

Transforming preschool teacher's role: From implementer toward researcher

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ABSTRACT. In this paper, we start from the conception of the preschool teacher's role as researcher and the perception of teacher research in the function of practice transformation. The aim of our research was to analyze the research dimension of the pre-school teachers' practice. The projects reports of 127 teachers who participated at the Annual Conference of Preschool Teachers have been analyzed by coding the data in content analysis matrices. The teachers' reports were analyzed through four questions: What do preschool teachers state as reasons and aims of their projects? Which dimensions of a research process they cover by their projects? How do they document and evaluate the process and the effects of the project? What do they see as benefits of the project? The analysis has shown that the pre-school teachers do not generally conduct projects in the function of reflection and transformation on their own practice. By qualitative technique of data synthesis, we identified three project models with non-research ones dominating.

Keywords: Practitioner research, project models, transformation of preschool teacher role, community of research.

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INTRODUCTION

The practitioners researches are researches, in which the practitioners, within the context of their own practice determine the issues and the methods of the research, monitor, analyze and share data in a systematic manner, while at the same time they examine their own standpoints and change their own practice (Cochran-Smith & Lytle, 2009; Hess & Mullen, 1995; Carr & Kemmis, 2004; Pinnegar, & Hamilton, 2009). These are "intentional and systematic researches" (Cochran-Smith in Carr & Kemis, 2004: 107), initiated within their own practice and aim to a better understanding and improvement of their own practice. In these researches pre-school teachers: opens up an issue they would like to learn more about, and which is usually a problem or a difficulty in a practice; plans appropriate actions; systematically monitors and collects data about their own actions; analyzes and considers whether there is a basis for a more comprehensive conception and a change of practice (Atweh *et al.*, 2002).

The studies about the practitioners' researches (Cochran-Smith 2002; Hess & Mullen, 1995; Korthagen, 2006; Lyons, 2010) emphasize the importance of developing education professionals as the reflective practitioners who reflect on and reconsider their own practice. The practitioner's research assumes active, careful exploration of their own experience in an attempt to acquire a deeper understanding of its relations with others' experiences and ideas. The research is developed in the interaction with the others, always involving different values and ideas. Therefore, many authors consider it as an ethic value of a practice (Campbell & Groundwater-Smith, 2007; Cochran-Smit & Lytle 2009).

Carr and Kemis (2004) argue that searching for the problem in research puts the practitioner in a situation where the lack of a particular knowledge becomes an opportunity for professional development rather than something to be ignored or hidden. McKernan (2007) and Wenger (2007) see the advantage of the practitioners' research in the exchange of questions that become a basis for building a community of practitioners. Research encourages the practitioners to make their views and research data "public" and then share them with the others in an environment where their voices and problems are seldom recognized (Cochran- Smith 2002; Fullan 2007; Poutman, 2000). Sharing the research questions, data and interpretations with others enables practitioners to re-visit the understanding of the problem which they want to solve in different situations and with different interlocutors (Rithcie, 2006).

Process of opening the questions, implementation the changes, monitoring and reconsideration, make a research cycle that is focused on

understanding the problem and changing the practice (McIntosh, 2010). Research questions come from that which happens in a classroom or kindergarten while the methodology is designed according to the context. "The results" can be immediately used for the improvement of the practice and further investigation of the problem (Phillips & Kevin, 2010). The central questions of such research are "How I can change what I do?" and "How is this reflected on my practice?"

The concept of a pre-school teacher as a researcher of the practice assumes the two levels of transformation:

a) Transformation of a pre-school teacher's role into a role of researcher instead of the integration their role of the researcher with the pre-school teacher role as the program implementer

Within the traditionally understood role of the pre-school teacher as the implementer of the theoretical postulates and a given program model, one may ask why would the research of practice be important for a pre-school teacher? Pre-school teachers, who are in the existing practice expected to apply professional knowledge and implement a given program and are already burdened with different demands and work pressure, may wonder why should they take on yet another role? Researching of own practice cannot be an addition to the traditionally understood role of a pre-school teacher but means the transformation of that role. The pre-school teachers as researchers realizes their practice through their own research: they pose questions of importance for themselves, children and other actors of the education practice; gather and analyze data, including their own observations and thinking about those questions; examine their assumptions and beliefs; articulate their theories on education; discuss their researches with colleagues to test the credibility of their interpretations and conclusions; talk about their conclusions with children and parents; exchange experiences with colleagues at the meetings and conferences; write about their researches, participate in Internet communications and Internet forums.

