

*Danijela Blanuša Trošelj, Karla Franković, Milena Valenčič Zuljan*

## PRESCHOOL TEACHERS' INVOLVEMENT IN INFORMAL LEARNING AS AN IMPORTANT FACTOR OF THEIR PROFESSIONAL DEVELOPMENT

### ABSTRACT

*Every preschool teacher's activity results in changes in the preschool teacher as well as in the practice. In situations where we have a limited number and form of professional training offered to preschool teachers, whose attendance is not always subject to the personal plan of preschool teachers' professional development, informal learning adds great value to teacher development. This paper aims to examine the involvement of preschool teachers in certain forms of informal learning and their reflection on the impact these forms have on their professional development. The empirical part of the paper presents the results of a survey conducted among preschool teachers. 110 preschool teachers from the Republic of Croatia responded to the questionnaire and we got answers to two research questions. The results show that preschool teachers are most often involved in a form of informal learning which includes agreeing on how to work with a colleague from the group and documenting the children's activities.*

**Keywords:** *informal learning, preschool teachers, professional development*

### VKLJUČENOST VZGOJITELJEV PREDŠOLSКИH OTROK V INFORMALNO UČENJE KOT POMEMBEN DEJAVNIK NJIHOVEGA PROFESIONALNEGA RAZVOJA – POVZETEK

*Vsaka aktivnost vzgojiteljev predšolskih otrok spreminja tako posameznega vzgojitelja kot prakso v vrtcu. V razmerah, ko smo omejeni tako pri številu kot obliki strokovnih usposabljanj predšolskih vzgojiteljev, katerih udeležba v njih tudi ni vedno odvisna od osebnega načrta poklicnega razvoja vzgojiteljev v vrtcu, ima informalno učenje velik pomen za razvoj vzgojiteljev. Namen prispevka je raziskati vključenost*

---

**Blanuša Trošelj Danijela, PhD, Assist. Prof.,** Faculty of Teacher Education, University of Rijeka,  
[danielabl@uniri.hr](mailto:danielabl@uniri.hr)

**Karla Franković,** Preschool Teacher, Kindergarten Snježna pahulja, Fužine,  
[frankovickarla@gmail.com](mailto:frankovickarla@gmail.com)

**Milena Valenčič Zuljan, PhD, Prof.,** Faculty of Education, University of Ljubljana,  
[milena.valencic@pef.uni-lj.si](mailto:milena.valencic@pef.uni-lj.si)

*vzgojiteljev predšolskih otrok v nekatere oblike informalnega učenja in njihov razmislek o vplivu teh oblik na njihov profesionalni razvoj. V empiričnem delu prispevka so predstavljeni rezultati ankete med 110 vzgojitelji predšolskih otrok v Republiki Hrvaški. Na podlagi vprašalnika smo dobili odgovore na dve raziskovalni vprašanji. Rezultati kažejo, da so predšolski vzgojitelji najpogosteje vključeni v informalno učenje, ki zajema dogovor o tem, kako sodelovati s kolegom iz skupine, in dokumentiranje otrokovih dejavnosti.*

**Ključne besede:** *informalno učenje, vzgojitelji predšolskih otrok, profesionalni razvoj*

## **INTRODUCTION**

Today a preschool teacher faces extreme pressures from society's expectations and educational policy (Lohman, 2006). Current times and the new paradigm of early and preschool education (Broström, 2006; Slunjski, 2014) have brought changes to the role of preschool teachers as professionals, with continuous professional development and lifelong learning becoming an imperative of the educational profession. Therefore, it is important to determine the real situation in all domains of the professional development of preschool teachers. This paper is based on informal forms of learning, which are less represented in the field of research but are of great importance in the life of teachers, primarily because of the motivational aspect, accessibility, and the individual approach. The theoretical part will provide an overview of definitions, the position of informal learning in professional development, and consideration of various forms of informal learning. The empirical part, results, and discussion provide insight into the frequency and effectiveness of various forms of informal learning in the preschool teacher's life.

## **THE POSITION AND THE ROLE OF INFORMAL LEARNING IN THE PROFESSIONAL DEVELOPMENT OF PRESCHOOL TEACHERS**

A competent modern preschool teacher is characterised by continuous work on himself/herself in the personal and professional sense, the acquisition of new knowledge and skills needed in their work, the integration of new with already existing knowledge, and their exploration in practice, all of which is accompanied by changes in individual beliefs and, consequently, actions (Vujičić, 2011; Slunjski, 2014). Today's preschool teacher recognizes the importance of questioning his/her own beliefs, experiences, and daily actions (Muraja, 2012), which makes the teacher a researcher of his/her own practice, a theorist in action, a reflective practitioner, an initiator of change, and a professional who continuously works on his/her own personal and professional development.

