

# Developing an Assessment Scale for the Characteristics of Cooperative Learning in Language Teaching

Marina Semiz<sup>1</sup> and Radovan Antonijević<sup>2</sup>  
<sup>1</sup>Faculty of Education, University of Kragujevac  
<sup>2</sup>Faculty of Philosophy, University of Belgrade

## Abstract

*This paper describes the development and metric traits of a new research instrument used to examine teachers' assessments of the characteristics of cooperative learning in language teaching in junior grades of primary school (class teaching). We integrated findings obtained through a social-psychological approach on cooperative learning and socio-constructivist outlooks on contemporary teaching and learning into the structure of the Questionnaire – Teacher's Assessment Scale (Q-TAS). In addition, the starting point for the scale's development was the analysis and appraisal of existing instruments based on self-reports or reports of the respondents on the implementation of cooperative learning, particularities of language teaching and class teaching, as well as theoretical analysis of the construct of cooperative learning. The survey included 240 teachers of the fourth grade of primary school who implement cooperative learning in Serbian language classes from 14 districts of Serbia. In line with the theoretical structure of cooperative learning's characteristics, we designed four subscales: Structuring a cooperative task, Forming cooperative groups, Principles of cooperative learning, and Roles and activities of teachers and pupils. The scale's reliability as a whole, as well as the reliability of its constituent subscales was examined by measuring internal consistency, whereas the structural validity of the subscales was examined by means of exploratory factor analysis. In general, given the findings on the reliability and validity of the subscales, we can conclude that the Questionnaire - Teacher's Assessment Scale has satisfactory metric traits, i.e. it is a reliable and valid instrument for examining the characteristics of cooperative learning in current*

*language teaching. Finally, we offer critical assessment and recommendations for further improvement of the developed instruments.*

**Key words:** *assessment scale; class teaching; cooperative learning; language teaching; teachers.*

## Introduction

This paper presents the development and metric traits of the research instrument designed for the purposes of examining teachers' assessments of the characteristics of cooperative learning in language teaching in junior grades of primary school (class teaching). The scale was developed based on the findings on cooperative learning obtained by means of the social-psychological approach (Deutsch, 1949; Johnson & Johnson, 2003, 2009; Johnson, Johnson & Holubec, 1991), socio-constructivist knowledge of teaching and learning (Bruner, 2000; Vygotsky, 1977, 1996), analysis and appraisal of existing instruments for examining the cooperative learning implementation, particularities of language teaching and class teaching, as well as theoretical analysis of the construct of cooperative learning.

In terms of appearance, cooperative learning is as old as man and human society, but as a construct, it arose from social psychology or more precisely, from studying the consequences of cooperation and competition on the basic group processes and behaviour of individuals (Deutsch, 1949). Deutsch was the first scientist to formulate the theory of social interdependence in the 1940s (Deutsch, 1949), built on the foundations of Gestalt psychology, hypothesizing that interdependence can be positive (cooperation), negative (competition), or non-existent (individualism). Cooperation and competition as social relations between at least two people involve goal interdependence. In a competitive situation pupils' goals are negatively interdependent because the fulfillment of one goal is in opposition to the fulfillment of others. In a cooperative situation pupils' goals are positively interdependent because the success of each individual directly depends on the success of other pupils. In a situation where pupils work individually, goal achievement is a personal thing, and the achievements of other students are independent entities. Due to the impossibility of explaining different forms of people's behaviour, especially outside artificial situations, using the structure of the interdependence goal, Johnson and Johnson (Johnson & Johnson, 2003, 2009; Johnson et al., 1991) further developed the theory of social interdependence, with the basic premise that ways in which interdependence is structured determine communication and interaction within a group, as well as final outcomes. For these reasons, they focused their theoretical and research interest on discovering the conditions and assumptions that make cooperative learning effective in terms of individual and group development. Their contribution to the advancement of the idea of cooperative learning is very important, both because of the work on the conceptualization and operationalization of cooperative learning through concrete examples (positive interdependence, stimulating interaction, personal responsibility, social skills and group processing), and the empirical confirmation of

social interdependence theory and its hypotheses on a number of variables (academic achievement, adaptation, social relations, etc.).

Contemporary socio-constructivist outlooks (Bruner, 2000; Vygotsky, 1977, 1996) have significantly changed our understanding of the nature and principles of language teaching, understanding of contemporary teaching methods and learning, and indirectly, our understanding of cooperative learning itself. From the standpoint of social constructivism, teaching and learning are socially and culturally mediated and interdependent processes within which the need for cooperation between participants with different prior knowledge, experience and abilities has been recognized. Therefore, the foundation of the teaching process lies in the social interaction between teachers and pupils, as well as the interaction among pupils aimed at mastering the curriculum content. This interaction has a formative influence on the cognitive development of pupils (Vygotsky, 1977, 1996) so the focus of analysis of modern teaching shifts from outcomes and results toward the teaching process itself. As Vygotsky himself pointed out (Vygotsky, 1996), teaching should be focused toward the next developmental level, so that it anticipates and guides learning and student development. Bruner (Bruner, 2000) placed special emphasis on the elaboration of the teacher's role as a facilitator and partner in the process of joint learning. These characteristics indicated by the discoveries of social constructivism should be imminent for Serbian language teaching in junior grades of primary school, which is based on cooperative learning, especially if we bear in mind the particularities and importance of knowledge and forms of thinking associated with language teaching for the entire educational process and one's future life. In addition to the aforementioned tendencies, socio-constructivist views have promoted a wider application of the teaching methods based on cooperative relations between the participants in a teaching situation, which emphasizes the role of the teacher in guiding and supporting the learning process. At the same time, cooperative learning is recognized as an important teaching method for achieving educational goals. In the theory of social interdependence cooperation exists only between individuals, whereas socio-constructivist findings indicate a broader social and cultural context in the application of cooperative learning. Despite the differences, both the social-psychological standpoint and socio-constructivist conceptions of teaching and learning have influenced further development of the idea of cooperative learning, initiated research into various aspects of cooperative learning, and pointed to its multidimensional nature.

When it comes to the particularities of language teaching in primary education, we need to look at contemporary epistemological findings in teaching methodology as a science of teaching school subjects.

Contemporary epistemological findings associated with teaching, i.e. teaching methodology as a science of teaching school subjects, particularly emphasize two theses: one related to establishing a correlation between complementary sciences on

curriculum structure or revision and defining the teaching content and cognitive learning outcomes; and the other related to content transfer from the original/parent science into the methodological discourse by means of methodological transfer (Kolar Billege, 2020). First, methodology of the mother tongue (Croatian language) is interdisciplinary by its generic structure, because it unites the content of the sciences it was derived from (linguistic sciences) and educational sciences (sociology, pedagogy with didactics, and psychology). For example, Kolar Billege (2020) points to a correlation between the teaching methodology of the Croatian language and its parent science (linguistics), as well as between the teaching methodology of the Croatian language and sociology. As for the correlation between the teaching methodology of the Croatian language and its parent science, Kolar Billege underlines that the program content of language teaching in primary education must meet the principles of a gradual approach, coherence, and relevance required by the linguistic content, i.e. language as a system, with regard to the way it influences language as a standard. The complementary relationship between sociology and teaching methodology of the Croatian language implies several aspects and can be observed at the micro, mezzo, and macro level: a) in educational communication between teachers and students and in communication within the system of methodological implementation; b) in the selection of teaching content with regard to social values, ideology of the ruling social class, and social context in general; c) in the configuration of education systems and their critique; and d) in the development of sociolinguistic competencies. Second, language content transfer is based on the theory of didactic transfer whereby the content from original/parent sciences is associated with the insights and laws of their root scientific disciplines that deal with learning and teaching. In addition, language content mediation implies a selection of adequate, scientifically based methods, procedures, and teaching strategies (Kolar Billege, 2020). Kolar Billege (2016) also believes that the methodological approach to defining teaching content depends on the teaching context and is aimed at mastering linguistic knowledge that allows students to acquire communicative and linguistic competencies. Budinski (2017) expressed similar views, taking into account the content-time framework in the teaching of basic reading and writing skills in the Croatian language in primary education:

Methodological content-time framework optimum in the teaching of basic reading and writing for the purpose of achieving the defined learning outcomes [...] implies determining the necessary teaching content, the most appropriate methodological systems, methods, procedures and time units of teaching (methodological activity, teaching phase, teaching situation) with regard to psycholinguistic awareness (comprehension, production and acquisition of language), and the awareness of other sciences from which methodology of basic reading and writing was derived. (p. 29)

In the course of developing the idea of cooperative learning, different conceptual definitions have been formulated within different sciences. The issue of key determinants

of this complex phenomenon and concept has been singled out as relevant. Even in scientific circles, there is a pronounced plurality when it comes to the meaning of cooperative learning. Sometimes it is defined as a form of learning (Johnson et al., 1991), learning strategy (Kocabaş, 2013), teaching method (Davidson & Major, 2014; Slavin, 1995), teaching strategy (Mišćević-Kadijević, 2009; Ševkušić, 2006), pedagogical approach or concept (Vlahović, 2001). In addition to the plurality of meanings associated with cooperative learning, there is also a pedagogical and psychological approach to its definition. Moreover, there is an evident disagreement among authors about the position of this concept with regard to related concepts, primarily group work and collaborative learning. The plurality of approaches and meanings with which this concept is used, as well as opposing attitudes of different authors as to the position of this concept within the conceptual network can be associated with different applicative contexts of cooperative learning, diversity of theoretical and methodological approaches of the authors, as well as the complexity of the concept itself.

Given that the review of relevant scientific literature has identified different and in some situations even inconsistent applications of the concept of cooperative learning in terms of its content and scope, there was a need to establish a different approach to the definition of the term. In order to shed some light on the substance of cooperative learning in the education of junior primary school pupils and the particularities of native language teaching, the definition of this concept would have to clearly explain the following determinants: a) *relation between teaching and learning*, because they are inseparable processes in any teaching situation and because every participant of the teaching process may find themselves in the role of the teacher, and the role of the student (understanding cooperative learning as a teaching/learning method); b) *structure of the teaching process and learning*, because when working with pupils of junior grades of primary school, there is always a certain degree of structuring in terms of activities, teaching content, teacher and pupil's roles, i.e. learning process guided by the teacher, etc. c) *emphasis on asymmetrical and symmetrical social interactions*; d) *separate elements or principles* which clearly distinguish cooperative learning from similar teaching and learning methods; e) clearly indicated *orientation of cooperative learning toward fulfillment of educational goals* and the overall student development. In this paper, by cooperative learning we mean a *set of teaching and learning methods – with differently structured basic construction parameters, based on asymmetrical and symmetrical interactions where pairs or groups of pupils learn under teacher's guidance or in cooperation with him, in order to achieve common teaching goals in the socio-affective and cognitive domain of student development. This process occurs in the conditions which involve the following necessary elements: positive interdependence, individual responsibility, stimulating face-to-face interaction, practice of social skills and evaluation of group processes.*

In the context of cooperative learning in small groups, there is a selection of different views on: leadership style of the teacher, his/her roles and degree of involvement in the teaching process, power relations between the teacher and pupils, the extent to

which pupils should be trained for group work and group interactions, ways to build knowledge, goals of group work, and the importance of group work from the standpoint of different aspects of personality development (Matthews et al., 1995). Precisely for these reasons, it is necessary to develop an accurate and valid instrument to determine the characteristics of cooperative learning in the current language teaching practice. Despite the impressive number of theoretical and empirical papers dedicated to cooperative learning, only few of them raise the issue of the development and validation of research instruments. Unlike previous studies where the implementation of cooperative learning is equated with the implementation of the basic principles of cooperative learning, and thus examines only the presence of certain principles of cooperative learning in practice, an approach in which the characteristics of cooperative learning are analyzed through their interrelation with the four aspects of its implementation would have special theoretical and scientific significance. Those relevant aspects include: designing a cooperative task, forming cooperative groups, principles of cooperative learning, and roles and activities of teachers and pupils in cooperative learning. The analysis of the selected characteristics of cooperative learning in a specific context and from the teachers' perspective may lead to deeper understanding of cooperative learning's implementation possibilities.

### ***Review of the selected previous research***

Review and analysis of previous research (Atxurra et al., 2015; García et al., 2012; Ghaith, 2002; Hijzen et al., 2006; Ibarra & Rodríguez, 2007; Johnson & Johnson, 1983; Johnson, Johnson, & Anderson, 1983; Yoshida et al., 2016; Kocabas & Erbil, 2017; Parks et al., 2001) indicate that there are no adequate instruments for assessing the characteristics of cooperative learning in language teaching within the first cycle of education which take into account all determinants of cooperative learning and unique traits of native language teaching in junior grades of primary school.

