Original scientific paper
https://doi.org/10.32903/zs.66.2.1
UDK 371.311.4

FUTURE CLASS-TEACHERS' ATTITUDES TOWARD DIDACTIC VALUES OF COOPERATIVE LEARNING IN CLASS TEACHING

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Abstract

Starting from theoretical perspectives, existing conceptualizations and empirical studies on effects of cooperative learning, we analyse didactic values of cooperative learning in terms of class teaching. It is obvious that didactic values of cooperative learning are almost always analysed from the perspective of the teaching practice, neglecting the attitudes of students – future agents of teaching. With this study, we attempted to find out how future class-teachers' perceive didactic values of cooperative teaching in achieving socio-affective and cognitive objectives of class teaching, and to what extent their gender and year of study influence their perception of the didicatic values of cooperative learning. The study included 394 students of faculties of education in Serbia (Užice, Jagodina and Vranje). The results show that students, future class-teachers have positive attitudes toward didactic values of cooperative learning in terms of achieving socio-affective and cognitive objectives of teaching. We established significant differences in future class-teachers' attitudes, in relation to their gender and the year of study. In the context of the results obtained, we derived pedagogical implications and implications for future studies.

Keywords: cognitive objectives; cooperative learning; socio-affective objectives; student perception.

INTRODUCTION

The search for teaching strategies that will support and encourage cognitive, social and affective development of students has been and will be one of the most important didactic issues in the future. Numerous and consistent empirical validations on the effectiveness of cooperative learning has put this teaching strategy in the focus of theoretical and empirical studies. Despite the controversies that follow the conceptualizations and theoretical assumptions of cooperative learning, we have an increasingly present attitude that under certain conditions, cooperative learning carries a huge didactic potential, the possibilities of which have not been even remotely utilized in achieving socio-affective and cognitive objectives of teaching, and all for the purpose of changing and improving the teaching practice (Gillies & Ashman, 2003; Ševkušić, 1995, 2003). This particularly applies to the abilities of cooperative learning to encourage better student achievement, to improve interpersonal relationships between students, to promote positive attitudes toward students of different gender, abilities and cultural and ethnic origin. In this context, Slavin (2014) underlines and warns that, despite the theoretical base and empirical support that have lasted over three decades, cooperative learning still represents an innovative approach, not a teaching strategy widely accepted by practitioners.

There is not a unified view of what cooperative learning is on the conceptual plan. Identifications of cooperative learning with the implementation of group work and collaborative learning are not rare. By cooperative learning, Ševkušić (2006, p. 183) understands "teaching strategies where students learn in small groups and cooperate with each other to achieve the teaching objectives". Miščević Kadijević (2009b) uses the expressions "cooperative teaching", defining it as a teaching strategy based on direct peer interaction in the organization, and under

the authority of the teacher, who is ready for further involvement in preparing cooperative activities. "Cooperative learning", says Jensen, signifies "the process of active learning where academic and social skills are nurtured through direct student interaction, individual responsibility and positive interdependence" (Jensen, 2003, p. 235). A similar definition was given by David and Roger Johnson (Johnson, Johnson & Smith, 1998), where under cooperative learning, they implied the use of small groups in teaching, for the purpose of achieving objectives and tasks of teaching, and maximizing the learning of all members of the group, provided that the following conditions have been satisfied: positive interdependence, individual responsibility, improving 'face-to-face interaction, practicing social skills and group processing. *Positive interdependence* - means that group members are connected to each other in such a way that they cannot be successful unless each member of the group is successful. *Individual responsibility* – implies the responsibility of every student for his/her own success and independent evaluation of each group member's work. *Improving face-to-face interaction* – means that students involve in various forms of interaction to encourage and assist each other in performing tasks and achieving the mutual goal. *Practicing social skills* – includes active listening, accepting other people's opinions and ideas, negotiation, discussion skills, decision making and conflict management. *Group processing* – implies mutual discussion between group members on interaction and methods to improve mutual relationships and group work.

By reviewing and analysing different definitions of cooperative learning, we can separate the prescriptive and descriptive meaning of this term, where the first indicates that it is a pedagogical method where students cooperate, because they expect positive outcomes of that cooperation, whereas the second meaning indicates the psychological process that recognizes cooperation as the crucial mechanism for successful learning (Dillenbourg, 1999). This paper prefers the prescriptive meaning of cooperative learning, and we particularly distinguish the definition given by David and Roger Johnson, due to essential determinants that make a clear distinction between cooperative learning and the application of group work and related forms of learning.

REVIEW OF RELEVANT LITERATURE

We will use two kinds of sources for the analysis of didactic values of cooperative learning in achieving socio-affective and cognitive objectives of teaching: a) theoretical perspectives that explain the influence of cooperative learning on achieving socio-affective and cognitive objectives of teaching; and b) results of empirical studies on the effectiveness of cooperative learning and studies about students -future teachers' attitudes towards cooperative learning.

In the corpus of prior knowledge, the effectiveness of cooperative learning is analysed from the viewpoint of different theoretical perspectives, among which the greatest influence belongs to the theories of social interdependence, motivational perspective, perspective of social cohesion and the theory of constructivism (Slavin, 1989, 1991, 1996, 2014).

Theoreticians of social interdependence (e.g. Kurt Koffka, Kurt Lewin, Morton Deutsch, David and Roger Johnson) see cooperation as "positive interdependence among individuals' goals" (Johnson et al., 1998, p. 27). Cooperation is the result of promoting interaction, where individuals encourage each other and facilitate each other's efforts to learn (Johnson & Johnson, 2003, 2009). The way in which student interdependence is structured greatly defines communication patterns and student behaviour, which in turn affects the outcomes in the cognitive, affective and social domain.

