MORE SUCCESSFUL EDUCATION OF PRESCHOOL TEACHERS BY CONSENSUS – THE DELPHI METHOD

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Abstract:

In their paper, authors address the issue of improving formal education of early childhood and preschool teachers so that students – future preschool teachers would acquire competences necessary for quality educational work with early age and preschool children and their families, and would become competitive in the labor market. In the empirical non-experimental research in which 30 scientists, experts and practitioners participated with high level of consensus, responses to seven research questions, indicating changes and their direction in the formal education of early childhood and preschool teachers, were obtained by use of the Delphi method.

Key words: Delphi method, formal education, competences, preschool teachers, improvement

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Introduction:

When it comes to education of early childhood and preschool teachers, there are certain discrepancies between theory and practice, old and new education paradigms, formal education contents and requirements of preschool education system. Science, profession and educational policy each try to overcome this in their own way. Reforms are being implemented. However, do these reforms represent an efficient solution and are they implemented in the right place? Does the solution lie in reforms or "strategies for change" (Herring and Willson 2010, page 48) guided by new competences? Whose competences and which competences? Are preschool teachers the only ones that need new competences?

Cochran-Smith and Lytle (2009) stress that preschool teachers may play a key role in design, implementation and evaluation of educational reforms. Why not start with them then, if they are the ones who can influence social changes and social justice through their existence, knowledge and action (Scott Curwood, 2011)? Although this issue is an entirely logical one, we will focus our attention in this paper on preschool teachers, as the end "product" of educators' actions. Taking into consideration the effect of all factors related to the education of preschool teachers, we included experts and practitioners in this research.

If the starting point of thought and action is the child and the best interest of that child and the end goal is his competent participation in development of (the future) society, then the solution, most likely, lies in the evolution (and not reform), acquisition and development of competences by preschool teachers.

Context for development of child's competences is designed by the teachers who acquired their competences in the course of formal education and developed them through permanent professional training, and as such should "know and be the agent of educational and social change" (Cochran-Smith and Lytle, 2009, page 37). The quality of child's education largely depends on the context, curriculum, guidance and teaching, charisma, pedagogic style, environment, methods, etc. designed and implemented by the child's teachers within the framework of declared educational policy.

Although the National Curriculum Framework "focuses on developing competences and new types of knowledge and skills, placing the accent on innovation, creativity, problem solving, critical thinking, entrepreneurship, computer literacy, social and other competences…" (Ministry of Science, Education and Sport, 2010), education practice for preschool teachers mostly remains

sluggish and mostly outdated (Ljubetić, 2011). The curricula of certain faculties in the Republic of Croatia that educate preschool teachers are not coordinated when it comes to duration or classes (content, course status, load, etc), making their mutual compatibility and their compatibility with other faculties in Europe debatable, as it impedes greater mobility in the course of studies and decreases competitiveness on the European labor market.

When it comes to implementation, new competences (team work, verbal and written communication in foreign languages; partnership, research; documenting of practice and interpretation; reflection and self-reflection, etc.) mostly remain a "list of nice wishes" with small chance that the students – future preschool teachers will soon acquire them at the level of formal education, if that education should last three years. Shortcomings of institutional education of preschool teachers are sometimes, individually and sporadically, compensated in practice or through permanent professional training organized by the competent Ministry and the Education and Teacher Training Agency, or various informal educations that are most often initiated by individuals. "Variety" and insufficiently clear standards in education and professional training of preschool teachers are the likely reason for "discrepancies" between theory and practice.

The research was conducted using the Delphi method in order to stimulate discussion on improvement of the educational system for preschool teachers in the Republic of Croatia. Obtained results may serve as inspiration for critical reflection on the quality of institutional education for preschool teachers, or provide relevant authorities with an answer to the following question: do current education programs for preschool teachers enable teachers to acquire necessary competences, and if so, to what degree? For the purposes of this paper, competences are widely seen as "knowledge, skills, ability, personal quality, experience or other characteristics that make the capacity of preschool teachers for efficient teaching. More generally, this is the ability to execute tasks or solve problems in professional context aided by the acquired knowledge and skills" (Kelly et al, 2004, page 117).