In their researches, pre-school teachers develop a critical attitude toward their practice, based on the questions "Why do I do what I am doing?" and "How I can improve my practice?" They simultaneously develop an awareness of their own practice by becoming aware of their concepts of education and revising them, reflect on them and take on the responsibility for their own professional development (Campbell & Groundwater-Smith, 2007; Pešić, 2004).

b) Transformation of the practice from normative and reproductive to interpretative and inquiry-based

Transformation of a pre-school teacher's role presupposes a change of the existing understanding of the practice as the implementation of the outcome oriented program models to the practice focused on reconsideration and understanding of standpoints and problems (Altrichter *et al.*, 2000). The practice development from the reproductive to exploratory one moves toward a change of a relation between theory and practice. Such an approach assumes that there are problems in a practice which cannot be solved easily and which have no simple solutions. Solving the problems brings up new questions, new expectations and changes.

Rinaldi (2003) states possible reasons or difficulties for a hesitation of acceptance of the practitioners' research. On one hand, the academic community has no trust that the practitioners are able to conduct the research which they see as an objective scientific approach. On the other hand, practitioners hesitate to accept a research because it brings uncertainty and insecurity into daily work. The unknown, doubts, dilemmas, mistakes, crisis, confusion, that characterize the scientific research are not welcome in preschool teacher's daily work and a kindergarten life. When this issues appear in a kindergarten daily life they are perceived as moments of weakness, fragility, uncertainty which should be overcome as soon as possible because they "shake up a frame of reference" of the existing practice (Rinaldi, 2003: 4). A tendency to remain in a familiar, already tried and accepted way, is a root of resistance to change because it gives a feeling of security coming from a routine approach. Rinaldi suggests a concept of research "[...] as an attitude and an approach in everyday living, in schools and in life [...] as a way of thinking for ourselves and thinking with others, a way of relating with others, with the world around us and with life." (Rinaldi, 2003: 5).

METHOD

Pre-school teachers in Serbia have regular annual national conferences, at which they are showing their own projects realized during the previous year. They apply in written form to this conference. Association of pre-school teachers of Serbia asked the Institute for Pedagogy and Andragogy of Faculty of Philosophy for analyzes of papers which arrived for the Annual Serbian Pre-school Teachers' Conference in 2010. The purpose of this partnership was to support professional development of practitioners as researchers. The aim of our research was to analyze the research dimension of pre-school teachers' practice. Our sample comprised of the narrative reports of 127 pre-school teachers from 127 Serbian kindergartens who applied for the participation in the conference and agreed to be involved in our research. At the same conference, we presented the obtained results as a starting point for future cooperation in the professional development of teachers as researchers.

The teachers' reports were analyzed through four questions:

- 1. What do pre-school teachers state as reasons and aims of their projects?
 - 2. Which dimensions of a research process they cover by their projects?
- 3. How do they document and evaluate the process and the effects of the project?
 - 4. What do they see as benefits of the project?

In our qualitative research we have used a content analysis technique based on the thematic matrices in accordance with four research questions. By initial coding of report narratives we identified categories of data analyzed. Each matrix contained the following sections: classification categories and sub-categories, frequencies and examples.

Matrix 1 contained data related to the reason or motive of the project. It covered the following categories and their sub-categories: 1. The specific inservice training that they passed (its application, extension, reconsideration); 2. Implementation of the pre-school program; 3. Pre-school teachers' observations and insights from the practice with the subcategories related to: children, parents, colleagues, kindergarten; 4. Theoretical postulates as a reason for research; 5. Personal affinities; 6. External initiatives as a reason for research (with the subcategories: legislations, parents, advisers, professional services, local community, projects).