Johnson et al. (Johnson et al., 1983) developed the *Classroom Life Instrument* (CLI) assessment scale which comprises 59 items, where 7 items refer to cooperative learning in general, 10 to positive interdependence, 5 to assessment, and 8 to teacher support. The second version of this instrument introduced a dimension of heterogeneity (Johnson & Johnson, 1983), but did not include all principles of cooperative learning such as group processing, stimulating interaction and social skills. Ghaith (Ghaith, 2002) used an adapted version of the instrument developed by Johnson and Johnson on a student sample, but his study did not confirm the high reliability of this instrument. The adapted version of the instrument comprises 38 statements grouped into 6 categories: cooperative learning, teacher's academic support, teacher's personal support, peer academic support, peer personal support, and alienation. Yoshida et al. (Yoshida et al., 2016) designed an instrument with the aim of determining student anxiety in online cooperative learning. Exploratory factor analysis indicated the presence of three

dominant factors required for understanding student anxiety in online cooperative learning. In line with the content and item saturation, these factors were named as follows: computer anxiety, communication anxiety, and online learning anxiety. Results of the factor and correlation analysis indicate that key factors differ significantly from each other, and that subscales can be used as independent instruments. In addition, it turned out that the scale as a whole possesses high internal consistency and the established subscales high or acceptable internal consistency. Hijzen et al. (Hijzen et al., 2006) developed two instruments and applied them on a sample of secondary school pupils: *Quality of Cooperative Learning* (KCL) and *Conditions for Cooperative Learning* (CCL). The first scale (KCL) comprises 4 subscales, the first two of which relate to the principles of cooperative learning – positive interdependence and social skills, whereas the other two relate to pupil attitudes toward cooperative learning and the quality of group cohesion. The second research instrument (CCL) comprises 3 subscales: the first refers to teacher's behaviour with regard to cooperative learning, and the other two subscales refer to teachers' tasks in providing academic support and encouragement. Although significant, these instruments do not include information regarding group processing and stimulating interaction. Kocabas and Erbil (Kocabas & Erbil, 2017) developed an assessment scale for measuring teachers' competences for implementing cooperative learning. The results of exploratory and confirmatory factor analysis confirmed that the scale's structure comprises three key components named *preliminary and planning*, *implementation process*, and *evaluation* on a sample of teachers who actively implement cooperative learning. In addition, the conducted factor analyses indicated that the scale is a valid and reliable instrument for identifying teachers' competencies needed for the application of cooperative learning methods. Fernandez-Rio et al. (Fernandez-Rio et al., 2017b) designed a new instrument for the assessment of cooperative learning in the educational context (*The Cooperative Learning Questionnaire*) and examined its metric traits on a sample of primary and secondary school pupils (11-18 years). Starting from the five essential principles of cooperative learning, the aforementioned authors included five subscales: stimulating interaction, positive interdependence, individual responsibility, group processing, and interpersonal skills. The results indicated satisfactory convergent and discriminate validity of the instrument, as well as that it can be used as a reliable instrument for assessing all the basic elements of cooperative learning in primary and secondary school pupils. Confirmatory factor analysis showed that all reliability indices are acceptable, even in highly demanding conditions.

Other research instruments are only indirectly related to the fundamental principles of cooperative learning (García et al., 2012; Ibarra & Rodríguez, 2007; Parks et al., 2001) and include items related to pupils' attitude toward group work and organization or effects of group work; in other words, they are not focused on determining the requirements for cooperation. This applies to the instrument (*Cuestionario de Análisis*

*de la Cooperación en Educación Superior: Questionnaire for the Analysis of Cooperation in Higher Education*) developed by García et al. (García et al., 2012) with 49 items which comprise the following dimensions: conception of group work, utility, group work planning by the teacher, criteria for group organization, group rules, internal procedures, and efficiency of group work. Ibarra and Rodríguez (Ibarra & Rodríguez, 2007) focused on the quality of group interaction among university students. Their instrument (*The Autoinforme de Interacción Grupal: Self-Reports on Group Interaction*) comprises nine dimensions: exploratory questions, cumulative reasoning, conflict management, group composition, task characteristics, processes and procedures, individual and group motivation, performance assessment, and general conditions. Parks et al. (Parks et al., 2001) developed an instrument for assessing student perception of cooperative learning. The instrument comprises 34 items on a seven-point scale which represent the operationalization of three aspects: career, academic performance, and personal development outcomes. Exploratory factor analysis revealed three factors which accounted for 58 % of the variance in results, and were categorized as follows: job skills development (9 items), career development (7 items), and academic functions (6 items).

Three research instruments stand out, because they include almost all dimensions relevant for the implementation of cooperative learning in language teaching. We are primarily talking about the *Cooperative Learning Observational Schedule* (Veenman et al., 2002) instrument which is a 23-item observation protocol for measuring ways in which students, future teachers, frame cooperative learning. This instrument comprises 7 components: positive interdependence, individual responsibility, stimulating interaction, social skills, group processing, group work monitoring, and student engagement rate. However, this instrument is designed to assess the application level of cooperative learning carried out by an external observer instead of students - future teachers, teachers or pupils, i.e. direct participants in the educational process. When it comes to the second research instrument – *Student teacher questionnaire*, Veenman et al. (Veenman et al., 2002) designed an assessment scale with 70 statements organized into 4 subscales: readiness of future teachers to implement cooperative learning in the future; advantages of cooperative learning for pupils; positive attitudes toward cooperative learning, and finally, positive attitudes toward group work management. As part of the third relevant research instrument, Atxurra et al. (Atxurra et al., 2015) developed an assessment scale to examine the implementation of cooperative learning in the context of higher education (*Escala de Aplicacion del Aprendizaje Cooperativo: CLAS-Cooperative Learning Application Scale*) based on 7 factors: positive interdependence, stimulating interaction, social skills, group reflection, evaluation, heterogeneity and tutoring. The said instrument was validated on a large sample of 1470 students from two different universities in Chile and Spain. To ensure content validity, the first version of the questionnaire was evaluated by 8 experts. The experts had to indicate



the dimension to which each item was in line with its content, as well as the degree of clarity of its phrasing. The items evaluated as “well defined” by 6 out of 8 experts and entailed by the same dimension were included in the instrument. The final version of the questionnaire comprised 44 items organized into 7 dimensions. Internal consistency of the scale as well as the results of the confirmatory factor analysis indicated highly satisfactory reliability and validity of the instrument’s theoretical structure.

## **Method**

The majority of aforementioned instruments which refer to the application of cooperative learning not only fail to include all the relevant principles of cooperative learning but also fail to provide the data on harmonising the instrument’s theoretical structure and the distribution of empirical data. In most instruments presented here, the theoretical structure of cooperative learning is confirmed neither by exploratory nor confirmatory factor analysis. The only exceptions are the assessment scale for examining the implementation of cooperative learning in higher education developed by Atxurra et al. (Atxurra et al., 2015), the assessment scale for examining the process of cooperative learning developed by Bay and Çetin (Bay & Çetin, 2012), and the assessment scale for examining teacher competencies for the application of cooperative learning designed by Kocabas and Erbil (Kocabas & Erbil, 2017). Moreover, it should be noted that the application of cooperative learning in education is commonly observed in the context of higher levels of education and is often generalized independently of any specific school subject or course. Therefore, there is a need to provide an instrument which measures the characteristics of cooperative learning’s application in native language teaching and class teaching in a reliable and valid manner.

Our interest in studying the properties of cooperative learning in Serbian language teaching (as mother tongue) was prompted by different reasons, but we will single out two main ones. Firstly, mother tongue education helps students to acquire linguistic knowledge and skills and develop linguistic and sociolinguistic competencies vital for their continued education, mastery of other school subjects, and future life in general. Secondly, although there is no systematized knowledge about the frequency, application methods and characteristics of cooperative learning in Serbian language teaching, certain studies (Ilić, 2016) indicate that teachers in primary school mainly implement cooperative learning in Serbian language teaching.

The aim of this study was to design and examine metric traits of the instruments for assessing the characteristics of cooperative learning in language teaching from the standpoint of class teachers (junior grades of primary school). In contrast to previous studies where the application of cooperative learning was examined solely through the frequency of occurrence of certain principles of cooperative learning (Atxurra et al., 2015; Johnson & Johnson, 1983; Fernandez-Rio et al., 2017a, 2017b), this paper will attempt to examine the characteristics of cooperative learning through the prism and

mutual relation of four aspects of its application. For the purposes of this study, we operationalized the characteristics of cooperative learning in Serbian language teaching through four aspects: a) *structuring a cooperative task*, b) *forming cooperative groups*, c) *principles of cooperative learning*, and d) *roles and activities of teachers and pupils in cooperative learning*. We also created four subscales in line with the initial theoretical structure of cooperative learning's characteristics in Serbian language teaching. While the teacher makes decisions with regard to the structure of the cooperative task, he/she also estimates the most adequate way of forming groups for its realization and what principles to employ to ensure cooperative learning, and all these decisions significantly determine both the role of the teacher and pupils. Given the defined research aim, we decided on the analysis at the extracted factors level. The results of exploratory factor analysis of the subscales provide a better insight into teachers' perception of the characteristics of cooperative learning and their harmonization with theoretical assumptions.

### ***The sample***

The study included 240 teachers of the fourth grade of primary school who implement cooperative learning in Serbian language teaching from 14 districts in Serbia (Zlatibor, Moravica, City of Belgrade, Jablanica, Kolubara, Mačva, Pčinja, Pomoravlje, Rasina, Raška, Bor, Šumadija, South Bačka, Nišava). If we look at the structure of the sample (Table 1), we can see that it comprises teachers with different professional experience, where the teachers with more experience are better represented (35,8 % of teachers have between 21 and 30 years of service in education, and 29,6 % have between 11 and 20 years of experience) than those with less experience (16,7 % of teachers have less than 10 years of service). When it comes to education, most teachers have a university degree (63,3 %), followed by those with a college degree (19,3 %), whereas those with a Master's degree are a minority (17,5 %). When it comes to the third observed characteristic, we can see that the sample comprises teachers who implement cooperative learning with different degrees of frequency, where most teachers use cooperative learning once a week (32,9 %), followed by those who implement it three times a month (27,9 %), whereas those who use it on a daily basis are a minority (5,4 %). With regard to the competencies for the implementation of cooperative learning, most teachers believe they possess the necessary competencies to implement cooperative learning (81,2 %), followed by those who are undecided about their competencies (16,7 %), and finally, those who believe they lack the necessary competencies (2,5 %). When it comes to their attitude toward cooperative learning, most teachers have a positive attitude (83,3 %), 12,9 % are undecided, whereas 3,8 % have a negative attitude toward cooperative learning.

Table 1

Structure of the sample with regard to professional experience, professional qualifications, frequency of application of cooperative learning, competencies for application of cooperative learning, and attitude toward cooperative learning.

General teachers' characteristics (n=240)		f	%
Years of service	1-10	40	16.7
	11-20	71	29.6
	21-30	86	35.8
	>30	43	17.9
	Total	240	100.0
Level of education	College degree	46	19.3
	University degree	152	63.3
	Master's degree	42	17.5
	Total	240	100.0
Frequency of implementing cooperative learning	Once a month	37	15.4
	Twice a month	44	18.3
	Three times a month	67	27.9
	Weekly	79	32.9
	Daily	13	5.4
	Total	240	100.0
Competencies for implementing cooperative learning	I am mostly competent	195	81.2
	I am undecided	40	16.7
	I am not competent	5	2.5
	Total	240	100.0
Attitude toward cooperative learning	Positive	200	83.3
	Undecided	31	12.9
	Negative	9	3.8
	Total	240	100.0

## Instrument

To examine the characteristics of cooperative learning in current Serbian language teaching, we designed an instrument which represents a combination of a questionnaire and an assessment scale. With the first part of the instrument we collected data on the social-pedagogical traits of the teachers (years of service, level of education, frequency of application of cooperative learning, and attitude toward cooperative learning). The assessment scale comprised 60 items organized into four subscales: a) *Structuring a cooperative task* (SCTN); b) *Forming cooperative groups* (FCGN); c) *Principles of cooperative learning* (PCLN), and d) *Roles of teachers and pupils in cooperative learning* (RTPN). Teachers expressed their assessment of the frequency, i.e. regularity of cooperative

learning's characteristics in Serbian language teaching on a three-point scale (always (3), sometimes (2), and never (1)). A higher individual score indicates higher regularity of cooperative learning's characteristics in current Serbian language teaching, whereas lower individual scores indicate lower regularity of cooperative learning's characteristics. The pilot study examined the reliability of the scale and the component subscales by measuring the internal consistency, whereas structural validity of the subscales was examined by means of exploratory factor analysis.