Methodological Research Framework

Delphi method is a structured process of group communication, of mutually anonymous individuals – theorists, experts and practitioners who study complex problems in specific areas (Linstone and Turoff, 1975). It is useful in trying to understand and define insufficiently known phenomena, common decision-making and forecast. It studies the incidences for which it is not

possible to draw objective statistical rules. Using the knowledge of experts, as well as that of participants truly interested in the process which is the subject of this research, without social pressure and bowing to authorities, by using questionnaires in several rounds of research, it is possible to reach consensus. The assumption is that a group has more information and knowledge and can thus generate more ideas (possible responses). Lack of social pressure makes it possible to concentrate on the content of the research and not on participants.

Research participants are practitioners in the researched field, as well as those who, from position of a different (scientific) paradigm can contribute to complete overview of the research subject. By applying the Delphi method, the identity of research participants remains known only to researchers who collect data and return the results to experts for further revision.

Prerequisite for research quality is the (optimal) selection of experts who are competent in the research subject. A group of 10 to 15, but no more than 35 participants, is recommended (Kelly et al, 2004) since it is debatable if a larger group will increase the accuracy of the forecast. It is possible that a large number of individual opinions and forecasts would diminish the precision and reliability of the common forecast. At the same time, it is debatable how many motivated experts there are for the research of specific areas.

Data obtained using the Delphi method is processed using descriptive statistics. De Loe (1995) considers it possible to differentiate between four levels of consensus: high (more than 70% of experts agree on a particular element), medium (60% agree), low (50% agree) and no consensus (less than 50% of experts agree on a particular element). Garavalia and Gredler *(*2004) accept the consensus on forecasts (on a four point Likert-type scale where 1 represents complete lack of consensus and 4 complete consensus) if M> 3, and SD< 1. A lesser variance implies larger consensus (Rowe and Wright, 1999). However, Sackman (1975) stresses that consensus may be assumed only if forecasts move in the same direction, whereby it is justified to use even assessment scales that determine forecasts dichotomously (as consensus and lack of consensus).

From May to July 2013, we conducted an empirical non-experimental research using the Delphi method. The goal of the research was to determine necessary competences of preschool teachers as expected outcomes of their formal education in the Republic of Croatia. Delphi method was used in the research through three rounds of written feedback from mutually anonymous experts, scientists and practitioners.

Thirty participants[1] were initially included in the research and by the end of the third round there were 26 participants left. In the beginning, research included 10 scientists – university professors, 16 practitioners in direct educational process (preschool teachers, members of educational services, principal), two of whom are currently attending the postgraduate pedagogy program and 3 who are currently employees of the state working for services related to institutional preschool education. Majority of participants are women and only 10% (N=3) are men. Research participants are of different professions and scientific areas relevant to discussion about competences of preschool teachers. With the aim of (additionally) protecting the identity of research participants the table below (Table 1) shows the structure of research participants included in the first round of research.

Table 1: Structure of research participants – first round

		Status					Total
		preschool teacher	preschool teacher - rehabilitator	pedagogue	psychologist	academic sculptor	
academic status	scientist	0	0	9	1	1	11
	practitioner	5	1	5	3	0	14
	preschool teachers enrolled in PGP[2]	2	0	0	0	0	2
	administrative staff[3]	0	1	1	1	0	3
	Total	7	2	15	5	1	30

This research confirmed the position of authors Garavalia and Gredler *(*2004) that participants with more extreme attitudes[4] are more likely to withdraw from the research. After the first round, one participant withdrew from our research and three more participants withdrew after the second round, which is a total of 12% (N=4).

[1] Term „participant“ includes both sexes and additionally protects the identity of participants.

[2] Preschool teachers also work as university associates during their postgraduate studies.

[3] One person of the total number (3) of people is attending a postgraduate program.

[4] In the first round, one participant stated that the university where he/she is employed has the best formal education program for preschool teachers and there is nothing that should be changed.