By the postulates of the motivational perspective, cooperative learning contributes to the achievement of socio-affective and cognitive objectives of teaching, because cooperatively

structured situations imply mutual dependence of the success of the group and the individual success of its members (Slavin, 1996). The success of the group and the individual success of its members are determined by the behavior of the group members, this knowledge is sufficient to motivate students to help, encourage, give explanations to each other, and put in more effort to achieve individual and group objectives.

Theoreticians of social cohesion emphasize the idea that students help each other learn because they care and they want to be successful (Slavin, 1996). Previous empirical support of social cohesion perspective is not consistent (Slavin, 1996). Generally speaking, methods of cooperative learning put emphasis on teambuilding and group processes, but they do not provide specific group rewards, based on each team member's learning effort, and they are not more efficient than traditional teaching methods in terms of student achievement (Slavin, 1996).

A significant contribution to understanding the effectiveness of cooperative learning in achieving cognitive outcomes of teaching is provided by the constructivist perspective. Within this perspective, the two most relevant theories stand out: the theory of Jean Piaget and the cultural-historical theory of Lev S. Vygotsky. The basic assumption of the constructivist perspective is that social interaction improves student cognitive development, because it includes active construction of knowledge and facing different perspectives against one another. Two postulates from the Piaget's system are particularly important for understanding the effectiveness of cooperative learning on student achievement: a) Piaget's understanding of learning; and b) the "cognitive conflict" construct (Piaget, 1960; Piaget, 2002). According to Piaget (2002), learning is a dynamic process where students construct their knowledge by interacting with people and the environment. According to Piaget, cognitive conflict promotes intellectual development, because different student views, arising as the result of discussions on the common task, cause cognitive imbalance, which further encourages students to question their ideas and views, gaining a deeper understanding of the problem that lies in the base of the task. Another significant contribution to understanding the efficiency of cooperative learning in achieving cognitive outcomes of teaching lies in the postulates of the L.S. Vygotsky's social-constructivist perspective. According to this perspective, all higher mental functions have social origins. Vygotsky (1983) underlines that through social interaction with adults and more competent peers, the student can do more than he would be able to do on his own. Namely, "the zone of proximal development" shows that in teaching, one should focus on student's functions that have not fully matured yet. In cooperatively structured learning situations, when students are trying to explain their ideas and opinions to others, they need to reorganize their own understanding, which will often accomplish a better understanding of the problem they are analysing, which stimulates their achievement.

There is a strong empirical support to efficiency of cooperative learning in achieving socio-affective and cognitive objectives of teaching. At the socio-affective level, previous studies have shown that cooperative learning contribute to better interpersonal relationships, greater student self-respect, prosocial student behaviour, better acceptance of the student, development of positive attitudes toward students of different gender, abilities, cultural and ethnic origins, decline in conflicts and constructive resolution of conflicts (according to Ševkušić, 1994). At the cognitive level, the results of previous studies confirm the important influence of cooperative learning on improving student knowledge and skills at all levels of education. For example, in the context of language teaching, it has been proved that cooperative learning improves reading and writing skills, and reading comprehensions skills (Bölükbaş, Keskin & Polat, 2011; Gupta & Ahuja, 2014; Durukan, 2011; Madhu & Jyoti, 2014; Pan & Wu, 2013; Stevens & Slavin 1995a; Stevens & Slavin 1995b; Stevens, 2003; Shafqat & Rana, 2014), written expression (Durukan, 2011; Stevens & Slavin 1995a; Stevens & Slavin 1995b; Stevens, 2003) and vocabulary (Stevens & Slavin 1995a; Stevens & Slavin 1995b; Stevens, 2003). In science and

social studies classes, the implementation of cooperative learning helps acquire more durable declarative and procedural student knowledge (Miščević Kadijević, 2009a, 2009b).

In the second approach, according to the students - future teachers' attitudes, cooperative learning promotes mutual respect (Baker & Clark, 2009; Er & Ataç, 2014), better understanding students of different cultural backgrounds (Baker & Clark, 2009), mutual support and assistance (Er & Ataç, 2014), self-esteem, interaction and collaboration (Maden, 2011), active learning, group discussion, better understanding of the course content, the development of effective learning strategies (Pan & Wu, 2013), individual responsibility and better interpersonal relations (Er & Ataç, 2014). In the context of class teaching, according to the students - future teachers, cooperative learning promotes maximal activation of pupils, their motivation to further learning and effort, better socialization and interpersonal relationships among pupils (Ilić, 2015). Only one study identified the negative attitudes among Chinese future teachers' toward values of cooperative learning singling out the anger and the frustration of students in culturally heterogeneous groups (Baker & Clark, 2009). Some studies have actualized the influence of different factors that determine future teachers' attitudes (Er & Ataç, 2014; Ilić, 2015). One study showed that female - future teachers' in Turkey significantly more positively assess cooperative learning (Er & Ataç, 2014), while another study found that male - future teachers in Serbia more often express the full agreement or disagreement, while female express partial disagreement toward didactic value of cooperative learning in the context of classroom teaching (Ilić, 2015). Two main reasons point to the need to directly research interests toward studying future class-teachers' attitudes toward didactic values of cooperative learning in teaching. First, we have justified disapproval of the fact that educational work in school is mostly based on didactic teaching (Bruner, 2000), within which learning supported by peer interaction is irrelevant for knowledge acquisition, development of skills and personality traits necessary for social and intellectual operation and future work. Second, modern tendencies in reform movements emphasize the need for a different concept of initial teacher education, the focus of which would be on introducing students to and preparing them for the implementation of interactive teaching strategies, such as cooperative learning.