## Results

### **Reliability of the assessment scale and its component subscales**

Subscale reliability ranges between 0,65 and 0,93 (Table 2) in the teacher sample. In general, the value of Cronbach's alpha indicates high subscale reliability: *Roles of teachers and pupils in cooperative learning* ( $\alpha = 0,93$ ), and *Principles of cooperative learning* ( $\alpha = 0,79$ ), as well as a satisfactory reliability of the following subscales: *Structuring a cooperative task* (0,65), and *Forming cooperative groups* (0,67). The assessment scale as a whole ( $\alpha = 0,97$ ) and its component subscales satisfy the basic psychometric requirements of reliability.

Table 2

*Descriptive indicators of the reliability of subscales for examining cooperative learning's characteristics in Serbian language teaching in the teacher sample*

Subscales	M	SD	Cronbach's alpha	Statement number
Structuring a cooperative task	20.45	2.111	$\alpha = 0.65$	8
Forming cooperative groups	13.19	1.984	$\alpha = 0.67$	7
Principles of cooperative learning	42.74	4.603	$\alpha = 0.79$	18
Roles of teachers and pupils in cooperative learning	71.38	8.495	$\alpha = 0.93$	27

### **Validity of the assessment scale and its component subscales**

Content validity of the assessment scale and the final selection of items were determined by analysis and deductive evaluation of the expert team (school counsellors, teachers), based on the agreement between different evaluators. Given that the results of the factor analysis of the assessment scale as a whole failed to yield an interpretable solution, we resorted to exploratory analysis of its component subscales. As the result of its application, similar factor solutions were established: varimax, promax and oblimin rotation. Adhering to the criterion of interpretability, we decided on the oblique promax rotation. Prior to conducting the subscale factor analysis, we evaluated data adequacy (Pallant, 2011) with the use of two tests: Kaiser-Meyer-Olkin Measure of Sampling Adequacy (hereinafter KMO) and Bartlett's Test of Sphericity. For the purposes of factor extraction, we used the principal component method, observing the Kaiser-Guttman Criterion (eigenvalue greater than 1) and Cattell Scree Plot. Based on the results of factor analysis, items with correlations under 0,30 were excluded. The results of factor analyses and new subscales' structure are presented further in the paper.

Subscale – Structuring a cooperative task in Serbian language teaching from the teacher's standpoint (SCTN)

The KMO test determined the value of the index:  $K=0,71$ . Bartlett's Test of Sphericity reached statistical significance ( $\chi^2= 261,305$ ;  $df=28$ ;  $p=.000$ ). After the requirements for factor analysis were met, we began the analysis of the main components. This analysis identified the presence of two factors with characteristic values above 1 which explain 30,83 % and 17,15 % of the variance (Table 3). The two-factor solution explained the total variance of 47,95 %. After analyzing the content of the items and saturation of the factors, we named the factors as follows: a) Ways to structure a cooperative task (SCTN1); and b) Type and nature of a cooperative task (SCTN2). The first factor is primarily determined by items which indicate how teachers structure a cooperative task. The second factor includes statements that describe the type and nature of a cooperative task, i.e. statements that primarily determine whether it is a highly-structured or lowly-structured, a highly-cooperative or lowly-cooperative task in Serbian language teaching. There is a positive low correlation between the two factors ( $r=0,27$ ).

Table 3

*The matrix of the factor structure for Structuring a cooperative task in Serbian language teaching (SCTN) task*

Items	Factors	
	1	2
2 The goal of group work is teaching pupils to cooperate.	.799	
4 I provide clear oral instructions for group work to my pupils.	.704	
3 I clearly explain the group task to my pupils.	.659	
1 I clearly explain the aims of group learning to my pupils.	.650	
7 Pupils had a group task of forming a sentence with the given words.		.775
6 Each member of the group received a different task.		.650
8 Pupils had a group task of presenting a song or a story in a different form.		.638
5 I define who will do what and what materials will be used in advance.		.594
Eigenvalues	2.467	1.373
Percentage of the explained variance (Total: 47.95 %)	30.83	17.15

\*factor saturation under 0.30 is not displayed

The first factor predominantly explains teachers' perceptions regarding structuring a cooperative task (30,83 % of the explained variance) and comprises items referring to different ways to structure a cooperative task. Analysis of the content and saturation of the items grouped around the dominant factor highlights the activities of teachers in terms of particularities of defining and explaining group tasks and learning outcomes, as well as providing instructions for cooperative work. When they structure cooperative tasks, teachers strive to teach their pupils to cooperate within a group, they offer

clear oral instructions and guidance, and clearly explain tasks and learning goals of the group. The second factor's content is saturated with items referring to the type and nature of the cooperative task, and is primarily determined by items about the structure of the cooperative task. The analysis of item saturation indicates that the application of cooperative learning in Serbian language teaching is characterized by diverse cooperative tasks in terms of type (highly-structured and lowly-structured) and nature (proper cooperative tasks and individual tasks in a cooperative environment, i.e. lowly-cooperative tasks). There is a pronounced tendency among teachers to create highly-structured tasks (teacher defines the roles and activities of pupils in advance, as well as the duration of activities) more frequently than lowly-structured tasks (teacher determines group role, but leaves the particularities for the pupils to agree on). When it comes to the nature of the cooperative task when teaching the fourth grade, there is a pronounced tendency among teachers to apply smaller cooperative tasks which do not necessarily require cooperation and interdependence, group discussions or shared decision-making, but rather every individual's successful completion of their part, thus making the group task successful as well.

### ***Subscale – Forming cooperative groups in Serbian language teaching from the standpoint of teachers (FCGN)***

Two factors were extracted with exploratory factor analysis which explain 54,81 % of the variance of Forming cooperative groups subscale (Table 4). All factor analysis requirements were met: KMO measure of adequacy is 0,60, and the Bartlett's Test of Sphericity is statistically significant ( $\chi^2= 695,429$ ;  $df=21$ ;  $p=.000$ ). The first factor is predominantly defined by items referring to the size of cooperative groups. Accordingly, this factor was named Size of cooperative groups (FCGN1). All items referring to the composition of cooperative groups based on different ways of their formation (heterogeneous vs. homogeneous) and formation criteria (academic achievement, seating arrangement, etc.) are grouped around the second factor, which is why we named it Composition of cooperative groups (FCGN2). There is a positive correlation of medium intensity between these factors ( $r=0.31$ ).

The first factor – Size of cooperative groups – predominantly defines teachers' perception on the formation of cooperative groups (33.39 % of explained variance) in Serbian language teaching. This factor is in turn primarily determined by the items referring to the size of cooperative groups. Item saturation indicates that teachers determine the size of the groups, i.e. forming small (four members) or large cooperative groups (six members). Content-wise, the second factor – Composition of cooperative groups – comprises items which refer to the composition of cooperative groups according to different grouping criteria. Overview and analysis of the saturation of items comprising the second factor suggest that current Serbian language teaching involves cooperative groups of pupils with different academic achievement and similar

interests, formed on the basis of seating arrangements in the classroom and friendly relations among pupils.

Table 4

*The matrix of the composition of factors for the subscale Forming cooperative groups in Serbian language teaching - FCGN (promax rotation)*

Items	Factors	
	1	2
15 I determine the number of pupils in a group (three or more).	.966	
13 Pupils work in groups of four.	.960	
14 Pupils work in groups of six.	.365	
11 Groups comprise pupils of different academic achievement.		.710
9 Groups comprise pupils with similar interests.		.692
12 Group membership is determined based on the physical proximity in the classroom.		.653
10 Groups are comprised of pupils who are best friends.		.624
Eigenvalues	2.338	1.173
Percentage of the explained variance (Total: 50,16 %)	33.398	16.761

\*factor saturation under 0.30 is not displayed

### ***Subscale – Principles of cooperative learning in Serbian language teaching (PCLN)***

The analysis of the main components identified four factors that explain 50,58 % of the variance of Principles of cooperative learning subscale (Table 5). All factor analysis requirements were met: KMO measure of adequacy is 0,75, and the Bartlett's Test of Sphericity is statistically significant ( $\chi^2= 1025.179$ ;  $df=153$ ;  $p=.000$ ). After analyzing the content and the degree of item saturation, we named the factors as follows: a) Practicing social skills (PCLN1); b) Stimulating face-to-face interaction (PCLN2); c) Personal responsibility and group processing (PCLN3); and d) Positive interdependence (PCLN4). The items which refer to the substance of social skills and point to the importance of practicing social skills for group work are primarily reflected on the first factor. All assumptions about stimulating interaction in cooperative learning, i.e. desirable behaviour (conversation, providing explanations, offering help) for successful group work are grouped around the second factor – Stimulating face-to-face interaction. The third factor is primarily defined by items related to the importance and ways to encourage personal responsibility of students for their own work and for group work, as well as by items that indicate evaluation of the process and group outcomes. In consequence, the third factor was named Personal responsibility and group processing. The fourth factor is defined by items referring to different forms and ways of modelling positive interdependence among group members. In consequence, the fourth factor was named Positive interdependence.

Table 5  
*The matrix of the composition of factors for the subscale Principles of cooperative learning in Serbian language teaching – PCLN*

Items	Factors			
	1	2	3	4
30 I provide specific examples of behaviours desirable for group work.	.746			
29 Group work requires established rules of conduct.	.718			
28 Conflicts constantly arise in a group because some pupils disrupt the work of others.	.685			
31 Ideas of certain pupils are never accepted by other group members.	.625			
27 Conflicts arise in a group because certain pupils refuse to do their part of the task.	.487			
20 Members of the group provide explanations to each other.		.803		
22 Pupils help and encourage one another so as to successfully complete the group task.		.787		
21 Members of the group discuss the solution of the group task with each other.		.722		
26 I always appoint one member of the group to monitor the work of others.			.772	
25 I observe the work of the group and note the contribution of each member to the final outcome.			.604	
32 Members of a group evaluate the work of each individual member and make suggestions for improving their learning.			.598	
33 Each group introduces the class and the teacher to the suggestions for improving the work of their own group.			.490	
24 I randomly pick one member of the group to present the work of his/her group.			.447	
23 Pupils accept responsibility for their part of the task and make things easier for others.			.392	
18 Each group member is awarded/graded based only on the results of the whole group.				.913
19 Each group member is rewarded based on their personal success in the test.				.695
17 Success of one group member affects the success of all other group members.				.647
16 Members of a group are focused on achieving the common group goal (writing a report, etc.).				-.350
Eigenvalues	4.329	1.903	1.517	1.357
Percentage of the explained variance (Total: 50,58 %)	24.049	10.572	8.430	7.539

\*factor saturation under 0.30 is not displayed



When we approached the construction of Principles of cooperative learning subscale, we started from the principles of cooperative learning developed by Johnson and Johnson (Johnson & Johnson, 2003, 2009). According to them, the substance of cooperative learning comprises five principles: positive interdependence, stimulating face-to-face interaction, personal responsibility, social skills, and group processing. Descriptive analysis of the factor score – Practicing social skills – is particularly important, given that this factor predominantly explains teachers' perceptions of the principles of cooperative learning in Serbian language teaching (24,04 % of the explained variance). The first factor comprises items that reflect the essence and importance of pupils' social skills in cooperative work and points to the problems and difficulties that may arise due to their underdeveloped social skills. Teachers emphasize that pupils adhere to the established rules of conduct, that they teach social skills necessary for cooperative work by providing concrete examples of desirable behaviour, and that cooperative group work is often characterized by conflict among pupils (e.g. some pupils refuse to do their part of the task, ideas of certain pupils are never accepted by others, and some pupils always disrupt the work of others). The second factor – Stimulating face-to-face interaction – comprises items that refer to different ways of encouraging quality verbal interaction among pupils in cooperative learning, i.e. desirable forms of behaviour (conversation, providing explanations, offering help) for group success. In most Serbian language classes, teachers structure cooperation by promoting interaction between pupils via encouraging various desirable forms of behaviour, primarily discussions among pupils about the ways to solve a group task, mutual help and encouragement among pupils, and finally, mutual explanations among pupils with regard to the group task. The third factor – Personal responsibility and group processing – is determined foremost by items referring to the importance and ways to encourage personal responsibility of pupils for their own work and the work of the group, as well as items that indicate the importance of evaluation of both the process and group outcomes. The results of factor analysis point to the interesting fact of a close relationship between personal responsibility and group process evaluation. Namely, ways in which pupil's personal responsibility is structured determine ways in which individual and group work are assessed and evaluated (Antić, 2010; Ševkušić, 2003). The fourth factor – Positive interdependence – is defined by items referring to different forms and ways of structuring positive interdependence among group members. Values of item saturation indicate that positive interdependence among pupils is least represented in current Serbian language teaching with regard to other principles of cooperative learning.

We have observed mostly low correlations between the first (Practicing social skills) and the second factor (Stimulating face-to-face interaction), as well as between the second (Stimulating face-to-face interaction) and the third factor (Personal responsibility and group processing). We have also observed negative correlation between the third (Personal responsibility and group processing) and the fourth factor (Positive interdependence).