The classic Delphi method was used and in the first round the participants were invited to freely generate ideas (Hasson et al, 2000). Seven starting questions were asked. Taking into consideration the recommendation to be careful in structuring initial questions (Cohen et al, 2007), the participants were given the option to expand them. Based on participants' statements, the research team selected 185 relevant statements which were then sorted into four broader categories:

1. Structure of formal training for preschool teachers in the Republic of Croatia – duration and methods of education.
2. Potential for improving formal education and quality of curriculum for education of preschool teachers.
3. Necessary competences as expected outcomes of education: value orientations, knowledge and skills.
4. Competences that are considered desirable on the EU labor market.

Questionnaire for the second round of research was formed based on the feedback from the first round. Participants were asked to grade the significance of each statement that was made on a four point Likert-type scale where 1= completely insignificant and 4= extremely significant. Participants were informed that the statements or the order of statements do not, in any way, reflect the attitude of researchers or the significance they would attribute to individual statements (van Zolingen and Klaassen, 2003). Adhering to the attitude of Murphy et al. (1998), who argue that the median and the inter-quarterly range are more robust than the arithmetic mean and standard deviation, the mean value was calculated (M), together with standard deviation (SD) and variance for each element. Statements for which consensus was reached were singled out. Feedbacks that reflect lack of consensus for certain statements (f= 1) were rejected as extreme (lack of consensus less than 3.84%) and statements with high level of consensus were accepted (De Loe, 1995.). Statements for which consensus was not reached (statements in the range between lack of consensus: 1 or 2, and consensus: 3 or 4), and frequency for lack of consensus was higher than 1, were returned to the third round of research and participants were asked to provide their final judgment – accepting or rejecting individual statements. In the final round statements were accepted as reached consensus where all participants valued the element in the same direction, which is consistent with Sackman (1975). Finally, through concurrence of

research participants, consensus was reached for 77.29% of statements (143 elements), while 42 statements (22.7%) failed to reach consensus even after the third round.

Interpretation and Discussion of Results

In this paper, the attention will be focused on the statements (119 elements) that reached unanimous consensus (feedback in one direction) through three rounds of feedback. M, SD and variance were calculated for elements of these statements.

Partial consensus was achieved for the first research question related to the *optimal structure of the formal education of preschool teachers* in the Republic of Croatia. Data is stated as a significant indicator of necessary changes to educational policy in the Republic of Croatia.

Table 2: Duration and type of formal education of preschool teachers

		Formal training of preschool teachers				
		3-year professional study program	mandatory 5-year university study program	mandatory 5-year professional study program	Elective* professional study program 3+2 years	Elective* scientific university study program 3+2 years
academic status	experts	0	5 22,7 %	1 4,5%	1 4,5%	2 9,1%
	practitioners	1 4,5%	3 13,6%	4 18,2%	2 9, 1%	3 13,6 %
Total		1 4,5 %	8 36,3%	5 22,7%	3 13,6%	5 22,7%

*Interpretation: * = elective study program means mandatory three-year study program with the option to continue with the two-year graduate study program.*

It is clear that only 73% of participants (N=22) participated in the evaluation of the optimal model of formal university study program for preschool teachers (duration and type of the study program). Although consensus was not reached, majority of participants (95.5%) prefer mandatory or elective five-year study program. 59% of participants advocate the notion that the five-year study programs should be mandatory. According to De Loe (1995), this represents low to medium level of consensus (consensus of 50% for one variable or 60% for two adjacent variables). Slightly more than one third of participants (36.3%) opted for the five-year study program (mandatory three-year study program with the possibility to continue with the two-year, university or professional, graduate study program). After examining the frequency of

participants' answers, it is clear that unanimous consensus was not achieved. This is an open question that requires hurried response of educational policy of the Republic of Croatia.

When asked to think about the *methods of education and training of preschool teachers* in the Republic of Croatia that might contribute to the quality of formal education, the participants reached complete consensus for the following statements (M, SD and variance are showed for each statement).

