycieli warunkują realizowane przez nich działania praktyczne podejmowane w klasie szkolnej. Niepowodzenia odgórnie zarządzanych reform oświatowych powinny uświadomić decydentom konieczność oparcia reform na badaniach w działaniu prowadzonych wspólnie z nauczycielami i zaangażowanie nauczycieli w rozumienie procesu zmiany. W artykule przedstawiono kilka case study z zrealizowanych projektów w Polsce będących przykładami dokonanej z sukcesem zmiany myślenia nauczycieli o edukacji, zbudowania sieci uczących się nauczycieli, budujących oddolnie kulturę uczenia się opartą na współkonstruowaniu poprzez wzmacnianie refleksyjności, poczucia sprawstwa, rozumienia tego co dzieje się w klasie szkolnej. Szczególną rolę w tym oddolnym ruchu pełni autorskie Laboratorium Zmiany Edukacyjnej.

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