Matrix 2 contained data related to the pre-school teachers' expectations and goals of the project. Categories and subcategories are: 1. Reconsideration of the practice through the research; 2. Introducing novelties into a practice (new contents, methods, techniques, means, new forms of work with children, family, colleagues); 3. Application of inservice training program; 4. Professional development; 5. Goals related toward the others as an intention of the project (goals related to children, parents...).

Matrix 3 contained data on the research process classified in the following categories and subcategories: 1. Research plan as the basis of a research process (subcategories: no research plan; research plan; general plan of activities; activities planned in advance); 2. Developmental aspect of a projects (subcategories: reconsideration and redefining of the practice; extending to other activities; application of some activities; steps in a research); 3. Research problems (subcategories: identifying problems and ways of solving them; just identifying problems; problems not identified); 4. Integration of a research in the practice (subcategories: upgrading practice; repeating the activities in the practice; one-time application).

Matrix 4 included data on evaluation in the following categories and subcategories: 1. Documenting (subcategories: documenting as a proof of

realized activities and their presentation; documenting for the purpose of the activities themselves; documenting for monitoring and reconsideration of the practice; no documenting in the project); 2. Formative evaluation; 3. Summative evaluation; 4. Evaluation presented through the interpretation; 5. Evaluation as the pre-school teacher's subjective assessment; 6. No evaluation in project.

Matrix 5 contained data on the perceived benefit of a project classified in the following categories: 1. No benefit stated; 2. Projected benefits; 3. Benefits which are same as the aim of the project; 4. Pseudo benefits; 5. Estimated benefits; 6. Evaluated benefits. All of these categories had the following subcategories: according to the child, parent, pre-school teacher, program, institution, kindergarten community.

For the synthesis of data we have used the qualitative techniques: the complementary technique and the expanding technique. By the complementary technique the results obtained by one instrument are used to clarify the results obtained by the other instrument. The expanding technique is used to synthesize the results obtained by different components and different instruments into one unit (Greene, 2007; Onwuegbuzie & Leech, 2005; Patton, 2002).

RESULTS

The reasons and aims of pre-school teachers' projects

The most common reasons for pre-school teachers to start their own projects are the implementation of theoretical postulates about child development and children learning (20.5%) and the realization of pre-school programs (20.5%) (Table 1).

Table 1. Project reasons

Category	%	Narrative example	
theoretical postulates	20.5	Advancement in an artistic, creative expression is partly determined by the development of higher functions, general child development and hereditary factors	
realization of a pre- school program	20.5	Realization of activities related to ecology; literacy development	
previous experiences	15.0	In our practice, we have noticed that this topic is not sufficiently covered	
insights from the practice	14.1	Observations and monitoring of children play and usage of the existing means have led us to make the analysis of the means the children are most interested in and most frequently play with	
in-service training the pre-school teachers have attended	13.3	Implementation of MENSA NTC learning system; implementation of training program "We are earthen"	
external initiatives personal affinities	15.0 1.6	Involvement in International program "Days of Danube"I have been personally involved in ecological activities in local community	

Insights from practice, listed as reasons to start their own projects in almost half of cases were related to children, and then, to professional development of pre-school teachers.

The reasons related to programs of training/professional development of pre-school teachers in almost half of the cases were related to implementation of the content and activities from training programs, while in only one sixth of cases re-examination of training programs have been listed as the reason.

Under external initiatives, they usually assumed local government or NGO's initiatives, or initiatives based on changes in educational legislatives. There were no cases in which parent's initiatives have been listed as the reason for the start of the project.

The data on the aims and goals of the project are shown on the Table 2.