Table 3 Possible improvements of the formal education of preschool teachers in the Republic of Croatia (ranked answers)

	Mean	Std. Deviation	Variance
Make it possible for students to learn "by doing"	3.87	.344	.119
Improving the work of preschool teachers	3.87	.344	.119
Constant, two-way communication between students and professors	3.86	.351	.123
Learning through practice with systematic guidance of processors (theory in practice)	3.83	.388	.150
Implementation of reflective practicums	3.83	.491	.241
"Individualize" practice	3.83	.388	.150
Being familiar with at least one foreign language, at least a B level in speech and writing	3.82	.395	.168
Adjusting university education to requirements of the profession	3.78	.518	.269
Integrative approach to courses	3.78	.422	.178
Stronger link between educational contents	3.78	.422	.178
Employing quality staff that comes from practice	3.78	.422	.178
Better connection between the university and early childhood and preschool education institutions (facilities)	3.74	.449	.202
Implementing classes through workshops and reflective practicums	3.74	.449	.202
Distributing professional and pedagogical practices (internships) throughout the year	3.74	.449	.202
Better link between university study programs (faculties)	3.70	.470	.221
Systematic monitoring and documenting of processes	3.65	.573	.328
Using non-directive learning and teaching strategies	3.65	.487	.237
Student team work on projects	3.61	.499	.249
Introducing students to examples of good practices	3.52	.593	.352
Common learning and work of students from different study groups	3.35	.647	.419

Respondents reached complete consensus regarding certain manners of education of preschool teachers and the potential for improvement. Responses (Table 3) can be classified into four categories, such as:

- **Institutional interconnection** – better connection of faculties, better link between departments of individual faculties that educate teaching professionals, and better connection between early childhood and preschool education institutions and faculties that would be regulated by contracts;
- **Program interconnection** – integrative approach to courses and better connectivity of education content, "individualization" of student internships and enabling students to learn "by doing";
- **Teaching staff at university study programs (faculties)** – improving the quality of university professors, using non-directive learning and teaching strategies and ensuring constant two-way communication between students and professors;
- **Improving the current state –** knowing at least one EU language as well as B level in speech and writing, enabling learning from parents and with parents through workshops, student team work on projects and connecting with EU students on projects, organizing workshops and reflective practicums, "reflection in action" (during internship in early childhood and preschool education institutions), distributing student practice (internships) throughout the academic year and learning in practice with systematic guidance of professors (theory in practice), ensuring cooperation with expert associates of the institution during internship (practice), employing quality staff - people from practice in the role of demonstrators, associates, assistants, exercise leaders, etc., and introducing mandatory communication practicums.

In this paper, we will focus only on suggestions of research participants related to potential improvements to the current formal education of preschool teachers in the Republic of Croatia. Their focus on the following is obvious:

1. acquisition of competences by students– future preschool teachers (especially in the field of communications where the highest level of consensus between research participants was reached (M= 3.95; SD= .213; Table 8)

2. modern methods in teaching (team work, communication, research and similar) that lead to the acquisition of these competences,

3. better quality of relation between theory and practice in the course of studies,

4. improving the work of teachers as assumption for improving the education system for preschool teachers (M=3.87, SD= .344).

Analysis and interpretation of obtained results enables us to answer the first two research questions related to: 1) structure (duration, manner, and curriculum) of education of preschool teachers, including the balance between theory and practical experience, and 2) potential improvements in this area. It can be concluded that significant consensus between research participants was reached regarding the structure of curriculum for the education of preschool teachers and the manner in which themes are taught to students along with potential improvements in the course of studies, but consensus was not achieved regarding the duration and character of education of future preschool teachers.

When it comes to the third research question that read: *In which way might increased cooperation at European level additionally improve the education of preschool teachers?*, participants were asked to evaluate the significance of statements from the first round.

Table 4: Cooperation at European level that might additionally improve the education of preschool teachers (ranked responses)

	Mean	Std. Deviation	Variances
Presenting examples of quality EU practices	3.74	.449	.202
Action research with EU students	3.70	.470	.221
Kindergarten cooperation network and exchange of experiences	3.70	.470	.221
Networking of national and foreign educational institutions	3.61	.499	.249
Networking of national and foreign universities*	3.57	.507	.257
Connecting with EU students on projects*	3.57	.507	.257
Linking faculty departments*	3.39	.499	.249

*Interpretation: *= consensus achieved in the third round*

Research participants are agreed on the significance of presenting examples of quality practices from the European Union countries (M=3.74; SD= .449) and potential common action student

researches (M=3.70; SD= .470). They consider the linking of preschool institutions to be more significant than the linking of universities. In additional statements, participants emphasize the diversity of studying conditions as impediments to cooperation. Certain research participants emphasize that cooperation is acceptable only with those countries that have similar educational policies, models and curricula for the education of preschool teachers. Consensus was not achieved on the significance of connecting and networking for certain education elements in the area of European cooperation. Consensus was achieved at group level regarding the potential for connecting students from EU countries on common projects (M= 3.57; SD= .507). As a prerequisite for such cooperation, attibution of significance of knowing at least one EU language at B level in speech and writing is indicative (M=3.55; SD= .510). We assume that European orientation of the Republic of Croatia has been recognized, but consensus was not reached regarding cooperation models.