Table 6  
The matrix of intercorrelations between factors encompassed by Principles of cooperative learning in Serbian language teaching subscale

Factors	PCLN 1	PCLN 2	PCLN 3	PCLN 4
PCLN 1				
PCLN 2	0.40			
PCLN 3	0.28	0.31		
PCLN 4	0.17	0.10	-0.03	

### ***Subscale – Roles of teachers and pupils in cooperative learning in the context of Serbian language teaching from the teachers' standpoint (RTPN)***

Factor analysis isolated three factors that explain 51.36 % of the variance for Roles of teachers and pupils in cooperative learning subscale (Table 7). All requirements for factor analysis were met ( $K=0.92$ ;  $\chi^2=3268.005$ ;  $df=351$ ;  $p=.000$ ). The first factor explains most of the variance (39.85 %) and comprises items on different teachers' roles, primarily planners and organizers of cooperative learning, facilitators of cooperative learning, evaluators of the process and outcomes of cooperative learning, and motivators (RTPN1). In line with the content and saturation of the statements, this factor was named Roles of teachers with regard to goals and outcomes of cooperative learning. The second factor was defined by items related to the role of teachers as regulators of social relations, affective partners in interaction, and their cognitive-diagnostic role. Accordingly, the second factor was named Roles of teachers in relation to pupils as partners in cooperative learning (RTPN2). All assumed items on the role of pupils in cooperative learning were grouped around the third factor – Role of pupils in cooperative learning (RTPN3).

For the purposes of constructing Roles of teachers and pupils in cooperative learning subscale, we used the classification developed by Ivić et al. (Ivić et al., 2001). In this classification, teachers' roles are divided into six categories: the teacher, motivator, evaluator, cognitive-diagnostic role, regulator of social relations in the class as a group, and partner in affective interaction. The initial customized classification of teachers' roles has not been empirically confirmed. Teachers' perception on their own role in cooperative learning doesn't correspond to their theoretical assumptions, so we needed to redefine the initial classification of the teacher's roles. Specifically, the empirical distribution of teachers' answers indicates that their roles can be grouped into two broader categories. The following roles are grouped around the factor that predominantly explains the phenomenon we are researching: teacher's role (teacher as a planner, organizer and facilitator of cooperative learning), motivational role, and the role of the evaluator of cooperative learning. The second factor is defined by items which operationalize the role of teachers as regulators of intergroup social relations, affective partners, and their cognitive-diagnostic role.

Table 7

The matrix of the composition of factors for the subscale Roles of teachers and pupils in cooperative learning in the context of Serbian language teaching – RTPN

Items	Factors		
	1	2	3
38 I provide teaching materials and means for group work.	.823		
37 I determine the timetable and duration of activities in group work.	.786		
35 I teach pupils how to converse and respect each other within a group.	.727		
34 I teach pupils how to solve conflicts within a group.	.713		
40 I encourage group members to discover where they went wrong for themselves.	.689		
39 I arrange the classroom so as to make it adequate for group work.	.675		
36 I teach pupils how to work together as part of a group.	.673		
47 I follow and evaluate the performance of each group and each group member.	.652		
46 I encourage pupils to learn for the sake of learning and new knowledge.	.557		
45 I motivate pupils for group work with praise and rewards.	.552		
48 I monitor and assess relations, cooperation and interaction between group members.	.497		
41 I direct the attention of group members to important things.	.455		
52 I solve conflicts within a group.		.766	
53 I correct undesirable behaviour within a group.		.736	
50. I determine if pupils within a group are ready for certain activities.		.694	
51 I maintain good relations with pupils and help them to establish good intergroup relationships.		.675	
49 I identify group members' interests and preferences.		.650	
42 I encourage interaction and exchange with pupils.		.483	
43 I solve tasks together with the group.		.482	
54 I encourage pupils to share their feelings and experiences about group work.		.415	
44 Pupils have the freedom to talk openly and honestly with the teacher.		.329	
57 It is pupils' duty to listen carefully and take down ideas and solutions of the group.			.722
55 It is pupils' duty to find and provide sources of information (books, etc.).			.662
58 It is pupils' duty to write a group report.			.659
60 It is pupils' duty to observe whether group members work together and participate in group work.			.595
59 It is pupils' duty to control whether group members fulfill their tasks in the allocated time.			.440
56 It is pupils' duty to assess whether members of their group have understood the content being learned, and if yes, to what extent.			.378
Eigenvalues	10.759	1.801	1.308
Percentage of the explained variance (Total: 51,36 %)	39.846	6.670	4.844

\*factor saturation under 0.30 is not displayed

The first factor – Roles of teachers with regard to goals and outcomes of cooperative learning – dominantly explains the researched phenomenon (39,85 %), i.e. represents teachers' assessment of their own roles in cooperative learning. Analysis of the content and saturation of the items grouped around the dominant factor highlights the roles teachers use to create the conditions in which cooperative learning can occur (teacher as planner and organizer of cooperative learning, teacher as lecturer), after which they provide support and aid pupils, guiding the process of cooperative learning (teacher as facilitator, motivator and evaluator of cooperative learning). The second factor – Roles of teachers in relation to pupils as partners in cooperative learning – is defined by items which refer to teachers' role as regulators of social relations, affective partners in interaction, and their cognitive-diagnostic role. In the implementation of cooperative learning teachers encourage interaction and exchange with pupils, lead open and honest conversations with them, encourage pupils to share their feelings and experiences about group learning (teacher as affective partner in interaction); they determine pupils' readiness to perform group activities and discover their interests and preferences (cognitive-diagnostic role); they establish and maintain good relations with pupils and help pupils establish good relations with each other, solve tasks together, and solve conflicts within a group, as well as correct undesirable behaviour within a group (teacher as regulator of intergroup social relations). The third factor – Roles of pupils in cooperative learning – comprises items that refer to pupils' roles. Speaking of which, this factor is saturated with items referring to the pupil who performs different and complementary roles, primarily the role of the scribe/reporter, researcher, evaluator, observer, and supervisor. Teachers use educational procedures to structure different pupils' roles which emphasize their initiative and independence in research, their ability to regulate social relations and behaviours within a group, as well as their ability to control and evaluate group work.

Table 8  
*The matrix of intercorrelations between the factors of Roles of teachers and pupils in cooperative learning subscale*

Factors	RTPN 1	RTPN 2	RTPN 3
RTPN 1			
RTPN 2	0.60		
RTPN 3	0.52	0.50	

We have observed a statistically significant, high correlation between the factors (Table 8).

## Discussion

In general, the results of factor analysis indicate that teachers' perceptions of structuring cooperative tasks largely coincide with the initial theoretical knowledge; in other words, there is an agreement between the conclusions arising from descriptive analysis of the extracted factors and theoretical assumptions. In terms of structuring

cooperative tasks, teachers' perceptions are grouped around two key aspects: a) ways of structuring a cooperative task (how teachers design cooperative tasks); and b) cooperative task's structure (what elements make the structure and substance of a cooperative task). Also, descriptive analysis of the extracted factors further implies that teachers' perceptions are mostly focused on ways to structure a cooperative task, whereas the structure itself remains in the background. It should be noted that no single way of structuring a cooperative task exists, and consequently, there is no cooperative task's structure inherently better or more effective than the others; instead, certain theoretical solutions have greater educational potential for the attainment of certain teaching goals regarding student development. The third interpretation substantiated by the results of factor analysis indicates the possibility that teachers make decisions on structuring cooperative tasks in an actual school, i.e., social and cultural context which is often characterized by unfavorable circumstances in terms of didactic-methodological, temporal and spatial organization of teaching. Teachers' perceptions regarding structuring cooperative tasks implicitly point out to their beliefs about the potential and actual developmental capabilities of their pupils. Teachers' perceptions, especially those related to the structure of cooperative tasks, reveal that in Serbian language teaching teachers commonly use solutions with less educational potential for initiating and developing the knowledge and mental processes of higher quality in their pupils. Moreover, in the actual school environment, teachers' decisions regarding the structure of learning tasks depend on a number of parameters, primarily the nature of the teaching content, lesson goals, organization of teaching, as well as personal traits of both teachers and pupils (Antić, 2010; Ivić et al., 2001).

In terms of a cooperative task's formation, teachers' perceptions are grouped around two key aspects: size and composition of cooperative groups. Furthermore, the factor analysis yielded another significant result which shows the teachers' standpoint of the size of a group being more important than its composition in the process of group formation in Serbian language teaching. We can assume that teachers largely consider numerous advantages of working in smaller groups in class teaching (e.g. possibility of achieving better interaction and more balanced participation of all group members), or that their perceptions are shaped by more practical reasons for which they believe smaller cooperative groups are easier to form, organize and monitor.

If we take the results of factor analysis as well as initial theoretical assumptions into account, we can conclude that the theoretical model of the cooperative learning principles developed by Johnson and Johnson (Johnson & Johnson, 2003, 2009) has been largely empirically confirmed. In contrast to the theoretical model which predicts five principles of cooperative learning, empirical data indicate four principles, whereby the items related to the importance of personal responsibility and group processing are grouped around the same factor. Another interesting discovery of factor analysis is the contribution of each principle in the explanation of cooperative learning's characteristics in Serbian language teaching. Although the principles are not hierarchically arranged in

the theoretical model, positive interdependence stands out as the fundamental principle and prerequisite for other principles. The results of factor analysis indicate that positive interdependence of all principles of cooperative learning explains only the smallest percentage of the cooperative learning's characteristics in Serbian language teaching. In contrast, teachers' perceptions indicate the greatest proportion of social skills and stimulating interaction between pupils in the interpretation of cooperative learning's characteristics in Serbian language teaching. There are two possible explanations of the results of factor analysis. Firstly, given the unique features of Serbian language teaching, i.e. the nature of the teaching content of cooperative learning (literature, spelling, grammar), as well as the particularities of the learning context (which focuses on communication, interaction and exchange of information, meanings and interpretations among pupils), it is understandable that teachers' perceptions indicate the dominance of social skills and stimulating interaction among pupils over other principles of cooperative learning. Secondly, there is an assumption that teachers' perceptions regarding the principles of cooperative learning are largely shaped by their beliefs about the theory of group dynamics which underlines the key role of social skills for overall human development. Previous research has confirmed the assumption about the development and improvement of pupils' social skills through cooperative learning (Ahmadpanh et al., 2014; Ferrer, 2004; Lavasani et al., 2011; Mendo-Lázaro et al., 2018; Mitchell et al., 2003), and the importance of quality interaction between pupils for both individual and group success (Gillies et al., 2008). According to the teachers and the results of factor analysis, pupils generally accept responsibility for their own part of the task, thus trying to make things easier for the other members of their group, with the most common way to encourage pupils' personal responsibility being random selection of a group member to present the group results. However, the data also indicate insufficiently specified reference criteria for assessing the personal responsibility of pupils and group processes and activities in general. In the evaluation of group processes and activities, it is noticeable that it is mainly carried out at individual level (group considers how an individual learns and how to improve their performance), while neglecting group evaluation and decision making aimed at improving group performance, and consequently their success. If the evaluation of the processes and results of a cooperative group is based solely on the evaluation of individual achievement, or solely on group results, there is a definite possibility that the potentials of cooperative learning will not appear at all or that inappropriate forms of competition will develop within a group or between different groups (Boud et al., 1999). It is interesting to note that in the current implementation of cooperative learning positive interdependence mostly relies on a system of rewards based on the final group product, somewhat less on the contribution of each member to the performance of the group, whereas it is based the least on the group's common goal. It is assumed that teachers' perceptions about the importance of positive interdependence among group members are largely shaped by the motivational perspective (Watson, 1992), according

to which the reward structure is the key element for explaining the effectiveness of cooperative learning. In addition, it is also assumed that teachers believe extrinsic motivation (e.g. rewards) is a more important catalyst of cooperative activities among pupils in class teaching, compared to intrinsic motivation.

Teachers' perceptions regarding their own role and the role of pupils in cooperative learning indicate two important conclusions. The first significant insight arising from the results of factor analysis refers to the structure of teachers and pupils' roles in cooperative learning. Namely, the empirical distribution of teachers' responses does not support the initial and adapted classification into six different teacher's roles. Teachers do not perceive or assess most of their roles in cooperative learning as separate or independent roles. Contrary to theoretical conceptualization, teachers' perceptions about their own roles in cooperative learning can be grouped into two broad categories. In the first category, teachers combine the role of a teacher (teacher as a lecturer, planner and organizer, facilitator of cooperative learning), motivator, and evaluator. The second category entails the teacher as a regulator of intergroup social relations, an affective partner in interaction, and the teacher's cognitive-diagnostic role. Through the realization of the roles from the first group, teachers' activities and procedures are prefocused on the content, goals and outcomes of cooperative learning. This generates conditions in which cooperative learning can occur, after which teachers guide the process of cooperative learning by providing support and help to pupils. Through realization of the roles from the second group, teachers are focused on their pupils, they build social and affective relations, i.e. teacher-pupil and pupil-pupil interactions. Another important conclusion supported by the results of factor analysis indicates teachers' dominance over pupils in cooperative learning.