Table 2. Project goals

Category	%	Narrative example
goals toward the others	60	cultivation and development of a speech; development of interests for reading books; encouraging children for imaginative expression; making parents aware of the importance of their participation in the life and work of kindergarten
introducing novelties into a practice	33	Parent information through video records of activities with children
goals referring to the professional development	4.7	Development of competences of a pre-school teacher-mentor
goals focused on the reconsideration of the practice	2.2	Do I give a child what he/she needs; what do I do wrong

The data shows that the pre-school teachers primarily set their research goals in relation toward the others, usually children followed by parents. For the one third of pre-school teachers introducing novelties are a goal of a research. These usually mean the introduction of new content, teaching methods or materials. Only one third in this category refers to a change of a nature of relationship with children, parents or colleagues. The data shows that the pre-school teachers are the least focused on their own professional development and practice as the areas to reconsider and change by research.

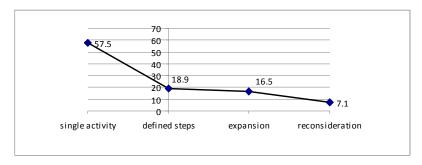
The research process dimensions

The dimension of research process in the project was analyzed through the dimensions of planning, development, integration and problem solving (Table 3).

Table 3. The research plan Category Narrative example preplanned particular traditional children plays; "my grandmother told me"; folk 394 activities costumes and needlework organization of various forms of the cooperation with parents; non-specific plan 33.0 organization of the activities to develop children's activities independence and improve their capabilities. 16.6 research plan 11.0 Inclusion of child with special needs: child systematic observation - talking with parents - team development development of activity and support plan - monitoring

The data obtained show that teacher plans are mainly about particular activities that they will conduct with others (children, parents or colleges) and not the research activities.

Analysis of the developmental aspect in the pre-school teachers' projects has shown on Graph 1.



Graph 1. Developmental aspect of the research

More than a half of the projects (57.5%) were limited to a single activity (preparation of a wall paper; ecological workshop with children; planting flowers in a yard; organizing drawing/painting competition...). In 18.9% of the cases, the developmental dimension is connected to the defined steps ("Exploring the space; becoming aware of the space; designing space for stimulating creative expressions; making an art") or expansion to the other activities ("A doll is introduced to the various activities with children, parents, school"). Only 7.4% of all the researches have been developed through the reconsideration and redefining of the practice ("analysis of the previous research, observation techniques, dividing into sub-teams, defining sub-teams' tasks; designing instruments for the monitoring in the sub-teams; analysis of sub-teams documentation").

The data shows that the way of developing the research process is connected with the way in which the research is integrated into the practice. A single application of an activity in almost half of the projects (44.1%), the repetition of the same activity in other areas or with other participants in the third of the cases (32.3%), draws to the conclusion that the projects were not in a function of a continuous change of the practice. Only 23.6% of the projects have been integrated into the practice through upgrading the process.

An important process dimension is also a matter of relation toward the problems as a natural part of a research process and a challenge which stimulates further research (Table 4).

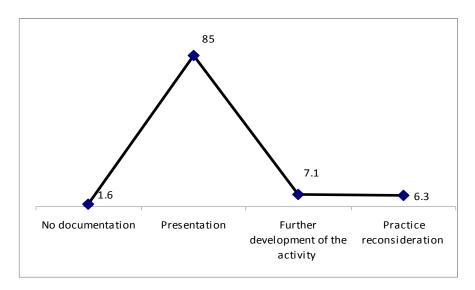
Table 4. Problems

Category	%
problem not stated	61.4
problems stated without solution	23.6
problems and solutions	15.0

The largest number of the listed problems is of a technical nature (weather conditions; not enough materials to make costumes; lack of material resources) followed by organizational ones (lack of time for team meetings; too many children in a group). The least number of the problems are actually research ones (own prejudices; insufficient experience; encounter with the new and unknown; problems with recording and documenting activity; problems in processing survey data).

Documenting and evaluation of research process

Our findings show that almost all pre-school teachers document the research but primarily in the function of presenting the process and/or products of activities (Graph 2).



Graph 2. Documenting in a research process

In only 7% of cases, the documenting was used for the further development of the activity. In only 6% of cases, the documenting was in a function of the practice reconsideration – collecting and documenting data facilitates a revision of the research question in a research process (Krnjaja, 2009).