Many sources (Blanuša Trošelj, 2018; Lawless & Pellegrino, 2007; Piasta et al., 2012) emphasize that the key to the development of a competent practitioner is continuous professional development. In order to constantly adapt to innovations and improve and acquire new knowledge and competencies in accordance with the needs of contemporary society and the profession, continuous professional development and lifelong

learning are an obligation, right, and responsibility of every preschool teacher. Professional development is a lifelong process and includes the development of personal, professional, and social dimensions, changes in one's attitudes and understanding, which influences changes in practice (Valenčič Zuljan, 2001). Professional development is an internal process and should be independent of constraints such as finances and time; it should be voluntary and continuous. The constant of professional development is precisely the development itself, which means that it respects, expands, and complements existing knowledge and competencies. The result of professional development is personal change, i.e., growth and development in the personal and professional sense. The responsibility of each individual for his/her own professional development, therefore, should be entirely on him/her (Horvatić, 2018). What one is made aware of and learns about his/her own actions never disappears from such actions (Sagor, 2000). For what has been learned to be applicable, development must not be reduced to the cognitive level but should also include emotional and psychomotor components (Žorga, 1999). Fortunately, today's preschool teachers increasingly recognise the multidimensionality and importance of their own professional development (Blanuša Trošelj, 2018; Valenčič Zuljan & Blanuša Trošelj, 2014) and are becoming critical in their expectations, reflections, and application of various forms of professional development. Thus, they are becoming active creators of educational policies at all levels. Interestingly, although the effectiveness of professional development is recognised in practice, its adequacy is still questioned in the context of meeting teachers' learning needs (Lawless & Pellegrino, 2007).

Professional development itself can be formal, non-formal, and informal. The paradigm according to which initial education gives knowledge to an individual for their entire career has long been abandoned (Marentič Požarnik, 1987; Valenčič Zuljan, 1999). Today initial education is seen as a formal form of development, which is only the initial, fundamental point in an individual's development. Given the rapid changes in scientific and technological fields, and the inability to anticipate all the needs of a society in the educational context of the future, initial education should focus on the development of the basic system of knowledge and values of the individual. Among them are the importance of critical thinking, resilience, and the competency to learn how to learn.

In the educational profession non-formal learning is most often incorporated into forms of professional development (professional meetings, lectures, workshops, seminars, training, conferences). This form of learning is often imposed, the topics do not necessarily follow the interest of individuals; it is limited in time, financially, and geographically, and is not available to all preschool teachers (Blanuša Trošelj, 2018). But in the event that preschool teachers are given free choice, some will often choose those forms of professional training that are associated with pleasure and entertainment, or those that do not require the questioning and changing of the ways of thinking and practice (Slunjski, 2016). However, the real situation indicates the limited number and form of professional training offered to preschool teachers, whose attendance is not subject to the personal

plan of preschool teachers' professional development but rather to spontaneous selection and compliance with legal requirements (Blanuša Trošelj, 2018). Given the description of the contemporary competent professional and the numerous new preschool teacher roles, many authors emphasize the importance of forms of professional development with transformational potential (Hawley, 2002, as cited in Fatović, 2016). These include those forms of learning that lead not only to changes in knowledge, but also to changes in the mental models of preschool teachers or their implicit pedagogies, i.e., values, beliefs, and attitudes.

In the contemporary context, an organisation that nurtures the professional development of its members is actually a learning organisation, and learning is carried out at the level of the institution, group, and individual (Marsick & Watkins, 2001; Štemberger & Vesel, 2016), not excluding any level of action and development. Yet the literature extensively explores action at the institution level, although the individual level is recognised as crucial and fundamental (Berg & Chyung, 2008). A significant part of development at the individual level is accounted for by informal learning (Krajnc, 2008), although, indirectly, both signify well-being at the organisational level.

Lohman (2006) discusses three forms of informal learning connected to the school context: knowledge sharing, experimentation, and environmental research. Some authors view informal learning from the prism of collaborative learning, while the kind of learning that does not involve sharing with colleagues is called independent, self-directed learning (Jones & Dexter, 2014).

Informal learning can also be viewed as unstructured, spontaneous learning in the workplace that does not have systemic support, and which contributes to changes in knowledge and/or behaviour (Grosemans, Boon, Verclairen, Dochy, & Kyndt, 2015). The authors divide the activities of teachers' informal learning into reflection, learning from others without direct interaction, experimentation or learning through work, and learning from others through interaction. Informal learning is sometimes viewed in the context of all those types of learning that do not take place in a structured form and classroom setting. According to OECD research (2009), it is dialogue that is in the function of the progress of educational work and the most effective method of teachers' professional development. The importance of dialogue for professional development and the resilience of the individual has been confirmed by other research (Day, Sammons, Stobart, Kington, & Gu, 2007; Valenčič Zuljan, 2008). Especially important is informal conversation between novice preschool teachers and mentors (Krajnc, 2006), who, depending on the emotional and professional engagement, often become key people in the professional development of the individual (Blanuša Trošelj, 2018; Valenčič Zuljan & Vogrinc, 2005). On the other hand, among the indirect forms, Neil and Morgan (2003) identify the importance of reading and networking in the professional development of teachers. Informal learning includes several elements of the effectiveness of professional development. Among other things, the possibility of coordination with other activities does not take additional time, i.e., it adapts to the pace of the individual

and responds to his/her needs and the organisation in which he/she operates (Jones & Dexter, 2014).

Informal learning is both the most accessible and the cheapest form of development (Neil & Morgan, 2003). Although it is a form that is the least exclusionary on the basis of geographical location, the level of professional development, size of the institution in which one works, support from a professional service, and so on, it is clear that there may be a difference in the availability of resources. On the other hand, it is important to consider the limitations of such a form since, for example, the Internet often includes questionable data and sources (O'Hara & O'Hara, 2001), and reading excludes interaction with people so that the interpretation of what has been read depends solely on one person and his/her attitudes and knowledge (Neil & Morgan, 2003). In order for the informal learning and professional development of an individual to be effective both initial education and shaping the learning community are important.