## **Conclusion**

The findings on the validity and reliability of the subscales yield a general conclusion that the Questionnaire for Teacher Assessment Scale possesses satisfactory metric traits, i.e. it is a valid and reliable instrument for examining the characteristics of cooperative learning in current Serbian language teaching. Subscales based on the factors' composition matrix possess satisfactory indicators of reliability and homogeneity. The results of exploratory factor analysis support the initial operationalization of the characteristics of cooperative learning in junior primary school language teaching (class teaching). In addition, the instrument can be significant for clarifying problems and obstacles teachers encounter when they implement cooperative learning in junior primary school language teaching, and it may have indirect implications for the professional development and initial education of future teachers.

There is a need to improve the research instrument in terms of item content, as well as the possibility to upgrade the subscales into separate and independent instruments. The next step toward improving the constructed instrument involves its application in future research with different teacher samples (subject teachers, foreign language

teachers, etc.). Moreover, any future research should consider the possibility of linking the characteristics of cooperative learning in language teaching with different training programs where teachers can learn how to apply cooperative learning, and with different implicit beliefs of teachers about cooperative learning. There is also a need to examine the convergent validity of the subscales and use the techniques of confirmatory factor analysis to examine the structure of cooperative learning's characteristics in language teaching.

The results indicate satisfactory metric traits of the scale and its component subscales and support understanding of cooperative learning as a multidimensional construct whose content combines the nature and substance of cooperative learning, particularities of language teaching and teaching in junior grades of primary school, as well as the context in which cooperative learning is applied. The socio-constructivist conclusions presented in this paper indicate that cooperative learning always occurs in a context shaped by social, cultural, economic and political influences of micro and macro scope. For these reasons, any application of cooperative learning will be shaped by numerous factors which modify its course, process and results. This makes it impossible to make generalizations that would equally apply in all educational situations, regardless of the specifics of the teaching process and the education system in general. Moreover, educational values of cooperative learning as a teaching and learning method are not defined in advance; instead, a teacher develops the cooperative learning method in a real context and with intention to support certain teaching goals and initiate the desired forms of learning. The insight and knowledge arising from the socio-constructivist understanding of contemporary teaching and learning, as well as social-psychological knowledge of cooperative learning, must be taken into account in the construction of research instruments and their interpretation.

## References

- Ahmadpanh, M., Soheili, S., Jahangard, L., Bajoghli, H., Haghghi, M., Holsboer-Trachsler, E., Conrad, D., Brand, S., & Keikhavandi, S. (2014). Cooperative learning improves social skills and knowledge of science topics in pre-adolescent children in Iran. *British Journal of Education, Society & Behavioural Science*, 4(8), 1029-1037. <https://doi.org/10.9734/BJESBS/2014/8136>
- Antić, S. (2010). *Kooperativno učenje: modeli, potencijali, ograničenja [Cooperative learning: Models, potentials, limitations]*. Institut za psihologiju Filozofskog fakulteta Univerziteta u Beogradu.
- Atxurra, C., Villardón-Gallego, L., & Calvete, E. (2015). Diseño y validación de la Escala de Aplicación del Aprendizaje Cooperativo (CLAS). *Revista de Psicodidáctica*, 20(2), 339-357. <https://doi.org/10.1387/RevPsicodidact.11917>



- Bay, E., & Çetin, B. (2012). İşbirliği süreci ölçeği (İSÖ) geliştirilmesi. *Uluslararası İnsan Bilimleri Dergisi*, 9(1), 1063-1075.
- Boud, D., Cohen, R., & Sampson, J. (1999). Peer learning and assessment. *Assessment & Evaluation in Higher Education*, 24(4), 413-426. <https://doi.org/10.1080/0260293990240405>
- Bruner, Dž. (2000). *Kultura obrazovanja [The Culture of Education]*. Eduka.
- Budinski, V. (2017). Podloge za standardiziranje optimalnoga metodičkog sadržajno-vremenskog okvira za poučavanje početnoga čitanja i pisanja na hrvatskom jeziku [Foundations for standardising optimal methodological content-time frame for teaching initial reading and writing in Croatian]. *Napredak*, 158(1-2) 11–32.
- Davidson, N., & Major, C. H. (2014). Boundary crossings: Cooperative learning, collaborative learning, and problem-based learning. *Journal on Excellence in College Teaching*, 25(3-4), 7-55.
- Deutsch, M. (1949). A theory of cooperation and competition. *Human Relations*, 2, 129-152. <https://doi.org/10.1177/001872674900200204>
- Fernandez-Rio, J., Sanz, N., Fernandez-Cando, J., & Santos, L. (2017a). Assessing the long-term effects of cooperative learning on students' motivation. *Physical Education and Sport Pedagogy*, 22(1), 89-105. <https://doi.org/10.1080/17408989.2015.1123238>
- Fernandez-Rio, J., Cecchini, J. A., Méndez-Giménez, A., Méndez-Alonso, D., & Prieto, J. A. (2017b). Design and validation of a questionnaire to assess cooperative learning in educational contexts. *Anales de psicología*, 33(3), 680-688. <https://doi.org/10.6018/analesps.33.3.251321>
- Ferrer, L. M. (2004). Developing understanding and social skills through cooperative learning. *Journal of Science and Mathematics Education in Southeast Asia*, 27(2), 45-61.
- García, M. M., González, I., & Mérida, R. (2012). Validación del cuestionario ACOE: Análisis del trabajo cooperativo en Educación Superior. *Revista de Investigación Educativa*, 30(1), 87-109. <https://doi.org/10.6018/rie.30.1.114091>
- Ghaith, G. M. (2002). The relationship between cooperative learning, perception of social support, and academic achievement. *System*, 30(2), 263-273. [https://doi.org/10.1016/S0346-251X\(02\)00014-3](https://doi.org/10.1016/S0346-251X(02)00014-3)
- Gillies, R. M., Ashman, A., & Terwel, J. (Eds.) (2008). *The Teacher's role in implementing cooperative learning in the classroom*. Springer. <https://doi.org/10.1007/978-0-387-70892-8>
- Hijzen, D., Boekaerts, M., & Vedder, P. (2006). The relationship between the quality of cooperative learning, students' goal preferences, and perceptions of contextual factors in the classroom. *Scandinavian Journal of Psychology*, 47, 9-21. <https://doi.org/10.1111/j.1467-9450.2006.00488.x>
- Ibarra, M<sup>a</sup> S., & Rodríguez, G. (2007). El trabajo colaborativo en las aulas universitarias: Reflexiones desde la autoevaluación. *Revista de Educación*, 344, 355-375.
- Ilić, M. (2016.). Učestalost i mogućnosti primene kooperativnog učenja u razrednoj nastavi [Frequency and possibility of applying cooperative learning in class teaching]. *Inovacije u nastavi*, 29(2), 25-37. <https://doi.org/10.5937/inovacije1602025I>
- Ivić, I., Pešikan, A., Janković S., i Kijevčanin, S. (2001). *Aktivno učenje: priručnik za primenu metoda aktivnog učenja/nastave [Active learning: Handbook for applying the methods of active learning/classes]*. Institut za psihologiju.

- Johnson, D. W., & Johnson, R. T. (1983). Social interdependence and perceived academic and personal support in the classroom. *The Journal of Psychology*, 120, 77-82. <https://doi.org/10.1080/00224545.1983.9712012>
- 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). 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. <https://doi.org/10.3102/0013189X09339057>
- Johnson, D. W., Johnson, R. T., & Anderson, D. (1983). Social interdependence and classroom climate. *The Journal of Psychology*, 114, 135-142. <https://doi.org/10.1080/00223980.1983.9915406>
- Johnson, D. W., Johnson, R. T., & Holubec, E. J. (1991). *Cooperation in the classroom*. ASCD.
- Kocabaş, A. (2013). The effects of cooperative learning on continual and state anxiety and musical performance in teaching music. *International Journal of New Trends in Arts, Sports & Science Education*, 2(2), 27-35. <https://doi.org/10.13189/ujer.2017.050303>
- Kocabas, A., & Erbil, D. G. (2017). A scale development for teacher competencies on cooperative learning method. *Universal Journal of Educational Research*, 5(3), 316-324.
- Kolar Billege, M. (2016). Odabir sadržaja poučavanja hrvatskoga jezika u skladu s metodičkim pristupom [The choice of contents for teaching Croatian in accord with the teaching methodology approach]. *Napredak*, 157(1-2) 105-124.
- Kolar Billege, M. (2020). *Sadržaj, ishodi i vrednovanje u Hrvatskome jeziku – metodički pristup [Contents, outcomes and assessment in Croatian – teaching methodology approach]*. Sveučilište u Zagrebu, Učiteljski fakultet.
- Lavasani, M. G., Afzali, L., Borhazadeh, S., Afzali, F., & Davoodi, M. (2011). The effect of cooperative learning on the social skills of first grade elementary school girls. *Procedia Social and Behavioral Sciences*, 15, 1802-1805. <https://doi.org/10.1016/j.sbspro.2011.04.006>
- Matthews, R. S., Cooper J. L., Davidson, N., & Hawkes, P. (1995). Building bridges between cooperative and collaborative learning. *Change: The Magazine of Higher Learning*, 27(4), 35-40. <https://doi.org/10.1080/00091383.1995.9936435>
- Mendo-Lázaro, S., León-Del-Barco, B., Felipe-Castaño, E., Polo-Del-Río, M. I., & Iglesias-Gallego, D. (2018). Cooperative team learning and the development of social skills in higher education: The variables involved. *Frontiers in psychology*, 9(1536). <https://doi.org/10.3389/fpsyg.2018.01536>
- Mitchell, S., Woloshyn, V. E., & Elliott, A. E. (2003). Promoting cooperative learning in the classroom: Comparing explicit and implicit training techniques. *Brock Education*, 12(2), 23-39. <https://doi.org/10.26522/brocked.v12i2.35>
- Miščević-Kadijević, G. (2009). Uticaj različitih modaliteta kooperativnih oblika rada na usvajanje deklarativnih i proceduralnih znanja učenika [Influence of different modalities of cooperative ways of work on the acquisition of declarative and procedural student knowledge]. *Zbornik Instituta za pedagoška istraživanja*, 41(2), 383-400. <https://doi.org/10.2298/ZIPI0902383M>

- Pallant, J. (2011). *SPSS: priručnik za preživljavanje [SPSS: Survival handbook]*. Mikro knjiga.
- Parks, D. K., Anthony J., Onwuegbuzie, A. J., & Cash, S. H. (2001). Development of a measure for predicting learning advancement through cooperative education: Reliability and validity of the PLACE Scale. *Journal of Cooperative Education and Internships*, 36(1), 23-31.
- Slavin, R. E. (1995). *Cooperative learning: Theory, research, and practice* (2nd edition). Allyn & Bacon.
- Ševkušić, S. (2006). Kooperativno učenje i kvalitet znanja [Cooperative learning and the quality of knowledge]. In S. Krnjajić (Ed.), *Pretpostavke uspješne nastave* (pp. 179-202). Institut za pedagoška istraživanja.
- Veenman, S., Benthum, N., Bootsma, D., Dieren, J., & Kemp, N. (2002). Cooperative learning and teacher education. *Teaching and Teacher Education*, 18(1), 87-103. [https://doi.org/10.1016/S0742-051X\(01\)00052-X](https://doi.org/10.1016/S0742-051X(01)00052-X)
- Vigotski, L. S. (1977). *Mišljenje i govor [Thinking and speech]*. Nolit.
- Vigotski, L. S. (1996). *Problemi razvoja psihe [Problems in psyche development]*. Zavod za udžbenike i nastavna sredstva.
- Vlahović, B. (2012). *Obrazovanje u društvu umrežene kulture [Education in the society of networked culture]*. Srpska akademija obrazovanja.
- Watson, S. B. (1992). The essential elements of cooperative learning. *The American Biology Teacher*, 54(2), 84-86. <https://doi.org/10.2307/4449413>
- Yoshida, H., Tani, S., Uchida, T., Masui, J., Fukushima, M., & Nakayama, A. (2016). Development and validation of the online cooperative learning anxiety scale. *International Journal of Information and Education Technology*, 6(5), 357-364. <https://doi.org/10.7763/IJiet.2016.V6.714>

---

**Marina Semiz**

Faculty of Education  
University of Kragujevac  
Trg Svetog Save 36, 31000 Užice, Serbia  
[semizmarina@pfu.kg.ac.rs](mailto:semizmarina@pfu.kg.ac.rs)