METHODOLOGY

Research Objective and Hypotheses. Research objective is to examine the attitudes of future class-teachers' toward didactic values of cooperative learning in class teaching. We differentiated *four research tasks* from the objective: 1) examine students'-future teachers' attitudes toward didactic values of cooperative learning in terms of achieving socio-affective teaching objectives; 2) examine students'-future teachers' attitudes toward didactic values of cooperative learning in terms of achieving cognitive teaching objectives; 3) examine differences in students'-future teachers' attitudes toward didactic values of cooperative learning in terms of achieving socio-affective teaching objectives in relation to gender and the year of study; and 4) examine differences in students - future teachers' attitudes toward didactic values of cooperative learning in terms of achieving cognitive teaching objectives, in relation to gender and the year of study. In accordance with the defined objective and research tasks, we defined the following *research hypotheses:*

- *H1: More than 51% students'-future teachers' have positive attitudes toward didactic values of cooperative learning in terms of achieving socio-affective teaching objectives*
- *H2: More than 51% students'-future teachers' have positive attitudes toward didactic values of cooperative learning in terms of achieving cognitive teaching objectives*
- *H3: There are differences in students'-future teachers' attitudes toward didactic values of cooperative learning in achieving socio-affective teaching objectives in relation to gender*

H4: There are differences in students'-future teachers' attitudes toward didactic values of cooperative learning in achieving socio-affective teaching objectives in relation to the year of study

H5: There are differences in students'-future teachers' attitudes toward didactic values of cooperative learning in achieving cognitive teaching objectives in relation to gender

H6: There are differences in students'-future teachers' attitudes toward didactic values of cooperative learning in achieving cognitive teaching objectives in relation to the year of study

Sample. Research population consists of all students of faculties of education in Serbia, and the research sample consists of 394 students of the second, third and fourth year, from faculties of education in Užice, Jagodina and Vranje. The sample structure is the following: a) by gender – 49 (12,4%) male and 345 (87,6%) female; and b) by the year of study – 123 (31,2%) students of the second, 141 (35,8%) students of the third and 130 (33,0%) students of the fourth year.

Instrument and Data Processing. In this research, we used the descriptive-analytical method, scaling as the research technique, and a Likert scale as the research instrument. For the purposes of this research, we created a Likert-type scale, which consists of 34 statements arranged in two subtests: 1) *Socio-affective teaching objectives supported by cooperative learning* (α=0,85), and 2) *Cognitive teaching objectives supported by cooperative learning* (α=0,85). The value of Cronbach's alpha on both tests indicates high reliability of the instrument and justifies its use. The first subscale is operationalized through 20 items that relate to interpersonal relationships, prosocial behaviour and self-respect. The second subscale contains 14 items that include different types of student knowledge, opinions and skills. Students expressed a level of agreement, i.e. disagreement on a five-point evaluation scale for each item (I strongly agree – 5, I mostly agree – 4, I'm indecisive – 3, I mostly disagree – 2, I strongly disagree – 1). The data collected in this research were processed with descriptive statistics and one-way analysis of variance.

RESULTS

Although authors agree that cooperative learning offers great possibilities for improving students' social and affective development, there are still no unified views on indicators, based on which we could assess the possibilities of cooperative learning in achieving socio-affective and cognitive teaching objectives. The research has shown that students - future teachers' positively assess the possibilities of cooperative learning in terms of achieving socio-affective objectives of class teaching. Average scores on almost every individual item are above the neutral ($3,50<M<4,34$). As a whole, the results shown in Table 1 indicate that slightly more than two thirds of future class-teachers' (69,33%) assess the indicators given in the first subscale as significant socio-affective objectives of class teaching supported by cooperative learning, 25,07% of future class-teachers' expressed full agreement regarding this issue, and 44,26% expressed partial agreement. In terms of possibilities to achieve socio-affective teaching objectives via cooperative learning, 18,87% students take a neutral position, and 11,80% negatively assess these possibilities.

Table 1. Future class-teachers'attitudes toward the abilities of cooperative learning to achieve socio-affective objectives of teaching

Socio-affective objectives	5	4	3	2	1	M	SD
Learning in small groups leads to better interpersonal relationships among students.	40,4%	52,8%	3,3%	2,3%	1,3%	4.29	.749
Cooperative learning encourages students to help each other.	45,2%	48,2%	2,8%	3,0%	0,8%	4.34	.745
Cooperative learning improves students' self-respect.	19,5%	55,3%	18,3%	5,1%	1,8%	3.85	.850
Cooperative learning develops the ability to adopt the perspective of another member of the group.	9,4%	49,5%	33,5%	6,6%	1,0%	3.59	.789
Cooperative learning contributes to better acceptance of each group member.	26,6%	52,5%	10,9%	8,1%	1,8%	3.94	.926
Working in cooperative groups helps develop mutual trust in students.	24,6%	52,0%	15,0%	6,9%	1,5%	3.91	.926
Students evaluate each other more positively in the conditions of cooperative learning.	23,4%	48,0%	20,1%	6,6%	2,0%	3.84	.925
Cooperative learning helps develop positive attitudes toward students of the opposite gender.	18,0%	43,4%	27,2%	8,6%	2,8%	3.65	.964
Cooperative learning helps develop positive attitudes toward students of different ethnic groups.	19,5%	43,4%	25,1%	8,9%	3,0%	3.67	.986
Cooperative learning doesn't help develop positive attitudes toward students with disabilities.	5,3%	18,5%	29,7%	28,4%	18,0%	3.35	1.132
Cooperative learning improves constructive conflict resolution within the group.	12,4%	48,2%	26,9%	9,9%	2,5%	3.58	.918
Students who work in cooperative groups are less anxious.	18,3%	40,1%	26,9%	11,9%	2,8%	3.59	1.007
Students who work in cooperative groups argue less.	10,4%	31,5%	27,7%	25,6%	4,8%	3.17	1.074
Working in cooperative groups improves communication between students.	44,2%	47,0%	6,1%	1,8%	1,0%	4.31	.753
Cooperative learning improves student socialization.	40,9%	44,2%	9,9%	4,1%	1,0%	4.19	.850
Students who work in cooperative groups make more friends.	37,6%	43,4%	14,0%	3,8%	1,3%	4.12	.876
Working in cooperative groups reduces students' fear of failure.	28,9%	42,6%	19,0%	7,6%	1,8%	3.89	.967
In cooperative groups, withdrawn and shy students open up more.	26,4%	43,9%	17,3%	9,1%	3,3%	3.80	1.032
Students who work in cooperative groups show more tolerance.	25,4%	48,5%	17,5%	7,6%	1,0%	3.89	.903
Students who work in cooperative groups are more willing to listen to others.	28,4%	52,0%	13,5%	4,3%	1,8%	4.01	.867
Total	**25,07**	**44,26**	**18,87**	**9,03**	**2,77**	**3.65**	**.964**