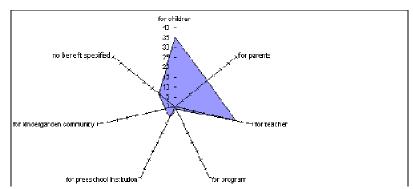
Evaluation helps to "crystallize" the research question, get insights and build their own theories (Pešić, 2004). Through evaluation i.e. a self-evaluation, pre-school teachers does not prove their researches but articulates a relation toward that which stems from the research process. Our data show that there was not any kind of evaluation in almost two thirds of the projects (Table 5).

Table 5. Evaluation

Category	%	Narrative example
no evaluation	57.6	
subjective assessment	20.3	children were thrilled, parents were delighted because of their children; children, pre-school teachers and parents have shown very keen interest
have evaluation (formative or summative)	15.0	questionnaire for parents; reflective question list
interpretation without showing data	7.1	video clips and questionnaires for parents showed that in these games children express a cheerful mood and joy in accomplishing success

Project benefits

Data in Graph 3 clearly show a prominent orientation toward perceived benefit for children (35.4%) and pre-school teachers (31.7%), followed by the benefit for parents. There is almost negligable percentage of the perceived benefit for the program, institution and kindergarten community.



Graph 3. Perceived benefit

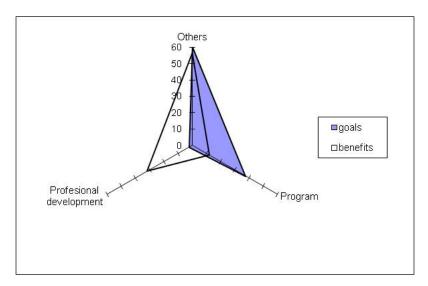
The data gathered by analyzing the type of benefit are shown in Table 6.

Table 6. The type of benefit

Category	%	Narrative example
projected benefit	44.6	satisfied child, relaxed, creative, imaginative, curious; a complete openness of kindergarten to the family
same as a goal	27.1	to develop personal and professional confidence
estimated benefit	13.7	they have more confidence in themselves and their capabilities
pseudo benefit	13.7	"discovering beauty in small things"; or for parents: "opportunity to apply drama model at home"
based on evaluation	0.9	The research of children's perspective has helped us to see how children comprehend a life in a kindergarten and what are the available opportunities to change our practice in accordance with children's perspective.

According to the type, the projected benefits prevail. The pseudo benefits are related to the overall expectations which does not follow from the project. In some projects, pseudo benefits are related to common outcomes (realization of the all goals which are posed) or to the maxims (the beauty is in the small things). The negligible percent (0.9%) of a benefit assessed on the basis of the evaluation showed the absence of the research approach in the projects.

We have used a qualitative expansion technique (Greene, 2007) to group data obtained in the goals and benefits categories into three dimensions: goals and benefits related to the others; goals and benefits related to the professional development; and goals and benefits related to the program and institutions. Data in Graph 4 show the overlapping of goals and benefits related to the others (children and parents) and sharply opposed goals and benefits related to professional development and the program.

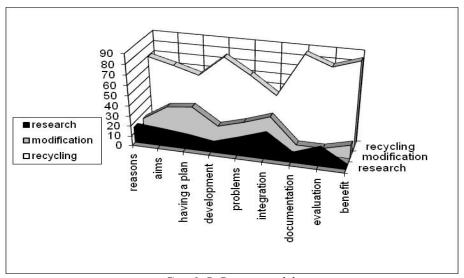


Graph 4. Relation between goals and benefits

The professional development is stated as a goal in only about 2% of the projects but perceived as a benefit in 31.7% of them. Similarly, the program development is a goal in 37.7% cases but the program development as benefit is stated in almost three times less projects (12%).