Very little empirical research has attempted to connect individual learning to the concept of a learning organisation. Berg and Chyung (2008) investigated the factors that influence informal learning in the workplace and the types of informal learning activities people engage in at work. More specifically, the research examined the relationship between informal learning engagement and the presence of learning organisation characteristics and perceived factors that affect informal learning engagement. On a sample of 125 participants, the study did not find a significant correlation between informal learning engagement and the presence of learning organisation characteristics. While age and education level did not impact informal learning engagement, it was found that older workers tended to engage in more informal learning. The authors conclude that the tacit nature of informal learning makes it a challenging subject to study. It is often so embedded into daily activities that individuals are unable to recognise their informal learning retrospectively.

The Project LiNEA (Learning in Nursing, Engineering, and Accountancy), a longitudinal study of professional accountants, engineers, and nurses during their first three years of full-time employment, found that learning in the workplace was enhanced by improving opportunities for productive engagement in a wide range of work processes (Teaching and Learning Research Program, 2004, 2007, as cited in Vaughan, 2008). Vaughan (2008) highlights that

[a]lthough many of the activities were tacit and difficult to explain, working in groups with people who had different kinds and levels of expertise seemed to help everyone understand the nature of that expertise and make better use of it in their own roles. Thus participants' commitment to their work, their colleagues, and their employers was affected by the quality of support and feedback they received, the appreciation of value of their work and personal sense of action and control. (p. 17)

## **METHOD**

The paper aims to examine the involvement of preschool teachers in certain forms of informal learning and their reflection on the impact of these forms on their professional development.

Based on this, two research questions were singled out:

Q1: How often do the surveyed preschool teachers use certain forms of informal learning?

Q2: How do the surveyed preschool teachers assess the effectiveness of a particular form of informal learning in their professional development and do the surveyed preschool teachers differ in terms of some sociodemographic characteristics (work experience, level of education, involvement in learning communities)?

### **Data Procedures**

The research was conducted in the period from June to August 2019. Data was processed using the SPSS statistical software package (version 22.0.). Measures of descriptive statistics were used to check the differences between participants' involvement in different forms of informal learning. A one-way analysis of variance and Bonferroni's post hoc test are applied to examine whether there are differences in the involvement and effectiveness of informal learning according to the level of study, and work experience, and in cases where the prerequisites are not met (Levene's test), the nonparametric tests Kruskal-Wallis and Mann-Whitney were used. To check the differences between participants according to the field of study, a t-test is applied to examine whether there are differences in the involvement and effectiveness of informal learning according to the preschool teachers' involvement in learning communities.

### **Sample of Participants**

110 preschool teachers from the cities of Rijeka, Opatija, and Kostrena, Republic of Croatia, participated in the research. Of the total number of participants, 99.1% are female. The participants' average length of service is 13.94 years. The range of years of service is from 2 months to 43 years. Four preschool teachers have completed high school (3.6%), 47 undergraduate professional studies (42.7%), 31 undergraduate university studies (28.2%), while 28 preschool teachers have completed graduate studies (25.5%). Of the total number of participants, 60 (54.5%) are included in learning communities, while 50 of them (45.5%) are not.

### **Questionnaire**

A questionnaire comprising of three parts was constructed based on previous research in the field of the informal professional development of preschool teachers and contemporary theoretical knowledge. The first part of the questionnaire contains socio-demographic data on the participants, preschool teachers' work experience, whether they currently work with a group of children up to 3 years or over 3 years of age, involvement in learning

communities, and the level of education. For the purposes of the analysis, the length of service reported by the preschool teachers was divided into three groups. The first group consists of preschool teachers with up to 4 years of work experience, which in principle corresponds to the categories of novice preschool teachers and the first year of a reflective preschool teacher according to the model of professional development (Blanuša Trošelj, 2018). The second category includes preschool teachers with between 5 and 15 years of work experience, i.e., the reflective preschool teacher and advanced preschool teacher, while the third category, with over 16 years of work experience, includes the routine preschool teacher, expert preschool teacher, and veteran preschool teacher, according to Blanuša Trošelj (2018).

The second part of the questionnaire comprises of a scale consisting of 18 items on which the preschool teachers assess how often they perform certain informal learning activities (Table 1). A 5-points Likert scale of frequency of use, ranging from 1 (never used) to 5 (used several times a week), was used to carry out the assessment.

The third part of the questionnaire consists of a scale with the same 18 items but in which preschool teachers assess the effectiveness of informal activities in their professional development. A 5-point Likert scale of effectiveness was used for the assessment, ranging from 1 (not at all) to 5 (greatly effective).

Based on the content and theoretical concept introduced in the theoretical part of this work, we divided the items of the effectiveness of the informal forms of activities in the professional development of preschool teachers into three groups.

The first factor includes the items concerning those forms of informal learning that are often an unconscious contribution to preschool teachers' professional development and include the exchange and sharing of experiences, opinions and materials with preschool teachers who an individual directly interacts with on a daily basis, and we called it *Direct agreement and exchange of experiences*. Cronbach Alpha is 0.830. It consists of six items: *Agreeing on how to work with a colleague from the group*, *Talking to colleagues about problems from practice*, *Joint preparation for work with a colleague from the group*, *Exchanging ideas with colleagues on improving the practice*, *Using social networks to exchange ideas from practice*, and *Sharing incentives and materials with colleagues*.