**Radovan Antonijević**

Faculty of Philosophy  
University of Belgrade  
Čika Ljubina 18-20, 11000 Belgrade, Serbia  
[radovan.antonijevic@f.bg.ac.rs](mailto:radovan.antonijevic@f.bg.ac.rs)

# Razvoj skale za procjenu obilježja suradničkoga učenja u nastavi jezika

---

## Sažetak

*U ovom radu opisuje se razvoj i metrijske značajke novoga istraživačkog instrumenta za ispitivanje procjena nastavnika o svojstvima suradničkoga učenja u nastavi jezika u razrednoj nastavi. Prilikom konstruiranja Upitnika sa skalom procjene za nastavnike (USPN) integrirana su saznanja o sociopsihološkom pristupu suradničkom učenju i sociokonstruktivističkim shvaćanjima suvremene nastave i učenja. Uz navedeno, polazište za razvoj skale procjene je analiza i kritika postojećih instrumenata na temelju samoizvještaja ili izvještaja ispitanika o primjeni suradničkoga učenja, specifičnosti nastave jezika i razredne nastave, kao i teorijska analiza konstrukta suradničkoga učenja. U istraživanju je sudjelovalo 240 nastavnika četvrtih razreda osnovnih škola koji primjenjuju suradničko učenje u nastavi Srpskoga jezika iz 14 okruga u Republici Srbiji. U skladu s teoretskom strukturom karakteristika suradničkoga učenja stvorene su četiri podskale: strukturiranje suradničkoga zadatka, formiranje suradničkih skupina, načela suradničkoga učenja te uloga i aktivnosti nastavnika i učenika. Pouzdanost skale u cjelini i komponentata podskala ispitana je mjerenjem unutrašnje konzistencije, dok je konstrukcijska valjanost podskala ispitana eksploratornom faktorskom analizom. Općenito govoreći, uzimajući u obzir nalaze o pouzdanosti i valjanosti podskala, može se zaključiti da Upitnik sa skalom procjene za nastavnike ima zadovoljavajuće metričke karakteristike, odnosno da je pouzdan i valjan instrument za ispitivanje obilježja suradničkoga učenja u trenutačnoj nastavi jezika. Na kraju, daju se kritička procjena i preporuke za daljnje poboljšanje razvijenoga instrumenta.*

**Ključne riječi:** *nastava jezika; nastavnici; razredna nastava; skala procjene; suradničko učenje.*

## Uvod

U ovom radu govori se o razvoju i metrijskim značajkama istraživačkoga instrumenta konstruiranoga u svrhu ispitivanja procjena nastavnika o svojstvima suradničkoga učenja u nastavi jezika u razrednoj nastavi. Polazna točka za razvoj skale procjene je znanje sociopsihološkoga pristupa suradničkom učenju (Deutsch, 1949; Johnson

i Johnson, 2003, 2009; Johnson, Johnson i Holubec, 1991), sociokonstruktivističko znanje o poučavanju i učenju (Bruner, 2000; Vygotsky, 1977, 1996), analiza i kritika postojećih instrumenata o primjeni suradničkoga učenja, specifičnosti poučavanja jezika i razredne nastave, kao i teorijska analiza konstrukta suradničkoga učenja.

U smislu pojavnosti, suradničko učenje staro je koliko i čovjek i ljudske zajednice, ali kao konstrukt potječe iz socijalne psihologije, točnije iz proučavanja posljedica suradnje i natjecanja na osnovne grupne procese i ponašanje pojedinaca (Deutsch, 1949). Na temelju geštalt teorije, Deutsch (Deutsch, 1949) je prvi put formulirao teoriju socijalne međuovisnosti 1940-ih s tezom da međuovisnost može biti pozitivna (kooperacija), negativna (konkurencija) ili nepostojeća (individualizam). Kooperacija i natjecanje kao društveni odnosi između najmanje dvoje ljudi uključuju međuovisnost cilja. U natjecateljskoj situaciji ciljevi učenika negativno su međusobno ovisni jer je postizanje cilja jednoga učenika suprotno ciljevima drugih učenika. U situaciji kooperacije ciljevi učenika pozitivno su međusobno ovisni jer uspjeh svakog pojedinca izravno ovisi o uspjehu ostalih učenika. U situaciji kada učenici rade individualno, postizanje cilja je osobno, a postignuća ostalih učenika neovisna. Zbog nemogućnosti objašnjenja različitih oblika socijalnoga ponašanja ljudi, posebno izvan umjetnih situacija Johnson i Johnson (Johnson i Johnson, 2003, 2009; Johnson, Johnson i Holubec, 1991) dalje razvija teoriju socijalne međuovisnosti s osnovnom pretpostavkom da načini strukturiranja međuovisnosti određuju načine komunikacije i interakcije u grupi i krajnje rezultate. Iz tih su razloga, svoj teorijski i istraživački interes usredotočili su na otkrivanje uvjeta i pretpostavki koje kooperativno učenje čine učinkovitim u smislu individualnoga i grupnoga razvoja. Njihov doprinos razvoju ideje suradničkoga učenja vrlo je važan, kako zbog rada na konceptualizaciji i operacionalizaciji suradničkoga učenja kroz specifična načela (pozitivna međuovisnost, promocijska interakcija, osobna odgovornost, socijalne vještine i grupna obrada), tako i zbog empirijske potvrde teorije socijalne međuovisnosti na velikom broju varijabli (akademski uspjeh, prilagodba, socijalni odnosi itd.).

Suvremene sociokonstruktivističke koncepcije (Bruner, 2000; Vygotsky, 1977, 1996) značajno su promijenile razumijevanje prirode i suštine nastave jezika, razumijevanje suvremenih metoda poučavanja i učenja, a neizravno i samo suradničko učenje. Sa stajališta sociokonstruktivističkih koncepcija, poučavanje i učenje društveno su i kulturno posredovani i međusobno ovisni procesi unutar kojih se prepoznaje potreba za suradnjom između sudionika različitih predznanja, iskustava i sposobnosti. Stoga je okosnica nastavnoga procesa socijalna interakcija nastavnika i učenika, kao i samih učenika na sadržajima školskoga programa. Ova interakcija ima formativni utjecaj na kognitivni razvoj učenika (Vygotsky, 1977, 1996), pa se fokus razmatranja suvremene nastave prebacuje s rezultata i ishoda na sam nastavni proces. Kao što je i sam Vygotski (Vygotsky, 1996) naglasio, nastava bi trebala biti usmjerena na sljedeću razvojnu razinu učenika kako bi se predvidjelo i usmjerilo učenje i razvoj učenika. Bruner (2000) je dao poseban doprinos razradi uloge nastavnika kao voditelja i partnera u procesu

suradničkoga učenja. Ove karakteristike na koje ukazuje sociokonstruktivističko saznanje trebale bi biti imanentne za poučavanje srpskoga jezika u mlađim razredima osnovne škole, koje se temelji na kooperativnom učenju, posebno imajući u vidu specifičnosti i važnost znanja i oblika mišljenja u nastavi jezika za cjelokupan obrazovni proces i budući život. Uz gore spomenute tendencije, sociokonstruktivistička shvaćanja potvrdila su širu primjenu nastavnih metoda koje se temelje na suradničkim odnosima između sudionika u nastavnoj situaciji i koje ističu ulogu nastavnika u vođenju i potpori procesa učenja. Time je kooperativno učenje prepoznato kao važna nastavna metoda za postizanje obrazovnih ciljeva nastave. U teoriji socijalne međuovisnosti, suradnja postoji samo između pojedinaca, dok je socijalno-konstruktivističko znanje naznačilo širi društveni i kulturni kontekst u primjeni suradničkoga učenja. Unatoč razlikama, i sociopsihološka perspektiva i socijalno-konstruktivistička koncepcija poučavanja i učenja utjecali su na daljnji razvoj ideje suradničkoga učenja, pokrenuli istraživanje različitih aspekata suradničkoga učenja i ukazali na njegovu višedimenzionalnost.

U pogledu specifičnosti nastave jezika u primarnome obrazovanju potrebno je osvrnuti se na suvremene epistemološke spoznaje metodike kao znanosti o poučavanju nastavnoga predmeta.

Suvremene epistemološke spoznaje vezane uz nastavu, odnosno metodike kao znanosti o poučavanju nastavnoga predmeta apostrofiraju posebno dvije teze: o uspostavljanju suodnosa supstratnih znanosti u strukturiranju kurikula ili revidiranju postojećega, odnosno za određivanje sadržaja poučavanja i kognitivnih ishoda učenja i o prijenosu sadržaja iz matične znanosti u metodički diskurs metodičkim transferom (Kolar Billege, 2020). Prvo, u generičkoj strukturi metodika nastave materinskoga (hrvatskoga) jezika je interdisciplinarna jer objedinjava sadržaje matičnih (lingvističke znanosti) i odgojno-obrazovnih znanosti (sociologije, pedagogije s didaktikom, psihologije). Primjerice, autorica Kolar Billege (2020) ukazuje na suodnos matične znanosti (lingvistika) i metodike hrvatskoga jezika, kao i sociologije i metodike hrvatskoga jezika. U okviru suodnosa matične znanosti i metodike hrvatskoga jezika Kolar Billege ističe da se u strukturiranju sadržaja programa nastave jezika u primarnome obrazovanju moraju uvažavati načela postupnosti, cjelovitosti i relevantnosti koje lingvistički sadržaji zahtijevaju, odnosno koje zahtijeva jezik kao sustav, s obzirom na to kako on utječe na jezik kao standard. Supstratni odnos sociologije i metodike hrvatskoga jezika podrazumjeva više aspekata i može se razmatrati na nivou mikrorazine, mezorazine i makrorazine: a) u nastavnoj komunikaciji između učitelja i učenika i komunikaciji u sustavu metodičke provedbe, b) u izboru sadržaja poučavanja s obzirom na društvene vrijednosti, ideologiju vladajuće društvene grupe i društveni kontekst uopće, c) prilikom strukturiranja obrazovnih sustava i njihovoj kritici i d) razvijanju sociolingvističke kompetencije. Drugo, prijenos jezičkih sadržaja temelji se na teoriji didaktičkoga transfera čime se sadržaji iz izvornih znanosti povezuju sa spoznajama i zakonitostima supstratnih disciplina koje se bave učenjem i poučavanjem. Pri tome posredovanje jezičnih sadržaja podrazumjeva izbor prikladnih, znanstveno utemeljenih

metoda, postupaka i strategija poučavanja (Kolar Billege, 2020). Autorica Kolar Billege (2016) smatra da je metodički pristup u određivanju sadržaja poučavanja uvjetovan kontekstom poučavanja s ciljem ovladavanja jezičnim znanjem koje omogućuje stjecanje komunikacijske jezične kompetencije učenika. Slične stavove iznosi i autorica Budinski imajući na umu sadržajno-vremenski okvir za poučavanje početnoga čitanja i pisanja na hrvatskom jeziku u primarnom obrazovanju. „Metodički sadržajno-vremenski optimum poučavanja početnoga čitanja i pisanja za postizanje definiranih ishoda učenja [...] podrazumijeva određivanje potrebnih sadržaja poučavanja te najpovoljnijih metodičkih sustava, metoda, postupaka i vremenskih jedinica poučavanja (metodički čin, nastavna etapa, nastavna situacija) s obzirom na psiholingvističke spoznaje (razumijevanje, produkcija i usvajanje jezika) i spoznaje ostalih matičnih znanosti metodike početnoga čitanja i pisanja” (Budinski, 2017, str. 29).

Tijekom razvoja ideje suradničkoga učenja u različitim su znanostima formulirane različite konceptualne definicije ovoga koncepta. Pitanje ključnih odrednica ovoga složenog fenomena i pojave izdvojeno je kao relevantno. U znanstvenim radovima postoji više značenja suradničkoga učenja. Ponekad se definira kao oblik učenja (Johnson i sur., 1991), strategija učenja (Kocabaş, 2013), metoda poučavanja (Davidson i Major, 2014; Slavin, 1995), strategija poučavanja (Mišćević-Kadijević, 2009; Ševkušić, 2006), pedagoški pristup ili koncepcija (Vlahović, 2001). Osim pluraliteta značenja u kojima se koristi pojam suradničkoga učenja, u njegovoj definiciji postoji i psihološki i pedagoški pristup. Štoviše, evidentna je razlika među autorima oko položaja ovoga koncepta u odnosu na srodne koncepte, a prije svega, rad u skupinama i suradničko učenje. Mnoštvo pristupa i značenja u kojima se koristi ovaj pojam i različiti pogledi autora na položaj ovoga pojma u konceptualnoj mreži mogu se povezati s različitim kontekstima primjene suradničkoga učenja, raznolikosti teorijskih i metodoloških pristupa od kojih autori polaze, ali i složenosti koncepta.