The fourth research question read: *Which knowledge should be adopted by future preschool teachers that were educated within the formal education system framework in order for them to be ready for professional work?*

Table 5 Knowledge of a student as reflection of readiness for professional work (ranked responses

To know…	Mean	Std. Deviation	Variance
child development theories	3.96	.209	.043
the characteristics of early childhood and preschool aged children	3.96	.209	.043
the significance of appropriate spatial-material and social environment	3.96	.209	.043
the significance of focusing on the child (and not on the content of work)	3.96	.209	.043
about the individual needs of children	3.96	.209	.043
about children with special needs	3.91	.288	.083
about integrated preschool curriculum	3.91	.294	.087
the significance of reflection for pedagogical work	3.86	.359	.124
preschool pedagogy	3.83	.388	.150
how to cooperate with parents	3.83	.388	.150
how to build a curriculum	3.78	.518	.269
the basics of child psychology	3.78	.422	.178
how to work with those who are gifted	3.74	.449	.202

the significance and the options for documenting processes	3.70	.559	.312
new scientific information	3.70	.559	.312
intercultural topics*	3.45	.671	.450
the group dynamics*	3.39	.783	.613

*Interpretation: *= consensus achieved in the third round*

Overview of Table 5 clearly shows extremely high value attributed to significance of certain statements (in the range of M=3.96 (SD= .209) to M=3.70. Obtained responses can be classified into four categories:

1. **pedagogical – psychological knowledge** (on theories of child development, characteristics of a child, preschool pedagogy and child psychology, working with children that have special needs, especially the gifted ones, monitoring the progress of child and integrated preschool curriculum) that unites these various types of knowledge, and is a prerequisite for a complete approach to the child and successful pedagogical practice in early childhood and preschool education;
2. **pedagogical context favorable for learning** (creating a learning environment and ensuring favorable conditions for satisfying special needs of children and cooperation with parents);
3. **improving pedagogical activity –** (the significance of reflection for pedagogical work and development of curriculum in practice) without the interaction of which it is not possible to modify or improve pedagogical practice. It is evident that research participants assign considerable significance to knowledge related to reflection, as they reached a high level of consensus (M=3.86; SD= .359).
4. **special knowledge** relates specifically to interculturalism and knowledge from the area of group dynamics.

Overview of results (Table 5) clearly shows complete consensus of research participants related to the necessity of acquiring knowledge on theories of child development and characteristics of children (M=3.96; SD=.209), which is not surprising if we take the extremely dynamic development of children in early childhood and preschool age (Vasta et al., 2004, Andrilović, Čudina-Obradović, 1994) into consideration, making the quality knowledge in these areas a prerequisite for competent pedagogical activity of preschool teachers. High level of consensus between research participants was also reached when it comes to knowledge regarding the work with special needs children (M=3.91; SD=.288) and regarding the creation of prerequisites for

satisfying the special needs of children (M=3.91; SD= .426). If we accept the fact that each individual (child and adult) has unique needs and that these needs are even more complex when it comes to gifted children and children with developmental challenges and that in order to successfully meet these needs one needs to guarantee proper conditions, results like these are not surprising. It is obvious the experts agree that care and appropriate pedagogical action toward children with special needs are backed up by very specific knowledge which the students must acquire in the course of their studies. It is that more surprising then, that consensus was not reached among research participants regarding special skills of preschool teachers for working with special needs children. Simply knowing of child's dynamic development and/or special needs is not sufficient for quality pedagogical work. Also required are skills (along with attitudes and value orientations) that make this knowledge useful and applicable. It is possible that research participants think that in practice "some other experts" will work with this group of children, which brings into question the inclusion of children with developmental challenges in early childhood and preschool education institutions, which is something both science and education policy advocate (National Pedagogical Standard, 2008, National Curriculum Framework, 2010). The question seems logical: do preschool teachers need knowledge in order to identify children with developmental challenges or is knowledge the foundation for acquiring skills to work with children with developmental challenges?