The second factor includes seven items that describe the application of reflective competencies in order to contribute to the improvement of practice and is therefore called *Reflective practice*. Cronbach's Alpha for this factor is 0.775. It consists of the following items: *Conducting reflections with colleagues on their educational work*, *seeking feedback*, *Observing colleagues and giving feedback on their educational work*, *Documenting children's activities*, *Analysing the collected documentation on children's activities*, *Experimenting with new work methods*, and *Self-reflection on one's own educational work*.

The factor *Learning from others* consists of five items that include different forms of informal learning in which preschool teachers develop their competencies from direct

or indirect forms of learning from others. Cronbach's Alpha for this factor is 0.703. This factor consists of the following items: *Professional visits to other preschools*, *Reading literature in the field of early and preschool education*, *Reading professional journals and articles*, *Reading original scientific papers in the field of early and preschool education*, and *Visiting your colleagues' groups*.

## RESULTS

### Involvement of Preschool Teachers in Informal Forms of Learning

Table 1: Descriptive data on the use of informal forms of learning of preschool teachers

Variable	Rank	M	Sd	Min	Max
Agreeing on how to work with a colleague from the group	1	4.76	0.703	1	5
Documenting children's activities	2	4.62	0.742	2	5
Talking to colleagues about problems from practice	3	4.48	0.832	2	5
Joint preparation for work with a colleague from the group	4	4.47	0.682	1	5
Exchanging ideas with colleagues on improving the practice	5	4.27	0.800	2	5
Sharing incentives and materials with colleagues	6	4.14	0.923	2	5
Using social networks to exchange ideas from practice	7	4.01	1.310	1	5
Self-reflection on one's own educational work	8	3.93	1.115	1	5
Visiting your colleagues' groups	9	3.94	1.152	1	5
Analysing the collected documentation on children's activities	10	3.87	1.024	1	5
Asking children for feedback on the educational practice	11	3.80	1.195	1	5
Reading literature in the field of early and preschool education	12	3.52	0.974	2	5
Reading professional journals and papers	13	3.42	1.044	1	5
Experimenting with new work methods	14	2.90	1.125	1	5
Reading original scientific papers in the field of early and preschool education	15	2.89	1.152	1	5
Conducting reflections with colleagues on their educational work, seeking feedback	16	2.83	1.203	1	5
Observing colleagues and giving feedback on their educational work	17	2.78	1.337	1	5
Professional visits to other preschools	18	1.85	0.792	1	5

The results presented in Table 1 show that preschool teachers are most often involved in those forms of informal learning that do not necessarily aim at the planned acquisition of new knowledge and awareness change, such as *Agreeing on how to work with a colleague*

from the group ( $M = 4.76$ ), *Talking to colleagues about problems from practice* ( $M = 4.48$ ), *Joint preparation for work with a colleague from the group* ( $M = 4.47$ ), *Exchanging ideas with colleagues on improving the practice* ( $M = 4.27$ ), and *Sharing incentives and materials with colleagues* ( $M = 4.14$ ). Most preschool teachers engage in these activities several times a month or several times a week. Those forms of informal learning that we associate with reflective practice and which are characterised by a focus on continuous learning and research practice and changes in the knowledge and implicit pedagogies of preschool teachers show a low involvement of preschool teachers. Thus, preschool teachers are less often involved in *Conducting reflections with colleagues on their own educational work* ( $M = 2.83$ ) and *Observing colleagues and giving feedback on their educational work* ( $M = 2.78$ ). According to the answers of the preschool teachers, it is evident that these activities are most often practiced several times a year. The lowest involvement of preschool teachers is visible in the activity of *Professional visits to other preschools* ( $M = 1.85$ ), which is expected given the different conditions and practices of educational institutions as well as the form of learning that cannot be conducted on a weekly basis. On the other hand, this valuable form of informal learning for the most part remains an activity in which they did not participate once during the course of a year or in which they participate once a year.

Further analysis examined the differences in involvement of preschool teachers in different forms of informal learning regarding their sociodemographic data.

The ANOVA parametric test was applied to examine whether there are statistically significant differences in the involvement of preschool teachers in informal forms of learning regarding the level of their education. The results showed that there are statistically significant differences in only one item, the involvement of preschool teachers in the activity of sharing incentives and materials with colleagues, with regards to the level of education ( $F(3,106) = 4.763$ ,  $p < 0.01$ ). The Bonferroni post hoc test was conducted in order to determine between which groups there are differences, as shown in Table 2. The final result shows that the preschool teachers who have completed graduate studies ( $M = 3.61$ ) are statistically significantly less often involved in the activity than the others (undergraduate university studies ( $M = 4.42$ ) and undergraduate professional studies ( $M = 4.26$ )). There are no statistically significant differences between preschool teachers who completed undergraduate professional studies and undergraduate university studies.