Budući da je pregled relevantne znanstvene literature otkrio vrlo različitu i u nekim situacijama, nedosljednu upotrebu pojma kooperativno učenje u smislu njegova sadržaja i opsega, bilo je potrebno istaknuti drugačiji pristup u definiranju pojma. Kako bi se razjasnila suština suradničkoga učenja u radu s učenicima mlađe školske dobi i specifičnosti nastave maternskoga jezika, definicija ovoga pojma trebala bi jasno objasniti sljedeće odrednice: a) *povezanost nastave i učenja* jer su to nerazdvojni procesi nastavne situacije, i zbog činjenice da svaki akter nastavnoga procesa može biti u ulozi onoga koji predaje i koga se poučava (razumijevanje suradničkoga učenja kao metode poučavanja/učenja), b) *strukturirani proces poučavanja i učenja* jer u radu s učenicima mlađih razreda osnovne škole uvijek postoji veći ili manji stupanj strukturiranih aktivnosti, nastavnih sadržaja, uloge nastavnika i učenika ili procesa učenja koji vodi nastavnik itd., c) *naglasak na asimetričnim i simetričnim socijalnim interakcijama*, d) *odvojeni elementi ili načela* koji jasno odvajaju kooperativno učenje od srodnih metoda poučavanja i učenja, e) jasno *naznačena usmjerenost kooperativnoga učenja* prema postizanju obrazovnih ciljeva nastave i sveukupnom razvoju učenika. U ovom radu

kooperativno učenje podrazumijeva skup metoda poučavanja i učenja - s različito strukturiranim osnovnim konstrukcijskim parametrima - koji se temelje na asimetričnim i simetričnim interakcijama u kojima učenici u skupinama ili u parovima, pod vodstvom nastavnika ili u suradnji s njim, poučavaju i uče kako bi postigli zajedničke ciljeve nastave u socijalno-afektivnoj i kognitivnoj domeni razvoja učenika. To se događa u uvjetima koji uključuju sljedeće potrebne elemente: pozitivna međuovisnost, individualna odgovornost, promocijska interakcija licem u lice, vježbanje socijalnih vještina i vrednovanje grupnih procesa.

U kontekstu učenja u malim skupinama kroz suradničko učenje, postoji širok raspon različitih pogleda na stil vodstva nastavnika, njegove uloge i stupanj uključenosti u nastavni proces; odnos moći između nastavnika i učenika; u kojoj bi mjeri učenici trebali biti u mogućnosti surađivati i komunicirati u grupi; kako se gradi znanje; koji su ciljevi grupnoga rada; u čemu se odražava važnost grupnoga učenja iz perspektive različitih aspekata razvoja ličnosti (Matthews i sur., 1995). Upravo iz tih razloga potrebno je razviti pouzdan i valjan instrument za ispitivanje obilježja suradničkoga učenja u trenutačnoj nastavi jezika. Unatoč impresivnom broju teorijskih i empirijskih radova posvećenih suradničkom učenju, mali broj istraživanja pokrenuo je pitanja razvoja i validacije istraživačkih instrumenata. Za razliku od prethodnih studija u kojima se primjena suradničkoga učenja poistovjećuje s primjenom osnovnih načela suradničkoga učenja, pa se tako ispituje samo kroz prisutnost određenih načela suradničkoga učenja u praksi, poseban teorijsku i znanstvenu važost imao bi pristup u kojem se obilježja suradničkoga učenja sagledavaju kroz međusobnu povezanost četiri aspekta u njegovoj primjeni. Ovi relevantni aspekti uključuju strukturiranje suradničkoga zadatka, formiranje suradničkih skupina, načela suradničkoga učenja i uloga i aktivnosti nastavnika i učenika tijekom suradničkoga učenja. Analiza odabranih obilježja suradničkoga učenja u određenom kontekstu iz perspektive nastavnika može dovesti do dubljega razumijevanja mogućnosti primjene suradničkoga učenja u nastavi jezika.

### **Pregled prethodnih istraživanja**

Pregled i analiza prethodnih istraživanja (Atxurra, Villardón-Gallego i Calvete, 2015; García, González i Mérida, 2012; Ghai, 2002; Hijzen, Boekaerts i Vedder, 2006; Ibarra i Rodríguez, 2007; Johnson i Johnson, 1983; Johnson, Johnson i Anderson, 1983; Yoshida i sur., 2016; Kocabas i Erbil, 2017; Parks, Anthony, Onwuegbuzie i Cash, 2001) ukazuju na to da ne postoje odgovarajući instrumenti za procjenu obilježja suradničkoga učenja u nastavi jezika u okviru prvoga ciklusa obrazovanja koji uzimaju u obzir sve odrednice suradničkoga učenja i specifičnosti nastave materinskoga jezika u mlađim razredima osnovne škole.

Johnson, Johnson i Anderson (Johnson, Johnson i Anderson, 1983) razvili su skalu procjene *Classroom Life Instrument* (CLI) koja sadrži 59 tvrdnji, od kojih se 7 tvrdnji odnosi na suradničko učenje općenito, 10 na pozitivnu međuovisnost, 5 na procjenu



i 8 na podršku nastavnika. Druga verzija ovoga instrumenta unijela je dimenziju heterogenosti (Johnson i Johnson, 1983), ali nije pokrivala sva načela suradničkoga učenja kao što su: grupna obrada, promocijska interakcija i socijalne vještine. Ghaith (Ghaith, 2002) je koristio prilagođenu verziju instrumenta koji su razvili Johnson i Johnson na uzorku studenata, ali njegovo istraživanje nije potvrdilo visoku pouzdanost ovoga instrumenta. Prilagođena verzija instrumenta sadrži 38 čestica grupiranih u 6 dimenzija: kooperativno učenje, akademska podrška nastavnika, osobna podrška nastavnika, akademska podrška vršnjaka, osobna podrška vršnjaka i alijenacija. Yoshida i suradnici (Yoshida i sur., 2016.) konstruirali su instrument usmjeren na utvrđivanje anksioznosti studenata tijekom mrežnoga suradničkoga učenja. *Eksploratorna* faktorska analiza ukazala je na prisutnost tri dominantna čimbenika za razumijevanje anksioznosti učenika tijekom mrežnoga suradničkoga učenja. U skladu sa sadržajem i zasićenošću tvrdnji, faktori su: računalna anksioznost, anksioznost komunikacije i anksioznost učenja na mreži. Rezultati faktorske i korelacijske analize sugeriraju da se ključni čimbenici međusobno dovoljno razlikuju, a podskale mogu se koristiti kao neovisni instrumenti. Nadalje, pokazano je da skala u cjelini ima visoku unutrašnju konzistenciju, a formirane podskale imaju visoku ili prihvatljivu unutrašnju konzistenciju. Hijzen, Boekaerts i Vedder (Hijzen, Boekaerts i Vedder, 2006) razvili su dva instrumenta koja su primijenili na uzorku srednjoškolaca: *Quality of Cooperative Learning* (KCL) i *Conditions for Cooperative Learning* (CCL). Prva skala (KCL) sastoji se od 4 podskale od kojih su prve dvije povezane s načelima suradničkoga učenja - pozitivnom međuovisnošću i socijalnim vještinama, dok su druge dvije podskale povezane sa stavovima učenika prema suradničkom učenju i kvalitetom grupne kohezije. Drugi istraživački instrument (CCL) uključuje 3 podskale: prva podskala odnosi se na ponašanje nastavnika u odnosu na suradničko učenje, a preostale dvije podskale povezane su sa zadatcima nastavnika u pružanju akademske podrške i poticaja. Ovi instrumenti, iako značajni, ne uključuju informacije o dimenzijama koje su povezane s grupnom obradom i promocijskom interakcijom. Kocabas i Erbil (Kocabas i Erbil, 2017) razvili su skalu procjene za mjerenje kompetencija nastavnika za primjenu suradničkoga učenja. U uzorku nastavnika koji aktivno primjenjuju suradničko učenje, rezultati eksploratorne i konfirmatorne faktorske analize potvrdili su da se struktura skale sastoji od tri ključne komponente koje se nazivaju preliminarno i planiranje, postupak provedbe i evaluacija. Uz to, provedene faktorske analize pokazale su da je to valjan i pouzdan instrument za određivanje kompetencija nastavnika potrebnih za primjenu metoda suradničkoga učenja. Fernandez-Rio i sur. (Fernandez-Rio i sur., 2017b) konstruirali su novi instrument za procjenu suradničkoga učenja u obrazovnom kontekstu (*The Cooperative Learning Upitnik*) i ispitali njegove metrijske značajke na uzorku učenika osnovnih i srednjih škola (11-18 godina). Polazeći od pet bitnih načela suradničkoga učenja, spomenuti autori uključili su pet podskala: promocijska interakcija, pozitivna međuovisnost, individualna odgovornost, grupna obrada i međuljudske vještine. Rezultati su pokazali zadovoljavajuću konvergentnu i diskriminirajuću valjanost instrumenta te

da se on može koristiti kao pouzdan instrument za procjenu svih osnovnih elemenata suradničkoga učenja kod učenika osnovnih i srednjih škola. Konfirmatorna faktorska analiza pokazala je da su svi indeksi pouzdanosti prihvatljivi, čak i pod najzahtjevnijim uvjetima.

Ostali istraživački instrumenti samo su neizravno povezani s bitnim načelima suradničkoga učenja (García, González i Mérida, 2012; Ibarra i Rodríguez, 2007; Parks, Anthony, Onwuegbuzie i Cash, 2001) i uključuju stavke povezane sa stavovima učenika prema grupnom radu, organizaciji ili učinku grupnoga rada, tj. nisu usmjereni na određivanje uvjeta za suradnju. To je slučaj s instrumentom (Cuestionario de Análisis de la Cooperación en Educación Superior) koji su razvili Garcia, Gonzalez i Merida (García, González i Mérida, 2012), s 49 stavki i koji uključuje sljedeće dimenzije: koncept grupnoga rada, korisnost, planiranje grupnoga rada od strane nastavnika, kriteriji za organizaciju grupe, pravila grupe, interni postupci i učinkovitost grupnoga rada. Ibarra i Rodríguez (2007) usredotočuju se na kvalitetu grupne interakcije sveučilišnih studenata. Instrument (The Autoinforme de Interacción Grupal) uključuje devet dimenzija: istraživačka pitanja, kumulativno obrazloženje, upravljanje sukobima, sastav grupe, karakteristike zadataka, procesi i postupci, motivacija pojedinca i grupe, procjena učinka i opći uvjeti. Parks i suradnici (Parks, Anthony, Onwuegbuzie i Cash, 2001) razvili su instrument koji procjenjuje percepciju studenata o suradničkom obrazovanju. Instrument je obuhvaćao 34 stavke na skali procjene od sedam točaka, koje predstavljaju operacionalizaciju tri aspekta: karijere, akademskih rezultata i ishoda osobnoga razvoja. Eksploratorna faktorska analiza otkrila je tri čimbenika koji su objasnili 58 % varijance u rezultatima, koji su imenovani na sljedeći način: razvoj radnih vještina (9 čestica), razvoj karijere (7 čestica) i akademske funkcije (6 čestica).

Ističu se tri istraživačka instrumenta koja uključuju gotovo sve dimenzije relevantne za primjenu suradničkoga učenja u nastavi jezika. Na prvom mjestu, to je instrument - *Cooperative Learning Observational Schedule* (Veenman, Benthum, Bootsma, Dieren i Kemp, 2002) koji je protokol promatranja s 23 točke koji mjeri način na koji studenti - budući nastavnici strukturiraju suradničko učenje. Ovaj instrument sadrži 7 komponenata: pozitivna međuovisnost, individualna odgovornost, promocijska interakcija, socijalne vještine, grupna obrada, praćenje grupnoga rada i stopa angažmana učenika. Međutim, ovaj je instrument namijenjen procjeni razine primjene suradničkoga učenja koje provodi vanjski promatrač, a ne studenti - budući nastavnici, nastavnici ili učenici ili izravni sudionici obrazovnoga procesa. Unutar drugoga istraživačkog instrumenta - *Student teacher questionnaire*, Veenman i suradnici (Veenman, Benthum, Bootsma, Dieren i Kemp, 2002) konstruirali su skalu procjene sa 70 tvrdnji raspoređenih u 4 podskale: spremnost budućih nastavnika za primjenu suradničkoga učenja u budućnosti; blagodati suradničkoga učenja za učenike; pozitivni stavovi prema suradničkom učenju i pozitivni stavovi prema upravljanju grupnim radom. U okviru trećega relevantnog istraživačkoga instrumenta, Atxurra, Villardón-

Gallego i Calvete (Atxurra, Villardón-Gallego i Calvete, 2015) razvili su skalu procjene za ispitivanje primjene suradničkoga učenja u kontekstu visokoga obrazovanja (Escala de Aplicacion del Aprendizaje Cooperativo - CLAS) na temelju 7 čimbenika: pozitivna međuovisnost, promocijska interakcija, socijalne vještine, grupna refleksija, evaluacija, heterogenost i poučavanje. Provjera valjanosti ovoga instrumenta provedena je na velikom uzorku od ukupno 1470 studenata s dva različita sveučilišta u Čileu i Španjolskoj. Da bi osigurali valjanost sadržaja, prvu verziju ovoga upitnika ocijenilo je 8 stručnjaka. Stručnjaci su morali naznačiti dimenziju kojoj je pripadala svaka stavka, u skladu s njezinim sadržajem, kao i stupanj jasnoće njezina izraza. Instrument zadržava stavke koje su stručnjaci (6 od 8 stručnjaka) ocijenili kao „dobro definirane” i koje su uključili u istu dimenziju. Konačna verzija upitnika sadržavala je 44 tvrdnje grupirane u 7 dimenzija. Unutrašnja konzistentnost skale, kao i rezultati kofirmatorne faktorske analize, ukazali su na vrlo zadovoljavajuću pouzdanost i valjanost teorijske strukture instrumenta.