Analysis and interpretation of obtained results enable us to answer the fourth research question related to knowledge that should be adopted by students – future preschool teachers that were educated in the framework of Croatian institutional education system, so that they would be ready for professional work. High level of consensus between practitioners and experts is obvious in relation to necessary and specific knowledge in the fields of general pedagogy, preschool pedagogy and developmental psychology, which the preschool teachers must have in order to professionally play their role of pedagogues.

The fifth research question read: *Which value orientations and formed attitudes should the preschool teacher who is ready for professional work have?* We state ranked responses.

Table 6 Desirable value orientations and attitudes of preschool teachers – professionals (ranked answers)

	Mean	Std. Deviation	Variance
The child is an active and competent being	3.96	.209	.043
The child is the subject of education	3.91	.294	.087
Development of partnership with parents is important to the quality of educational process	3.91	.288	.083
Critical thinking	3.91	.288	.083
Professional development is the obligation of each preschool teacher	3.91	.288	.083
Work on oneself is a prerequisite of quality	3.91	.288	.083
Educational process should be adapted to the needs of children	3.91	.288	.083
Preschool teacher should be reflective	3.91	.288	.083
Preschool teacher should constantly improve the quality of educational process	3.91	.288	.083
Preschool teacher should respect human rights	3.91	.288	.083
Accepting differences is one of fundamental educational values	3.87	.344	.119
Childhood is the process of social construction	3.87	.458	.209
Child is the center of the educational process	3.87	.344	.119
Flexibility in concrete and unpredictable situations is important to quality educational process	3.87	.344	.119
Preschool teacher should be empathic	3.87	.344	.119
Preschool teacher should appreciate creativity	3.87	.344	.119
Cooperation is a factor of quality	3.83	.491	.241
Preschool teacher bears responsibility for personal development	3.83	.388	.150
Quality is developmental category	3.78	.518	.269
Preschool teacher inspires development of the culture of living	3.78	.518	.269
Lifelong learning is a prerequisite of quality	3.78	.518	.269
Humanistic-democratic orientation is a fundamental value	3.78	.422	.178
Preschool teacher is responsible for quality relation to other factors of educational process	3.74	.449	.202
Evaluation is a prerequisite for work quality of educational institutions	3.74	.449	.202
Willingness to compromise is a necessity*	3.74	.449	.202
Assertiveness is an educational value*	3.73	.550	.303
Educational institution is a "living system"*	3.65	.647	.419

*Interpretation: *= consensus was achieved in the third round*

High level of consensus between research participants was reached for twenty-seven statements, whereby mod is 3.91 (f=9 or 1/3 of statements). Consensus range varies between M=3.96 (SD= .209) and M=3.65 (SD= .647). These attitudes of preschool teachers who are ready for professional work "cover" three categories in regards to content:

- **Attitudes related to children** – focus on the child, child is an active and competent being, and child as the subject of education;
- **Attitudes related to relationships** – significance of building partnerships and responsibility of an individual for the quality of the relationship (M=3.74; SD= .449);
- **Attitudes related to the educational process** – need to adjust the educational process to the needs of children, humanistic-democratic orientation in working with children and their parents and the importance of lifelong learning where a high level of consensus was reached (M= 3.78) with relatively high standard deviation (SD =.518), which indicated certain polarization of responses (significant – extremely significant). This can be related to the position of some participants who consider practice to be more important than theoretical education.