Table 2: Bonferroni post hoc test on the variable *Sharing incentives and materials with colleagues*

Education level (i)	Education level (j)	Mean difference (i-j)	Std. Error	Sig.
Undergraduate professional studies	Undergraduate university studies	-0.164	0.203	1.000
	Graduate studies	<b>0.648*</b>	0.210	<b>0.015</b>
Undergraduate university studies	Graduate studies	<b>0.812*</b>	0.229	<b>0.004</b>

\*The mean difference is significant at the 0.05 level

The t-test was conducted to determine the differences in frequency of involvement in different forms of informal learning regarding the preschool teachers' participation in learning communities. The results show that there are no statistically significant differences in the involvement in different informal forms of professional development between preschool teachers who participate in learning communities and those preschool teachers who do not.

The analysis of variance (ANOVA) was performed to determine whether there is a statistically significant difference in the frequency of using certain forms of informal learning with regards to the category of work experience.

The analysis of the variance showed that there is a statistically significant difference only in the variable *Professional visits to other preschools* ( $F(2,107) = 6.524, p < 0.01$ ). The post hoc test showed that preschool teachers with the most years of service ( $M = 2.13$ ) go on more frequent professional visits than preschool teachers with up to four years of work experience ( $M = 1.48$ ) and those with between 5 and 15 years of work experience ( $M = 1.86$ ).

### Preschool Teachers' Assessment of the Effectiveness of Certain Forms of Informal Learning in Their Professional Development

Table 3: Descriptive data on the effectiveness of the informal forms of preschool teachers' learning in their professional development

Variables	Rank	M	Sd	Min	Max
Direct agreement and exchange of experiences	1	4.3758	.54765	2.83	5
Reflective practice	2	4.2364	.48549	2.86	5
Learning from others	3	4.0673	.61556	1.4	5

As seen in Table 3, all variables in the preschool teachers' assessment of the effectiveness are assigned high values. They assess all forms of informal learning as highly effective in their professional development.

Analysis of variance (ANOVA) was used to determine whether there is a statistically significant difference in assessing the effectiveness of certain forms of informal learning in relation to different levels of preschool teachers' education.

The analysis of homogeneity of the variable *Reflective practice* found that the variables are homogenous (Levene's test = 0.967,  $df=3, p > 0.05$ ). An analysis of the variance showed there is no significant difference ( $F(3,517) = 2.270, p > 0.05$ ) between preschool teachers with different levels of education in terms of the assessment of the effectiveness of using informal forms of learning that include reflective competencies in their professional development.

The analysis of the homogeneity of the variable *Learning from others* found that the variables are homogenous (Levene's test = 0.441,  $df = 3, p > 0.05$ ). An analysis of the

variance showed there is no significant difference ( $F(3,632) = 1.701, p > 0.05$ ) between preschool teachers with different levels of education in terms of the effectiveness of using informal forms of learning and other professionals and associates.

The analysis of homogeneity of the variable *Direct agreement and exchange of experiences* found that the variables are homogenous (Levene's test = 1.42,  $df = 3, p > 0.05$ ). An analysis of the variance showed there is a significant difference ( $F(3,936) = 3.321, p < 0.05$ ) between preschool teachers with different levels of education in terms of the impact direct agreement and exchange of experiences have on the professional development of the individual.

Table 4: Bonferroni post hoc test on groups with different forms of education on the variable *Exchange and agreement*

Dependent variable	(i) Education level	(j) Education level	Mean difference (i-j)	Std. Error	Sig.
Exchange and agreement	Undergraduate professional studies	Undergraduate university studies	-.26356	.12285	.205
		Graduate studies	.16540	.12675	1.000
	Undergraduate university studies	Graduate studies	.42896*	.13843	.015

\*The mean difference is significant at the 0.05 level

The post hoc test shows that they differ in such a way that preschool teachers with undergraduate university studies ( $M = 4.61$ ) assess the effectiveness of *Exchange and agreement* with the highest value, statistically significantly more only than preschool teachers with completed graduate studies ( $M = 4.18$ ).

A t-test was conducted in order to determine if there is a statistically significant difference in assessing the impact of certain forms of informal learning on their professional development regarding preschool teachers' involvement in learning communities. The results show that there is no statistically significant difference between preschool teachers who are involved in learning communities and those who are not in the factors *Reflective practice* on professional development ( $t = -1.316, df = 108, p > 0.05$ ), *Learning from others* ( $t = -0.237, df = 108, p > 0.05$ ) and *Exchange and agreement* as a factor impacting preschool teachers' professional development ( $t = -0.714, df = 108, p > 0.05$ ).

The Kruskal-Wallis test has shown that there is a statistically significant difference between the groups with different work experience concerning the effectiveness of *Reflective practice* ( $\chi^2 = 8.665, df = 2, p < 0.05$ ). The Mann-Whitney test found that the preschool teachers with up to 4 years of work experience ( $N = 33, MR = 46.26$ ) differ statistically significantly in understanding the impact of reflective practice on professional development ( $U = 486.50, Z = -2.478, p < 0.05$ ) when compared to the preschool teachers with

more than 15 years of work experience ( $N = 44$ ,  $MR = 33.56$ ). Also, preschool teachers with up to 4 years of work experience ( $N = 33$ ,  $MR = 39.77$ ) differ statistically significantly ( $U = 337.50$ ,  $Z = -2.669$ ,  $p < 0.01$ ) from preschool teachers with 5 to 14 years work experience ( $N = 33$ ,  $MR = 27.23$ ). Younger preschool teachers, therefore, place a greater value on the reflective practice in their professional development compared to preschool teachers with more years of service. There is no statistically significant difference between preschool teachers with 5 to 14 years of work experience ( $N = 33$ ,  $MR = 38.11$ ) and those over 15 years of work experience ( $N = 44$ ,  $MR = 39.67$ ).