DISCUSSION AND CONCLUSIONS

By qualitative technique of data synthesis (Greene, 2007; Patton, 2002; Sherman & Webb, 2005) we synthesize the data obtained on all matrix subcategories. This enabled us to identify the three project models that teachers conduct. We named them: model of practice recycling, model of practice modification, and model of research practice (Graph 5).



Graph 5. Project models

In a practice recycling model, the reasons to initiate projects are theoretical postulates, program realization requirements, in-service training programs and external initiatives. The dominant project goals are those related to the others, primarily children and to a much lesser extent to the implementation of the in-service training program. In this project model, a process dimension is shown in: planning limited to the pre-planned activities or the lack of plan; there is no developmental aspect but only the implementation of the individual activities; there is no problematizing or integration because the activities are one-time only. Documenting is in a function of presenting; there is no evaluation, only subjective assessment. A perceived benefit is the projected benefit, and the same as a goal or pseudo benefit.

In a practice modification model, the reasons to initiate projects are the previous experiences with children, program contents, context, and own experience (Ritchie, 2006). The goals refer to introducing new contents,

methods and resources. In this research model, a process dimension is shown in the existence of the general activity plan; developmental aspect is seen in the presence of the stages or steps in the project or the expansion to the other activities; the problems are stated but they are primarily of the technical nature without the ways of solving them; integration in the practice is limited to the repetition of the activity with other participants, in other environment or with other contents. Documenting is in the function of the activity development while the evaluation consists of interpretation (Webster-Wright, 2010). The perception of benefit is based on the estimation.

In the practice research model, the reasons to initiate the project are predominantly related to the re-consideration of the practice and in a much lesser percent to the pre-school teacher's personal affinity. The goals refer to the reconsideration of the practice, change of relations between the actors (children, parents, colleagues) and professional development (Carr & Kemmis, 2004; Lyons, 2010). In the practice research model, a process dimension is shown in: setting the research plan; developmental aspect is reflected in reconsideration and redefining; problems are identified and solved as a part of the research process; upgrading and further development are the ways of integrating research in the practice (McKernan, 2008; Meyers, & Rust, 2003). Documenting is in the function of the reconsideration process and evaluation is a part of the research process. The benefit is based on the evaluation (Phillips, 2010).

Our analysis did not attempt to assess the educational quality of the teacher projects, but research dimension of a pre-school teacher's practice. The obtained data showed only to what extent the pre-school teachers' projects are actually the research ones. They in no way dispute that the most of those activities in the projects are the good practice examples. Furthermore, the analysis of the pre-school teachers' projects was based on the written documents that are always somewhat distorted and weaker than a real life process and inevitably reflect pre-school teachers' skills in report writing.

The predominance of the practice recycling model and very few research models indicate a strong need for a transformation of both the preschool teacher's role and the practice. Such transformations are not about the individual competence of pre-school teachers. They call for the systemic approach to the changes through the synergy of initial pre-school teacher's education, research and the education policy (Atweh *et al.*, 2002; CoRe..., 2011; Pavlović Breneselović, 2009). That means a necessity to change the initial pre-school teacher education to research-based education as a process of building knowledge and understanding through comprehension,

reflection, reconsideration, developing theories, and changing practice (Beck & Kosnik, 2006; Hess McCart & Mullen, 1995).

Transformation of a pre-school teacher's role into a researcher of their own practice requires the synchronized action of education policy and the change of approach to the professional development by supporting those forms of professional development that include the research and inquiry (CoRe..., 2011; Korthagen *et al.*, 2006). Furthermore, this implies greater openness of the scientific and university centers and their networking with the practice as well as redefining the role of scientist-researcher in the practitioner researches from an expert to "critical friend" position.

Finally, this means the transformation of kindergarten through the development of the kindergarten structure and culture as the community of learning and inquiry (Fullan, 2007; Wenger, 1998). Rinaldi (2003) proposes that the development of pre-school community of learning starts through research with children. Children are great researchers. Their notions of the world and the questions they open can give the strength for changes and a confidence into reconsiderations, doubts and mistakes. Children are the ones who can discover a joy of research to the adults and a value of the research as a way to reach out to and encounter with others.

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