Said attitudes (Table 6) that should be formed by each early childhood and preschool education professional, according to the forecast of experts and practitioners, relate to three of the most important aspects of educational work: child in focus, educational "philosophy" as the "framework" for pedagogical action and quality collaborative relationships that allow the realization of declared educational policy. It is obvious that research participants assign a somewhat lesser significance (M= 3.74; SD= .449) to the responsibility of an individual for the quality of relationship, which is not all that surprising considering that our culture's conventional wisdom still perceives someone else to be "responsible" for potential failures when it comes to interpersonal relations. It is evident that this aspect of education of future preschool teachers needs to be paid more attention, or other attitudes and their influence on the quality and consistency of educational process implementation might be brought into question. Research participants assign the least significance to the image of educational system as a "living system" (M=3.65; SD= .647).

Obtained results (Table 6) enable us to partially answer the fifth research question that tried to establish consensus between experts and practitioners related to value orientations and attitudes that preschool teachers who are ready for professional work should have. Very high level of consensus between research participants was reached in relation to desirable attitudes that were explicitly stated, while it was not achieved in regards to value orientations, and still we are able to make indirect conclusions about them (child, work/process and relationship quality as values).

The sixth research question regarded *skills that a* preschool *teacher must have in order to be ready for professional work in early childhood and preschool education institutions.* Obtained results were presented in Table 7.

Table 7 Desirable skills of professional preschool teachers (ranked answers)

	Mean	Std. Deviation	Variance
Forming proper spatial-material environment	3.96	.209	.043
Creating conditions for optimal satisfaction of special needs of children	3.91	.426	. 204
Solving problem situations	3.87	.344	.119
Creativity	3.86	.351	.123
Forming good relationships	3.86	.351	.123
Cooperating with external experts	3.86	.351	.123
Cooperating with colleagues	3.83	.388	.150
Documenting processes	3.82	.501	.251
Adapting practice to individual needs	3.78	.518	.269
Development of curriculum in practice	3.74	.449	.202
Negotiation skills	3.73	.456	.208
Promoting healthy life	3.65	.573	.328
Cooperative guidance	3.65	.573	.328

Research participants reached a high level of consensus in assessing necessary skills that a professional preschool teacher should have, ranging from M= 3.96 (SD= .209) to M=3.65 (SD= .573). In terms of content, said skills fall into three categories:

- **skills in working with children** – recognizing individual needs of children and forming proper spatial-material environment where the highest level of consensus between experts and practitioners was reached(M= 3.96; SD=.209);
- **cooperation skills** – forming good relationships, solving problem situations, cooperation with colleagues, negotiation skills and cooperation with external experts;
- **specific skills** – leading workshops and self-evaluations.

Listed necessary skills are consistent with desirable attitudes of preschool teachers - professionals - and are focused on children and formation of cooperative relationships, as well as very specific skills such as self-evaluation as a prerequisite of quality professional action, and leading workshops that present a modern form of education not only for parents but also for experts. The analysis of obtained results (Table 7) provided us with an answer to the sixth

research question related to necessary skills a preschool teacher who is ready for professional work should have.

When asked which *new competences preschool teachers should adopt to become competitive on the (European) labor market,* research participants provided new, in their opinion, currently underrepresented competences. Research participants did not reach consensus when it comes to the statement that our preschool teachers are already competitive on the labor market. Obtained results are presented in Table 8.

Table 8 New competences and characteristics of preschool teachers (ranked answers)

	Mean	Std. Deviation	Variance
Communicativeness	3.95	.213	.045
Interpersonal competences	3.95	.213	.045
Intrapersonal competences	3.95	.213	.045
Self-confidence and self-respect	3.91	.294	.087
Motivation for learning	3.91	.288	.083
Respect for human rights	3.91	.294	.087
Recognizing special needs of individuals	3.91	.417	.174
ICT competences	3.86	.351	.123
Creativity	3.86	.351	.123
Reflective practice- reflection in action	3.86	.351	.123
Learn how to learn	3.86	.468	.219
Create quality relations with all factors of the educational process	3.86	.351	.123
Communication in one of EU languages	3.83	.388	.150
Awareness on the need for change of personal pedagogies	3.82	.395	.162
Documenting processes	3.82	.501	.251
Self-evaluation	3.78	.422	.178
Critical thinking	3.78	.518	.269
Team work	3.78	.422	.178
Development of professional identity	3.78	.422	.178
Adapting the practice to individual needs of children	3.78	.518	.269
Civic competences	3.75	.550	.303
Present oneself to potential employer in a quality manner	3.74	.449	.202
Use the environment in the learning process	3.74	.449	.202
Strong personality	3.74	.449	.202
Development of curriculum in practice	3.74	.449	.202
Methodic competences	3.74	.541	.292
Negotiation skills	3.73	.456	.208
Cooperative leadership	3.65	.573	.328
Health competences	3.65	.487	.237
Cooperation with external experts	3.61	.499	.249