An analysis of the variance shows there is no significant difference ( $F(2,107) = 1.100$ ,  $p > 0.05$ ) between the preschool teachers with different work experience in their assessment of *Direct agreement and exchange of experiences* on the professional development of the individual. Also, there is no significant difference ( $F(2,107) = 0.565$ ,  $p > 0.05$ ) between the preschool teachers of different work experience in terms of the assessment of the effectiveness of informal forms of *Learning from other professionals and associates*.

## DISCUSSION

The preschool teachers assessed that they are most often involved in those forms of informal learning that are not necessarily aimed at acquiring new knowledge and changing awareness and that relate to everyday activities. Since the educational group is usually led by two preschool teachers, it is expected that preschool teachers will be more involved in agreeing on the way of working and joint preparation for work. High involvement is also visible in the preschool teachers' conversations about the problems in practice and its improvement, which agrees with the results of the TALIS (OECD, 2009) survey in which preschool teachers showed a high level of involvement (93%) in informal dialogues with colleagues. Although the research provides insight into the involvement of preschool teachers in these activities, it cannot provide insight into the quality of their informal dialogues and how much these activities really contribute to professional growth and development.

Extremely high involvement of preschool teachers has been shown in the use of social networks to exchange ideas from practice. Given the society in which we live today, it is not uncommon for preschool teachers to contribute to their own professional development in a variety of ways. Social networks can certainly help to connect preschool teachers from different parts of the country and the world, where preschool teachers' different experiences contribute to discussions, a wealth of feedback, and a greater exchange of ideas/advice. The Internet makes it possible to keep up with novelties, and social networks serve as an inexhaustible source of ideas and exchange of opinions on current situations that preschool teachers find themselves in. In addition, this is an affordable and inexpensive form of learning.

Preschool teachers are also involved in reading professional literature and reading professional papers, although they rarely read original scientific papers in the field of early and

preschool education. It is expected that a higher percentage of preschool teachers will be involved in this activity on an annual basis because preschool teachers in educational institutions are more often offered books and professional journals, while original scientific articles often mean self-initiative and activity in finding them, which requires more time and knowledge as well as the availability of sources through which such literature can be obtained. The research of Blanuša Trošelj (2018) linked the number of read sources with work experience, with preschool teachers with less work experience reading more. However, in the present research, there was no statistically significant difference.

Documenting children's activities was assessed with the highest values, which agrees with the results of research carried out by Vujičić and Čamber Tambolaš (2017), showing that this activity is common in the educational practice of preschool teachers. A higher level of preschool teachers' involvement in individual forms of informal learning can be explained by preschool teachers' awareness that professional development is the responsibility of each individual and that changes in practice do not happen without active self-action in this direction. An interesting result was obtained on the item *Asking children for feedback on the educational practice*, where a large number of preschool teachers do so on a weekly or monthly basis, while research by Múñez, Bautista, Khiu, Keh, and Bull (2017) shows that the largest percentage of preschool teachers from Singapore does the same between one and three times a year. The preschool teachers from the research show an awareness of the importance of listening to children and increasing their participation. In contrast, the results showed low values in the field of reflective practice related to the social learning process, i.e., group forms of reflective practice. The lower level of the preschool teachers' involvement in these activities can be explained by the fact that they are still not sufficiently ready for group reflection or to make their practice visible to others, and thus subject to questioning. It is known that reflective practice is a social process, that learning takes place in communion with others and not only on an individual level (Šagud, 2005). A lower level of involvement in these informal learning activities can also be an indicator of unsatisfactory conditions within the institution for their realisation.

Activities in which the preschool teachers are least involved include experimenting with new methods of work and professional visits to other preschools. When it comes to experimentation, research by Múñez et al. (2017) also shows that preschool teachers experiment with new methods of work several times a year, with a small percentage of those never doing so. A low level of involvement in professional visits to other preschools is expected given that professional visits to preschools are organised less frequently and depend on different conditions within educational institutions (Krajnc Dular, 2014; Krajnc Dular & Valenčič Zuljan, 2016). Given that 32.7% of preschool teachers have not yet had the opportunity to participate in this form of informal professional development, it can be concluded that the educational institutions in which they work are less connected with others. The reason may also be that this activity was offered to preschool teachers as a choice, which is why some of them did not have the opportunity to participate or did not recognise this activity as useful for their professional development. TALIS (OECD, 2009) also

shows that professional visits to other preschools are not a common practice of preschool teachers from other countries.

The phase of the preschool teachers' professional development proved to be a key socio-demographic characteristic in this research. The results show that there are no significant differences in the use of different forms of learning, except for professional visits, in which preschool teachers with more experience are more involved. In their model Day et al. (2007) describe novice preschool teachers as learning process-oriented, which may be related to their higher level of involvement in reading original scientific papers, but also fewer visits. A higher level of involvement of expert and veteran preschool teachers agrees with the model of Sheckley and Allen (1991, as cited in Valenčič Zuljan, 2018), who say that preschool teachers in higher stages of professional development more often learn as a transformative process. On the other hand, Sheckley and Allen believe that novice preschool teachers transform the learning process the least, while research results show that novice preschool teachers, along with expert preschool teachers and veterans, are more involved in (self)reflection than preschool teachers in other stages of professional development. Such results indicate the commitment of novice preschool teachers to the learning process and their focus on professional growth and development, which agrees with the model proposed by Day and associates (2007) as well as the model of Blanuša Trošelj (2018).