I strongly agree – 5, I mostly agree – 4, I'm indecisive – 3, I mostly disagree – 2, I strongly disagree – 1

Considering the distribution of attitudes, it is evident that future class-teachers' assess the following didactic values of cooperative learning in achieving socio-affective objectives most positively: *cooperative learning encourages students to help each other* (M=4.34); *working in cooperative groups improves communication between students* (M=4.31); *learning in small groups leads to better interpersonal relationships between students* (M=4.29). In cont-

rast, the following didactic values of cooperative learning have been estimated most negatively: *students who work in cooperative groups argue less* (M=3.17); *cooperative learning does not help develop positive attitudes toward students with disabilities* (M=3.35); *cooperative learning improves constructive conflict resolution within the group* (M=3.58) and *students who work in cooperative groups are less anxious* (M=3.59). Generally speaking, future class-teachers' assessed the items related to interpersonal relationships between students most positively.

Over the three decades, research interest was focused on cognitive teaching objectives supported by cooperative learning. Descriptive indicators for individual items and mean values of the scores on the scale (3.62<M<4.36) presented in Table 2, indicate that most future class-teachers' positively assess the possibilities of cooperative learning in achieving cognitive objectives in class teaching. As a whole, results show that over two thirds of future class-teachers' (73,82%) assess items given in the second subscale as significant cognitive objectives supported by cooperative learning, where 26,39% of the future teachers' express full agreement, and 47.43% partial agreement. In terms of possibilities to achieve cognitive teaching objectives through cooperative learning, 18,58% future teachers assume a neutral position, and 7.6% negatively assess these possibilities.

Table 2. Future class-teacher's attitudes toward the possibilities of cooperative learning to achieve cognitive objectives of teaching

Cognitive teaching objectives	**5**	**4**	**3**	**2**	**1**	**M**	**SD**
Cooperative learning activates students to the maximum.	27,2%	54,1%	10,9%	6,1%	1,8%	3,99	.887
In cooperative work, student motivation to learn is maximized.	18,5%	45,7%	23,9%	10,7%	1,3%	3.70	935
Cooperative learning contributes to more durable student knowledge.	21,1%	42,6%	21,8%	12,7%	1,8%	3,69	.999
Students who work in cooperative groups show a higher level of acquisition of the teaching content.	20,1%	48,0%	22,6%	7,4%	2,0%	3.77	.923
Working in smaller cooperative groups makes students forget the teaching content more slowly.	18,3%	43,4%	23,4%	12,4%	2,5%	3.62	1.001
Cooperative learning stimulates the development of student creative thinking.	38,8%	48,0%	10,4%	2,8%	/	4.23	.744
Cooperative learning stimulates the development of student critical thinking.	30,2%	49,2%	14,7%	4,1%	1,8%	4.02	.879
Cooperative learning stimulates the development of student logical thinking.	32,7%	50,8%	13,2%	1,8%	1,5%	4.11	.810
Cooperative learning helps every student to work and develop at his/her own pace.	25,9%	41,6%	20,1%	9,4%	3,0%	3.78	1.031
Cooperative learning improves the development of students' positive attitudes towards teaching subjects.	18,0%	51,0%	23,1%	6,3%	1,5%	3.78	.868
Working in smaller groups helps develop students' skills for resolving problem tasks.	22,1%	54,6%	18,5%	3,0%	1,8%	3.92	.827
In cooperative groups, students are encouraged to present their suggestions and ideas.	47,5%	44,7%	5,1%	2,0%	0,8%	4.36	.739
Experience acquired in cooperative groups improves student achievement.	30,7%	44,9%	21,1%	2,3%	1,0%	4.02	.838
Students who work in cooperative groups express more inventiveness.	18,5%	45,4%	31,5%	3,8%	0,8%	3.72	.818
Total	**26,39**	**47,43**	**18,58**	**6,06**	**1,54**	**3,91**	**.836**

I strongly agree – 5, I mostly agree – 4, I'm indecisive – 3, I mostly disagree – 2, I strongly disagree – 1

Considering the distribution of attitudes (Table 2), it is evident that future class-teachers' have assessed the following didactic values of cooperative learning in achieving cognitive objectives of class teaching most positively: *in cooperative groups, students are encouraged to present their suggestions and ideas* (M=4.36*)*; *cooperative learning stimulates the development of student creative thinking* (M=4.23); *cooperative learning stimulates the development of student logical thinking* (M=4.11). In contrast, future teachers' have assessed the following didactic values of cooperative learning most negatively: *working in smaller cooperative groups makes students forget the teaching content more slowly* (M=3.62); *cooperative learning contributes to more durable student knowledge* (M=3.69); *in cooperative work, student motivation to learn is maximized* (M=3.70). These results may be the consequence of students' belief that cooperative learning situations imply active participation from all members of the group, who exchange ideas and opinions.