Results presented in Table 8 show extremely high level of consensus between research participants, ranging from M=3.95 to M=3.61 with maximum SD= .573, and focus on the competences of preschool teachers that can be classified as "personal qualities" and "other characteristics" (Kelly et al., 2004, page 117) of an individual which make that individual competent on a personal and professional level.

- **Personal qualities of preschool teachers** include: interpersonal (communicativeness, readiness to compromise, respect for human rights, empathy, flexibility, accepting differences) and intrapersonal competences (motivation for learning, responsibility for personal development, creativity, self-confidence and self-respect, work on oneself, strong personality).
- **Other (professional) characteristics:** critical thinking, autonomy, reflection, readiness to continuous quality improvements, awareness of the need for changing personal pedagogies, appreciation of creativity, using environmental advantages and development of professional identity.

Large number of personal quality dimensions and other (professional) characteristics, as well as high correlation between responses of practitioners and experts, confirm the hypothesis of a modern preschool teacher as someone who has strong personality and is an excellent professional with educational and inspirational effect on individuals that surround him/her (children, parents, colleagues, etc.), by personal example, and someone who consistently develops their professional identity. Listed personal and other (professional) qualities of preschool teachers represent a vital factor and foundation for development of total capacity of a preschool teacher, which needs and can be developed and improved in the course of formal and permanent professional training by applying proper work methods. Responses to the research questions that read: *Which new competences should preschool teachers adopt in order to become competitive on the (European) labor market?*, provided a number of qualities which the preschool teachers should acquire in the course of their formal education and develop during their permanent professional training in order to competently perform their pedagogic tasks. Although majority of listed qualities should be implied, research participants list them as "new" or currently underrepresented. It is obvious that these competences of preschool teachers were

not paid enough attention in the current formal education, and that is why research participants list them as new and necessary.

Instead of a Conclusion:

"System of professional development of preschool teachers is a never-ending product that constantly evolves based on most recent research so that it could meet, in the best way possible, the needs of those it serves"[5] and we therefore consider it our task to constantly challenge the functionality of that system, with the aim of improving it. The fact that Croatia just became the 28th member state of the European Union is also binding, and greater mobility of preschool teachers on the labor market that is much larger than the one we faced until now is to be expected, and it is therefore necessary to train preschool teachers for the market game. At the same time, migrations from EU to Croatia should also be expected, which will present a special challenge for preschool teachers, who need to be ready to face it. Only those preschool teachers who are strong as persons and are expert professionals aware of their responsibility in the upbringing and education of new generations of children can readily meet the challenges.

Based on presented results it is possible to assume:

- accent in the education of future generations of preschool teachers must be placed on all communication competences and literacy (mother tongue and foreign language literacy, ICT literacy) that contribute to the development of communicativeness, interpersonal and intrapersonal competences. Literacy[6] should be understood not only as the ability to write and read, but also to express oneself and understand complex communication messages and their coding and decoding. Obtained results are consistent with the results of research by Kelly et al. (2002), who also stress the necessity for developed communication competences.
- Strengthen the link between theoretical education and practical competences of students, create a stronger connection and apply theory in practice in the course of studies, which requires the practice (internships) to be distributed all throughout the academic year and "individualize" practice with the aim of developing professional competences of

[5] www.earlychildhood.virginia.gov/documents/competencies.Pdf

[6] http://europa.eu.int/comm/education/policies/2010/et

individuals. Obtained results are also consistent with results of research conducted by Kelly et al. (2002). However, our research, as opposed to the one mentioned, did not reach consensus on the significance of action researches, or the application of qualitative paradigm in researches with the aim of improving theory and practice in early childhood and preschool education.

Stated results, opinions and evaluations of experts and practitioners who are significantly interested in the research field, require a hurried response from the educational policy of the Republic of Croatia.

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