The preschool teachers who see the highest level of benefits in the exchange of ideas and making agreements are those with completed university undergraduate studies. This may mean that preschool teachers with the obtained graduate level have acquired such a degree of competency that they seek less support and advice from colleagues. In addition, preschool teachers who have completed their undergraduate studies are still young and have fewer years of work experience (university undergraduate studies have been conducted since the academic year 2009/2010) and need more support, which is in line with previous research and professional development models (Blanuša Trošelj, 2018; Day et al., 2007).

Interestingly, involvement in learning communities does not particularly affect the involvement of preschool teachers in informal forms of learning. Given that learning communities are focused on continuous professional growth and development and strengthening the reflective and research capacities of preschool teachers, it was expected that the preschool teachers involved in them would be more involved in informal learning. This brings into question the organisation and quality of the formed learning communities.

## **CONCLUSION**

The establishment of the knowledge society, with its emphasis on knowledge building, determined within recent decades as a consequence of the radical redefinition of the international labour market, has contributed to learning becoming an even more strategic factor for global competitiveness.

Workplace learning is becoming increasingly important in professions. The character of work and workplace as a learning environment is changing. Therefore, it is no coincidence that interest in research has grown in recent decades. In this context, the professional development of the pedagogical staff and the creation of a learning community (the preschool as workplace) is of particular importance. In order for the pedagogical staff – preschool teachers and teachers – to be able to encourage their students and children to innovate and engage in lifelong learning, they themselves must be innovative and committed to their own learning and development throughout their careers. This research has shown that there is a need to strengthen the availability of certain forms of informal learning, such as reading original scientific papers in the field of early and preschool education and reflective practice related to the social learning process. A higher level of involvement of expert and veteran preschool teachers in professional visits have shown that preschool teachers with less experience need to be more involved in this valuable form of informal learning. Informal learning is accessible and recognisable to preschool teachers as useful in their professional development, and must become a recognised part of a quality systematic educational policy, in which the action of preschool teachers is a model for the first step in the lifelong education of children.

It would be useful to subject this topic to qualitative research in the future to achieve a deeper understanding of the results obtained. In this way, the reasons and problems that accompany the low involvement of preschool teachers in *experimenting with new work methods, reading original scientific papers in the field of early and preschool education, conducting reflections with colleagues on their educational work, seeking feedback, observing colleagues and giving feedback on their educational work and professional visits to other preschools* would be revealed, and targeted action could be taken towards a greater involvement of preschool teachers in these informal forms of learning.

## REFERENCES

- Berg, S. A., & Chyung, S. (2008). Factors that influence informal learning in the workplace. *Journal of Workplace Learning*, 20(4), 229–244.
- Blanuša Trošelj, D. (2018). *Professional development of preschool teachers in Croatia* (Doctoral dissertation). Retrieved September 15, 2020, from <http://pefprints.pef.uni-lj.si/5122/1/DOKTORATkonacniPRINTdanijela.pdf>
- Broström, S. (2006). Care and Education: Towards a New Paradigm in Early Childhood Education. *Child Youth Care Forum*, 35(5–6), 391–409.
- Commission of the European Communities. (2001). *Making European Area of Lifelong Learning a Reality. Communication from the Commission*. Retrieved September 15, 2020, from [http://www.europarl.europa.eu/meetdocs/committees/cult/20020122/com\(2001\)678\\_en.pdf](http://www.europarl.europa.eu/meetdocs/committees/cult/20020122/com(2001)678_en.pdf)
- Day, C., Sammons, P., Stobart, G., Kington, A., & Gu, Q. (2007). *Teachers matter. Connecting work, lives and effectiveness*. Retrieved September 15, 2020, from [https://books.google.hr/books?id=Juy8W3MDbkC&printsec=frontcover&hl=hr&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q&f=false](https://books.google.hr/books?id=Juy8W3MDbkC&printsec=frontcover&hl=hr&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false)
- Fatović, M. (2016). Profesija i profesionalni razvoj odgojiteljja. *Školski vjesnik*, 65(4), 623–638.