With the third research task, we attempted to examine the existence of gender and age-related differences in future class-teachers' attitudes toward the possibilities of cooperative learning to achieve socio-affective teaching objectives. By looking at Table 3, you can observe that future class-teachers' differ in two attitudes only, in relation to gender. The attitude that *students who work in cooperative groups argue less* was more positively assessed by male (55,1%) in comparison to female students (40,0%), and these differences are statistically signi-ficant (F=4.382, p=.037). In contrast, the attitude that *working in cooperative groups improves communication between students* was more positively assessed by female students (92,4%) in comparison to male students (81,6%) (F= 4.501, p=.035). Regardless of the statistical signifi-can-ce of the difference created between mean values of both attitudes is very small and expressed via eta-squared have not found a significant influence of gender on student attitudes toward cooperative learning (Bayat, 2004).

Table 3. Future class-teachers' attitudes toward the possibilities of cooperative learning to achieve socio-affective teaching objectives in relation to gender and the year of study

Socio-affective teaching objectives supported by cooperative learning	**Gender**		**Year of study**	
	F	p	F	p
Cooperative learning improves constructive conflict resolution within the group.	3.047	.082	.471	.625
Students who work in cooperative groups are less anxious.	.000	.997	4.173	.016*
Students who work in cooperative groups argue less.	4.382	.037*	3.076	.047*
Working in cooperative groups improves communication between students.	4.501	.035*	2.254	.106
Cooperative learning improves student socialization.	.440	.507	5.515	.004*
Students who work in cooperative groups make more friends.	2.448	.118	3.821	.023*
Working in cooperative groups reduces students' fear of failure.	2.391	.123	3.032	.049*
In cooperative groups, shy and withdrawn students become more open.	.974	.324	3.880	.021*
Students who work in cooperative groups show more tolerance.	.000	.987	3.319	.037*
Students who work in cooperative groups show more willingness to listen to each other.	2.422	.185	.412	.663

*statistical significance at .05 level

In terms of the year of study, values of the F-test are displayed in Table 3, have reached statistical significance in the case of 7 statements. With the subsequent comparison, achieved by the use of the Tukey's test, we examined between students of that year of study there are significant differences in the evaluation of the didactic possibilities of cooperative learning. The results of this analysis show that attitudes of second-year students (M=3.75) differ significantly from attitudes of third-year students (M=3.40) in terms of the statement that students who work in cooperative groups are less anxious. In terms of the statement that cooperative

learning reduces students' fear of failure, we have found evaluations that are significantly more positive in second year students (M=4.03) compared to third-year students (M=3.75). In addition, second-year students show significantly more positive attitudes (M=4.33) compared to fourth-year students (M=4.00) toward the possibilities of cooperative learning to improve student socialization. We also determined significant differences in attitudes of students from different years of study regarding the assessment that cooperative learning encourages friendships between students, and these significant differences occur between fourth-year students (M= 4.25) and third-year students (M=3.96). In terms of the attitude that through cooperative work, shy and withdrawn students open more, we have found significant differences between fourth-year students (M=3.92) and third-year students (M=3.61). That students who work in cooperative groups argue less is a belief significantly more represented in fourth-year students (M=3.25) than in third-year students (M=2.99). The didactic value of cooperative learning in encouraging tolerance among students is significantly more positively evaluated by fourth-year students (M=4.02) than by third-year students (M=3.74). In general, we have determined significant differences in attitudes on most statements, in favour of fourth-year students.

The objective of the fourth research task was to examine gender and age differences in future class-teachers' attitudes in relation to the possibilities of cooperative learning to achieve cognitive teaching objectives. Values of the F-test, displayed in Table 4, show that future class-teachers differ significantly in the evaluation of four attitudes, in relation to their gender. Female students (89,0%) have a significantly more positive attitude toward the statement that *cooperative learning stimulates the development of creative thinking* than male students (71,5%) (F= 9.945 p=.002). The effect size of this difference is very low and it equals 0.01. In addition, female students (81,2%) assess the attitude that *cooperative learning stimulates the development of student critical thinking* more positively than male students (67,4%) (F=11.558, p=.001). The effect size of the established differences, in relation to gender equals 0.03. A very low effect of gender differences (0.01) in students' attitudes in favour of female students (70,1% compared to 61.2%) was established for the attitude that *cooperative learning stimulates the development of logical thinking* (F=4.823, p=.029). In addition, female students assess the possibility that *cooperative learning helps develop positive attitudes of students toward the teaching subjects* more positively (F=5.326, p=.022). The effect of established gender differences is low and it equals 0.01. Although statistically significant, actual differences in students' attitudes toward didactic values in achieving cognitive teaching objectives are very small in relation to gender and they probably do not have greater practical significance.

Table 4. Future class-teachers' attitudes toward the possibilities of cooperative learning to achieve cognitive teaching objectives in relation to gender and the year of study

Cognitive teaching objectives supported by cooperative learning	**Gender**		**Year of study**	
	F	**p**	**F**	**p**
Cooperative learning activates students to the maximum.	.937	.334	5.939	.003*
Students who work in cooperative groups show a higher level of acquisition of the teaching content.	.057	.812	3.971	.020*
Working in smaller cooperative groups makes students forget the teaching content more slowly.	.489	.485	4.786	.009*
Cooperative learning stimulates the development of student creative thinking.	9.945	.002*	7.433	.001*
Cooperative learning stimulates the development of student critical thinking.	11.558	.001*	.098	.907
Cooperative learning stimulates the development of student logical thinking.	4.823	.029*	.909	.404
Cooperative learning helps every student to work and develop at his/her own pace.	.221	.638	13.886	.000*

Cognitive teaching objectives supported by cooperative learning	Gender		Year of study	
	F	p	F	p
Cooperative learning improves the development of students' positive attitudes towards teaching subjects.	5.326	.022*	6.565	.002*
Working in smaller groups helps develop students' skills for resolving problem tasks.	.001	.979	5.658	.004*
In cooperative groups, students are encouraged to present their suggestions and ideas.	1.89	.169	3.512	.031*
Experience acquired in cooperative groups improves student achievement.	.000	.999	1.545	.215
Students who work in cooperative groups express more inventiveness.	.001	.971	6.179	.002*

*statistical significance at .05 level

One-way analysis of variance resulted in statistically significant differences in the attitude of students from different years of study toward the didactic values of cooperative learning in achieving cognitive teaching objectives on 9 statements. The subsequent comparison with the use of the Tukey's test established statistically significant differences between fourth-year students (M=4.15) and third-year students (M=3.74) in their evaluation of the possibilities of cooperative learning to stimulate student activity. Fourth-year students evaluated that students show a higher level of acquisition of the teaching content in cooperative work more positively (M=3.93) than third-year students (M=3.61) and these differences are statistically significant. In addition, fourth-year students (M=3.82) have significantly more belief that cooperative learning makes students forget the teaching content more slowly than second-year students (M=3.43). It is believed to a greater extent by fourth-year students that the development of student creative thinking can be supported by cooperative learning (M=4.43) in comparison to third-year (M=4.12). In addition to this, there are significant differences between fourth and third-year students in favour of fourth-year students on the item: cooperative learning helps develop positive attitudes of students toward the teaching subjects (M=3.90 compared to M=3.56). Significant differences have been found between second-year students (M=3.98) and fourth-year students (M=3.68) in the evaluation of the possibility of cooperative learning to improve student inventiveness. Significant differences between second and third-year students have been established in the estimation of the didactic values of cooperative learning on 3 items on the subscale: cooperative learning helps every student develop at his/her own pace (M=4.01; M=3.43), working in smaller groups helps develop students' skills for resolving problem tasks (M=4.10; M=3.76) and in cooperative groups, students are encouraged to present their suggestions and ideas (M=4.48; M=4.24). It turned out that second-year students evaluate all three didactic values of cooperative learning more positively.

Discussion

Previous studies (Baker & Clark, 2009; Bayat, 2004; Maden, 2011; Pan & Wu, 2013) suggest that students have positive attitudes toward social values of cooperative learning after having worked in cooperative groups. It turned out that students who learned through the use of cooperative learning assess the indicators of the educational process more positively: quality of interpersonal relationships, willingness to help and cooperate, acceptance and one's personal contribution to work (Buljubašić Kuzmanović, 2009). According to the attitudes of students, cooperative learning encourages mutual respect and exchange of ideas between students, getting to know new friends better and meeting students of different cultural origins (Baker & Clark, 2009), mutual support (Morgan, 2003; according to: Bayat, 2004), self-respect of students, interaction and cooperation between students (Maden, 2011).

Regardless of the fact that we need additional research in order to completely comprehend positive attitudes of students toward didactic values of cooperative learning on the social

and affective development of younger primary school students, we should point out to possible explanations of the results obtained. First, it is possible that the positive attitudes of future class-teachers' are the consequence of the importance given to this teaching strategy in the didactic and methodological group of courses at teacher training faculties. Second, there is an assumption that the organization of professional practice and classroom observation at primary schools give future class-teachers' space to get directly introduced to the application of cooperative learning and its implications on social and affective development of students in junior grades of primary school. Third, it is possible that future class-teachers' attitudes reflect their positive experiences in working as a part of cooperative groups. As the fourth solution, which regularly monitors attitude evaluation, we can single out the possibility of giving socially desirable responses.

On the other hand, future class-teachers' have less positive opinions of didactic values of cooperative learning in terms of possibilities to promote positive attitudes toward students with disabilities, to reduce undesirable social behaviors, constructive resolution of conflicts that follow the work in cooperative groups and students' anxiety. More reserved future teachers' attitudes regarding these didactic values of cooperative learning may be a consequence of greater criticism and awareness of problems and obstacles in implementing cooperative learning. Namely, cooperative student work does not exclude various problems, disagreements and conflicts among students. In addition, students engage in cooperative activities with differently developed social skills, different socially desirable forms of behaviour and emotional problems, which can be distracting for successful group work (Cosden & Haring, 1992). The deficit in skills and socially desirable forms of behaviour is particularly pronounced in students with disabilities. In addition to these circumstances, the nature of their disability often doesn't allow students with disabilities to participate on equal terms and contribute to the group work, which in turn affects the behaviour and the attitude toward work of other group members with typical development.

Although mutually incomparable, the results obtained are in accordance with the results of related research, which suggest positive attitudes of future teachers toward the abilities of cooperative learning to achieve cognitive objectives of teaching. According to previous research, future teachers' attitudes tell us that cooperative learning encourages active learning and group discussion, better comprehension of the teaching content and that it promotes the development of successful teaching (Pan & Wu, 2013). Similarly to university students, students in primary and secondary school positively assess cooperative learning, emphasizing such learning as more useful from the aspect of acquired knowledge (Ghaith, 2003; according to: Bayat, 2004), more interesting and less frustrating for them (Buljubašić Kuzmanović, 2009; Ghaith, 2003; according to: Bayat, 2004). On the basis of the obtained results, we can distinguish four assumptions that could greatly determine more positive attitudes of future class-teachers: a) the influence of subjects from the general and special didactics during initial education; b) the influence of professional practice and classroom demonstration; c) the influence of personal experience in cooperative learning; and d) higher subjectivity of future class-teachers. It is interesting that future class-teachers assess didactic values of cooperative learning in achieving cognitive teaching objectives more positively than in achieving socio-affective objectives of class teaching. This can be interpreted with more pronounced focus of teaching at teacher training faculties toward cognitive effects of cooperative teaching. In general, initial teacher education programmes are designed to focus more on cognitive aspects and education than to the socio-affective domain and upbringing.