- Grosemans, I., Boon, A., Verclairen, C., Dochy, F., & Kyndt, E. (2015). Informal learning of primary school teachers: Considering the role of teaching experience and school culture. *Teaching & Teacher Education, 47*, 151–161.
- Horvatić, D. (Ed.). (2018). *Profesionalnost i profesionalni razvoj učitelja, nastavnika i stručnih suradnika*. Zagreb: Hrvatska akademska i istraživačka mreža – CARNET.
- Jones, W. M., & Dexter, S. (2014). How teachers learn: The roles of formal, informal, and independent learning. *Educational Technology Research & Development, 62*(3), 367–384.
- Krajnc, A. (2006). Kdo so bili moji mentorji? kdo mi je lahko mentor? *Andragoška spoznanja, 13*(4), 31–39.
- Krajnc, A. (2008). Odrprtost dostopa do izobraževanja in e-učenje. *Andragoška Spoznanja, 14*(3–4), 31–37.
- Krajnc Dular, S. (2014). *Kolegialno sodelovanje vzgojiteljev kot dejavnik profesionalnega razvoja posameznika in celotne organizacije* (Master's thesis). Univerza v Ljubljani, Pedagoška fakulteta, Ljubljana.
- Krajnc Dular, S., & Valenčič Zuljan, M. (2016). Suradnja odgojitelja različnih vrtića kao oblik kolegijalnog učenja. In N. Tataković, M. Radetić Paić, & I. Blažević (Eds.), *Kompetencijski pristup kvaliteti ranog i predškolskog odgoja i obrazovanja* (pp. 265–279). Medulin: Dječji vrtić Medulin, Fakultet za odgojne i obrazovne znanosti Sveučilište Jurja Dobrile u Puli.
- Lawless, K. A., & Pellegrino, J. W. (2007). Professional Development in Integrating Technology into Teaching and Learning: Knowns, Unknowns, and Ways to Pursue Better Questions and Answers. *Review of Educational Research, 77*(4), 575–614.
- Lohman, M. C. (2006). Factors influencing teachers' engagement in informal learning activities. *Journal of Workplace Learning, 18*(3), 141–156.
- Marentič Požarnik, B. (1987). *Nova pot v izobraževanju učiteljev*. Ljubljana: Državna založba Slovenije.
- Marsick, V. J., & Watkins, K. E. (2001). Informal and incidental learning. *New directions for adult & continuing education, 89*, 25–34.
- Múñez, D., Bautista, A., Khiu, E., Keh, J., & Bull, R. (2017). Preschool Teachers' Engagement in Professional Development: Frequency, Perceived Usefulness, and Relationship with Self-Efficacy Beliefs. *Psychology, Society, & Education, 9*(2), 181–199.
- Muraja, J. (Ed.). (2012). *Priručnik za samovrednovanje ustanova ranog i predškolskog odgoja i obrazovanja*. Zagreb: Nacionalni centar za vanjsko vrednovanje obrazovanja.
- Neil, P., & Morgan, C. (2003). *Continuing Professional Development for Teachers: From Induction to Senior Management*. London: Routledge.
- OECD. (2009). *Creating Effective Teaching and Learning Environments: First Results from TALIS*. Retrieved September 15, 2020, from <https://www.oecd.org/berlin/43024880.pdf>
- O'Hara, L., & O'Hara, M. (2001). *Teaching History 3-11-The Essential Guide*. London, New York: Continuum.
- Piasta, S., Justice, L., Cabell, S., Wiggins, A., Pence Turnbull, K., & Curenton, S. (2012). Impact of professional development on preschool teachers' conversational responsivity and children's linguistic productivity and complexity. *Early Childhood Research Quarterly, 27*(3), 387–400.
- Sagor, R. (2000). *Guiding School Improvement with Action Research*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Slunjski, E. (2014). *Dječji vrtić: zajednica koja uči: mjesto dijaloga, suradnje i zajedničkog učenja*. Zagreb: Spektar Media.
- Slunjski, E. (2016). *Izvan okvira 2: Promjena: od kompetentnog pojedinca i ustanove do kompetentne zajednice učenja*. Zagreb: Element.

- Šagud, M. (2005). *Odgajatelj kao reflektivni praktičar*. Petrinja: Visoka učiteljska škola.
- Štemberger, T., & Vesel, N. (2016). Kako strokovni delavci vrtca vrednotijo stalno strokovno izpopolnjevanje kot element svojega profesionalnega razvoja. *Andragoška Spoznanja*, 22(1), 85–97.
- Valenčič Zuljan, M. (1999). *Kognitivni model razvoja študentov razrednega pouka* (Doctoral dissertation). Univerza v Ljubljani, Filozofska fakulteta, Ljubljana.
- Valenčič Zuljan, M. (2001). Modeli in načela učiteljevega profesionalnega razvoja. *Sodobna pedagogika*, 62(2), 122–141.
- Valenčič Zuljan, M. (2008). *Učitelj na putu profesionalnog razvoja od početnika do eksperta*. Vršac: Visoka škola strukovnih studija za obrazovanje vaspitača "Mihailo Palov" Vršac.
- Valenčič Zuljan, M., & Blanuša Trošelj, D. (2014). Profesionalni razvoj vzgojiteljev z vidika vzgojiteljevih pojmovanj. *Andragoška spoznanja*, 20(1), 43–60.
- Valenčič Zuljan, M., & Vogrinc, J. (2005). Mentorjeva vloga pri spodbujanju profesionalnega razvoja učitelja pripravnika. In T. Devjak (Ed.), *Partnerstvo fakultete in vzgojno-izobraževalnih zavodov: Izobraževanje – praksa - raziskovanje* (pp. 105–127). Ljubljana: Pedagoška fakulteta.
- Vaughan, K. (2008). *Workplace learning: A literature review*. Retrieved September 15, 2020, from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.583.3485&rep=rep1&type=pdf>
- Vujičić, L. (2011). *Istraživanje kulture odgojno-obrazovne ustanove*. Zagreb: Mali profesor, Sveučilište u Rijeci.
- Vujičić, L., & Čamber Tambolaš, A. (2017). Professional development of preschool teachers and changing the culture of the institution of early education. *Early Child Development & Care*, 187(10), 1583–1595.
- Žorga, S. (1999). Kako se razvijamo odrasli? *Socialna pedagogika*, 3(3), 299–317.