Our results are not consistent with the results of some research that have not found a significant influence of gender on student attitudes toward cooperative learning (Bayat, 2004). In terms of the year of study, we established statistically significant differences in future class-teachers' attitudes toward didactic values of cooperative learning. The reason for these results may lie in the assumption that these differences are the result of the fact that fourth-year

students are able to analyse didactic values of cooperative learning more directly compared to second and third-year students, associating this teaching strategy with specific teaching subjects, critically analysing the contents suitable for analysis through student cooperative work. In addition, fourth-year students are more mature, they have more didactic-methodological knowledge and practical experience.

Conclusions

Results of this research show that the majority of future class-teachers show positive attitudes toward the possibilities of cooperative learning in achieving socio-affective and cognitive teaching objectives. By intensity, the highest percent of questioned future class-teachers has moderately positive attitudes toward didactic values of cooperative learning in class teaching. However, future class-teachers' assessments are somewhat more positive when estimating cognitive, not socio-affective objectives of class teaching supported by cooperative learning.

We established gender differences in future class-teachers' attitudes toward didactic values only on two items of the subscale *Socio-affective teaching objectives supported by cooperative learning* and 4 items of the subscale *Cognitive teaching objectives supported by cooperative learning.* In general, female students evaluate didactic values of cooperative learning more positively. Although statistically significant, actual differences between female and male students are very low, so we can conclude that gender has very little influence on students' attitudes toward didactic values of cooperative learning in achieving socio-affective and cognitive teaching objectives.

In terms of the year of study, we established statistically significant differences in future class-teachers' attitudes toward didactic values of cooperative learning in achieving socio-affective and cognitive teaching objectives. Fourth-year students assess values of cooperative learning in class teaching more positively on the majority of statements than second and third-year students.

The analysis of practical recommendations can go in several directions. Regardless of the fact that the results obtained have no direct pedagogical implications on the teaching practice, that they are not valid for designing recommendations for the teaching practice, they are significant from another aspect. The staunchest advocates of cooperative learning are also the best witnesses of insufficient application of this teaching strategy in practice. One of the ways to improve teaching is to introduce students – future teachers to the values of cooperative learning in achieving different teaching objectives during their initial education, in order to accept them. Since personal attitudes may greatly affect teachers' future behaviour, there is a possibility that students may express more willingness to implement different models of cooperative learning in their future work, when they start working with junior students of primary school. Students need to be introduced to alternative models of the organization of teaching, which have a great value from the didactic standpoint. This way, more declarative students' attitudes may grow into their real convictions. Accepting the values of cooperative learning also means the possibility to organize classes on new starting points, which require active construction of knowledge by students and which consider peer interaction a relevant factor of the social, affective and intellectual development of students. Although the highest percent of students expressed positive attitudes, we should not ignore the significant percent of those who expressed indecisive or negative attitudes. Therefore, future interventions in initial student education need to include carefully designed teaching activities of introducing and training students to implement cooperative learning in the conditions of class teaching. We need to work more intensely with students to develop the awareness of the importance of cooperative learning when working with junior primary school students. One direction of

interventions could include the application of cooperative learning programs for changing negative attitudes of students of teacher-training faculties toward the didactic values of this teaching strategy.

Future research should be focused on examining future class-teachers' conceptualization of cooperative learning, their understanding of the mechanisms responsible for realizing socio-affective and cognitive teaching objectives, obstacles and problems in the implementation of cooperative learning in class teaching, experience in working with cooperative groups (overall achievement, experience in learning through the use of cooperative groups), as well on analysing other relevant factors that may shape future class-teachers' attitudes toward cooperative learning, and all for the purpose of better understanding of the analysed problem. From the methodological standpoint, it is necessary to conduct studies on more representative samples.

REFERENCES

Baker, T. & Clark, J. (2009). Cooperative Learning: A Double Edged Sward: A Cooperative Learning Model for Use with Diverse Student Groups. *Business Studies Conference Papers*. Retrieved from https://docplayer.net/40622235-Cooperative-learning-a-double-edged-sword-a-cooperative-learning-model-for-use-with-diverse-student-groups.html

Bayat, O. (2004). *The Effects of Cooperative Learning Activities on Student Attitudes towards English Reading Courses and Cooperative Learning* (Master's thesis). Ankara: Bilkent University.

Bölükbaş, F., Keskin, F. & Polat, M. (2011). The Effectiveness of Cooperative Learning on the Reading Comprehension Skills in Turkish as a Foreign Language. *The Turkish Online Journal of Educational Technology*, *10*(4), 330-335.

Bruner, Dž. (2000). *Kultura obrazovanja*. Zagreb: Educa.

Buljubašić Kuzmanović, V. (2009). Kooperativno učenje kao indikator kvalitete odgoja i obrazovanja. *Život i škola*, *21*(57), 50-57.

Cosden, M. O. & Haring, T. G. (1992). Cooperative Learning in the Classroom: Contingencies, Group Interactions, and Students with Special Needs. *Journal of Behavioral Education*, *2*(2), 53-71.

Dillenbourg, P. (1999). What do you mean by collaborative learning? In P. Dillenbourg (Ed.), *Collaborative learning: Cognitive and Computational Approaches* (pp.1-19). Oxford: Elsevier.

Durukan, E. (2011). Effects of cooperative Integrated Reading and Composition (CIRC) Technique on Reading Writing Skills. *Educational Research and Reviews*, *6*(1), 107-109.

Sühedan, E. & B. A., Ataç. (2014). Cooperative learning in ELT classes: the attitudes of students towards cooperative learning in ELT classes. *International Online Journal of Education and Teaching*, *1*(2), 31-45.

Gillies, R. M. & Ashman, A. F. (2003). An historical review of the use of groups to promote socialization and learning. In R. M. Gillies & A. F. Ashman (Eds.), *Cooperative learning: the social and intellectual outcomes of learning in groups* (pp. 1-18). London and New York: RoutledgeFalmer Taylor & Francis Group.

Gupta, M. & Ahuja, J. (2014). Cooperative Integrated Reading Composition (CIRC): Impact on Reading Comprehension Achievement in English among Seventh Graders. *International Journal of Research in Humanities, Arts, and Literature*, *2*(5), 37-46.

Ilić, M. (2015). Didaktičke vrednosti kooperativnog učenja u razrednoj nastavi iz ugla studenata. *Pedagogija*, *70*(2), 225-238.

Jensen, E. (2003). *Super-nastava: nastavne strategije za kvalitetnu školu i uspješno učenje*. Zagreb: Educa.

Johnson, D. W., Johnson, R. T., & Smith, K. A. (1998). Cooperarive Learning Returns to College: What Evidence is There it Works? *Change*, *30*(4),27-35.

Johnson, D. W. & Johnson, R. T. (2003). Student motivation in co-operative groups: social interdependence theory. In R. M. Gillies & A. F. Ashman (Eds.), *Cooperative learning: the social and*

intellectual outcomes of learning in groups (pp. 136-175). London and New York: Routledge Falmer Taylor & Francis Group.

Johnson, D. W. & Johnson, R. T. (2009). An Educational Psychology Success Story: Social Interdependence Theory and Cooperative Learning. *Educational Researcher*, *38*(5), 365-379.

Maden, S. (2011). Effects of Jigsaw Technique on Achievement in Written Expression Skill. *Educational Sciences: Theory & practice*, *11*(2), 911-917.

Madhu, G. & Jyoti, A. (2014). Cooperative Integrated Reading Composition (CIRC): Impact on Reading Comprehension Achievement in English among Seventh Graders. *International Journal of Research in Humanities, Arts and Literature*, *2*(5), 37-46.

Miščević Kadijević, G. (2009). Kooperativni pristup u nastavi i trajnost učeničkih znanja. *Nastava i vaspitanje*, *58*(4), 499-508.

Miščević Kadijević, G. (2009). Uticaj različitih modaliteta kooperativnih oblika rada na usvajanje deklarativnih i proceduralnih znanja učenika. *Zbornik Instituta za pedagoška istraživanja*, *41*(2), 383-400.

Pan, C-Y. & Wu, H-Y. (2013). The Cooperative Learning Effects on English Reading Comprehension and Learning Motivation of EFL Freshmen. *English Language Teaching*, *6*(5), 13-27.

Piaget, J. (1960). *The moral judgment of the child*. London: Routledge.

Pijaže, Ž. (2002). Učenje i razvoj. In LJ. Miočinović (Ed.), *Pijažeova teorija intelektualnog razvoja* (pp. 171-184). Beograd: Institut za pedagoška istraživanja.

Slavin, R. E. (1990). Research on Cooperative Learning: Consensus and Controversy. *Educational Leadership: journal of the Department of Supervision and Curriculum Development, N.E.A.*, *47*(2), 52-54.

Slavin, R. E. (1991). Synthesis of research on Cooperative learning. *Educational Leadership: journal of the Department of Supervision and Curriculum Development, N.E.A*, *48*(5), 71-82.

Slavin, R. E. (1996). Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary Educational Psychology*, *21*(1), 43-69.

Slavin, R. E. (2014). Cooperative Learning and Academic Achievement: Why Does Groupwork Work? *Anales de Psicología*, *30*(3), 785-791.

Stevens, R. J. & Slavin, R. E. (1995a). Effects of a Cooperative Learning Approach in Reading and Writing on Academically Handicapped and Nonhandicapped Students. *The Elementary School Journal*, *95*(3), 241-262.

Stevens, R. J. & Slavin, R. E. (1995b). The Cooperative Elementary School: Effects on Students' Achievement, Attitudes and Social Relations. *American Educational Research Journal*, *32*(2), 321-351.

Stevens, R. J. (2003). Student Team Reading and Writing: A Cooperative Learning Aproach to Middle School Literacy Instruction. *Educational Research and Evaluation*, *9*(2), 137-160.

Shafqat, A. K. & Rana, N. A. B. (2014). Evaluation of the Effectiveness of Cooperative Learning Method versus Traditional Learning Method on the Reading Comprehension of the Students. *Journal of Research and Reflections in Education*, *8*(1), 55-64.

Ševkušić, S. (1994). Efekti kooperativnog učenja na prosocijalno ponašanje učenika. *Zbornik Instituta za pedagoška istraživanja,* 26, 149-165.

Ševkušić, S. (1995). Teorijske osnove i perspektive kooperativnog učenja. *Zbornik Instituta za pedagoška istraživanja*, 27, 138-156.

Ševkušić, S. (2003). Kreiranje uslova za kooperativno učenje: osnovni elementi. *Zbornik Instituta za pedagoška istraživanja*, 35, 94-110.

Ševkušić, S. (2006). Kooperativno učenje i kvalitet znanja. In S. Krnjajić (Ed.), *Pretpostavke uspešne nastave* (pp. 179-202). Beograd: Institut za pedagoška istraživanja.

Vigotski, L. (1983). *Mišljenje i govor*. Beograd: Nolit.