## **Metoda**

Većina spomenutih instrumenata o primjeni ili procesu suradničkoga učenja ne samo da ne uključuju sva bitna načela suradničkoga učenja, već ne daju podatke o sukladnosti teorijske strukture instrumenta s empirijskom raspodjelom podataka. U većini predstavljenih instrumenata teorijska struktura karakteristika suradničkoga učenja nije potvrđena eksplatornom ili kofirmatornom faktorskom analizom. Iznimka je skala procjene za ispitivanje primjene suradničkoga učenja u visokom obrazovanju koju su razvili Atxurra, Villardón-Gallego i Calvete (Atxurra, Villardón-Gallego i Calvete 2015), skala procjene za ispitivanje procesa suradničkoga učenja koju su razvili Bay i Çetin (Bay i Çetin, 2012) i skala procjene kompetencija nastavnika za primjenu suradničkoga učenja koju su konstruirali Kocabas i Erbil (Kocabas i Erbil, 2017). Stoga je potrebno osigurati instrument koji na valjan i pouzdan način, mjeri značajke primjene suradničkoga učenja u nastavi materinskoga jezika i u razrednoj nastavi.

Naš interes za proučavanjem karakteristika suradničkoga učenja u nastavi Srpskoga (materinskoga) jezika potiču brojni razlozi, a prvenstveno izdvajamo dva. Prvo, kroz nastavu materinskoga jezika učenici stječu jezična znanja, vještine i razvijaju jezične i sociolingvističke kompetencije od vitalne važnosti za nastavak obrazovanja, učenje svih ostalih predmeta i budući život. Drugo, iako nema sistematiziranoga znanja o učestalosti, metodama primjene i karakteristikama suradničkoga učenja u nastavi Srpskoga jezika, određena istraživanja (Ilić, 2016) ukazuju na to da učitelji u osnovnoj školi suradničko učenje uglavnom primjenjuju u nastavi Srpskoga jezika.

Cilj ovoga istraživanja je konstrukcija i ispitivanje metrijskih značajki instrumenta za procjenu karakteristika suradničkoga učenja u nastavi jezika iz perspektive nastavnika u osnovnoj školi. Za razliku od prethodnih studija u kojima se primjena suradničkoga učenja ispituje isključivo kroz predstavljanje samo određenih načela suradničkoga učenja

(Atxurra i sur., 2015; Johnson i Johnson, 1983; Fernandez-Rio i sur., 2017a, 2017b) u ovom radu obilježja suradničkoga učenja promatraju se kroz prizmu i međusobnu povezanost četiri aspekata u njezinoj primjeni. U svrhu istraživanja, obilježja suradničkoga učenja u nastavi Srpskoga jezika operacionalizirana su kroz četiri aspekta: a) strukturiranje suradničkoga zadatka, b) formiranje suradničkih skupina, c) načela suradničkoga učenja i g) uloge i aktivnosti nastavnika i učenika tijekom suradničkoga učenja. U skladu s početnom teorijskom strukturom obilježja suradničkoga učenja u nastavi Srpskoga jezika stvorene su četiri podskale. Dok nastavnik donosi odluke u vezi sa strukturom suradničkoga zadatka, istodobno procjenjuje koji je način formiranja skupina najprikladniji za njegovu realizaciju, koja načela trebaju biti strukturirana kako bi se osiguralo suradničko učenje, a sve te odluke značajno određuju uloge nastavnika i učenika. S obzirom na postavljeni cilj istraživanja, odlučili smo se za analizu na razini ekstrahiranih čimbenika. Rezultati eksplonatorne faktorske analize podskala pružaju bolji uvid u percepcije nastavnika o različitim karakteristikama suradničkoga učenja i njihovu usklađenost s teorijskim pretpostavkama.

### **Uzorak nastavnika**

U istraživanju je sudjelovalo 240 nastavnika četvrtoga razreda osnovnih škola koji primjenjuju suradničko učenje u nastavi Srpskoga jezika iz četrnaest okruga u Republici Srbiji (Zlatiborski, Moravički, Grad Beograd, Jablanički, Kolubarski, Mačvanski, Pčinjski, Pomoravski, Rasinski, Raški, Borski, Šumadijski, Južnobački, Nišavski). Ako pogledamo strukturu nastavnika (Tablica 1), moguće je konstatirati da uzorak uključuje nastavnike s različitim radnim iskustvom i da su zastupljeniji nastavnici s većim radnim iskustvom (35,8 % nastavnika s radnim iskustvom od 21 do 30 godina i 29,6 % nastavnika s nastavničkim iskustvom od 11 do 20 godina) od nastavnika s manjim radnim iskustvom (16,7 % nastavnika do 10 godina). Što se tiče razine obrazovanja, najveći je broj nastavnika koji su završili fakultet (63,3 %), zatim slijedi viša škola (19,3 %), a najmanji broj nastavnika završio je master/magistarski studij (17,5 %). U vezi s trećom razmatranom karakteristikom nastavnika može se reći da uzorak uključuje nastavnike s različitim stupnjevima učestalosti primjene suradničkoga učenja, pri čemu najveći broj nastavnika primjenjuje suradničko učenje jednom tjedno (32,9 %) i tri puta mjesečno (27,9 %), a najmanje nastavnika svakodnevno primjenjuje suradničko učenje (5,4 %). Prema kompetencijama za primjenu suradničkoga učenja, najveći broj nastavnika smatra da oni općenito imaju potrebne kompetencije za primjenu suradničkoga učenja (81,2 %), slijede nastavnici koji nemaju stav prema svojim kompetencijama (16,7 %), dok najmanji broj nastavnika procjenjuje da uglavnom nemaju potrebne kompetencije (2,5 %). Što se tiče stava prema suradničkom učenju, većina nastavnika ima pozitivan stav (83,3 %), 12,9 % nastavnika nema određeni stav, dok 3,8 % nastavnika ima negativan stav.

Tablica 1.

## **Instrument**

U ispitivanju obilježja suradničkoga učenja u trenutačnoj nastavi Srpskoga jezika, konstruiran je instrument koji predstavlja kombinaciju upitnika sa skalom procjene. U prvom dijelu instrumenta prikupljeni su podaci o sociopedagoškim karakteristikama nastavnika (godine radnoga iskustva, stupanj obrazovanja, učestalost primjene suradničkoga učenja, kompetencije za primjenu suradničkoga učenja i stav prema suradničkom učenju). Skala procjene sastoji se od 60 čestica grupiranih u četiri podskale: a) *Strukturiranje suradničkoga zadatka* (SKZN), b) *Formiranje suradničkih skupina* (FKSN), c) *Načela suradničkoga učenja* (NKUN) i d) *Uloge nastavnika i učenika tijekom suradničkoga učenja* (UNUN). Na skali od tri razine (uvijek (3), ponekad (2) i nikada (1)), nastavnici su izrazili ocjenu prisutnosti ili zastupljenosti karakteristika suradničkoga učenja u nastavi Srpskoga jezika. Veća individualna ocjena ukazuje na veću zastupljenost karakteristika suradničkoga učenja u trenutačnoj nastavi Srpskoga jezika, odnosno niži pojedinačni rezultati ukazuju na nižu zastupljenost karakteristika suradničkoga učenja. Pokusna studija ispitivala je pouzdanost skale i podskale mjerenjem unutrašnje konzistentnosti, dok je konstrukcijska valjanost podskale ispitivana eksploratornom faktorskom analizom.

## **Rezultati**

### ***Pouzdanost skale procjene i sastavnih podskala***

U uzorku nastavnika pouzdanost podskala kreće se od 0,65 do 0,93 (Tablica 2). Općenito, vrijednosti Cronbahova alfa koeficijenta ukazuju na visoku pouzdanost podskala: Uloge nastavnika i učenika tijekom suradničkoga učenja ( $\alpha = 0,93$ ) i Načela suradničkoga učenja ( $\alpha = 0,79$ ), kao i zadovoljavajuću pouzdanost podskala: Strukturiranje suradničkoga zadatka (0,65) i Formiranje suradničkih skupina (0,67). Skala procjene u cjelini ( $\alpha = 0,97$ ), kao i sastavne podskale udovoljavaju osnovnim psihometrijskim zahtjevima mjerenja pouzdanosti.

Tablica 2.

### ***Valjanost skale ocjenjivanja i sastavne podskale***

Sadržajna valjanost skale procjene i konačni odabir čestica utvrđeni su analizom i deduktivnom procjenom stručnoga tima (pedagoga, nastavnika), na temelju dogovora različitih ocjenjivača. Budući da nalazi faktorske analize skale procjene u cjelini nisu pružili tumačivo rješenje, pristupilo se eksploratornoj analizi njezinih sastavnih podskala. Ustanovljena su slična faktorska rješenja kao rezultat primjene rotacija: varimax, promax i oblimin. Poštujući kriterij interpretabilnosti, odlučili smo se za kosu promax rotaciju (promax). Prije provođenja faktorske analize podskala, procijenjena je adekvatnost podataka (Pallant, 2011). U tu svrhu primijenili smo dva testa: Kaiser-Meyer-Olkinova mjeru i adekvatnost uzorkovanja (u daljnjem tekstu: KMO) i Bartlettov test sferičnosti. U svrhu ekstrakcije faktora korištena je metoda glavnih

komponentata, uzimajući u obzir Kaiser-Guttmanov kriterij (svojstvena vrijednost veća od 1) i Cattellov test odrona. Na temelju rezultata faktorske analize izuzimaju se stavke s korelacijama ispod 0,30. U daljnjem tekstu prikazani su rezultati faktorskih analiza i struktura novih podskala.

### ***Podskala - Strukturiranje suradničkoga zadatka u nastavi Srpskoga jezika iz perspektive nastavnika (SKZN)***

KMO testom utvrđena je vrijednost indeksa  $K = 0,71$ . Bartlettov test sferičnosti postigao je statističku značajnost ( $\chi^2 = 261,305$ ;  $df = 28$ ;  $p = ,000$ ). Nakon što su se stekli uvjeti za faktorsku analizu, započela je analiza glavnih komponenata. Ova analiza otkrila je prisutnost dva čimbenika s karakterističnim vrijednostima iznad 1, koja objašnjavaju 30,83 % i 17,15 % varijance (Tablica 3). Dvofaktorsko rješenje objasnilo je ukupno 47,95 % varijance. Nakon analize sadržaja čestica i visina zasićenja po čimbenicima, imenovali smo čimbenike: a) Načini strukturiranja suradničkoga zadatka (SKZN1) i b) Tip i priroda suradničkoga zadatka (SKZN2). Prvi je čimbenik prvenstveno određen česticama koje ukazuju na to kako nastavnici strukturiraju suradnički zadatak. Drugi čimbenik činile su tvrdnje koje govore o tipu i prirodi suradničkoga zadatka, tj. one prvenstveno određuju jesu li to visokostrukturirani ili niskostrukturirani, odnosno visokokooperativni ili niskokooperativni zadatci u nastavi Srpskoga jezika. Postoji pozitivna niska korelacija između čimbenika ( $r = 0,27$ ).

Tablica 3.

Prvi faktor uglavnom objašnjava percepciju nastavnika o strukturiranju suradničkoga zadatka (30,83 % objašnjene varijance) i uključuje stavke o različitim načinima strukturiranja suradničkoga zadatka. Analiza sadržaja i zasićenosti stavki grupiranih oko dominantnoga čimbenika ističe aktivnosti nastavnika u smislu specifičnoga određivanja i objašnjenja grupnoga zadatka i ciljeva učenja, kao i davanje uputa za suradnički rad. Pri strukturiranju suradničkih zadataka u nastavi Srpskoga jezika, nastavnici pokušavaju naučiti učenike da surađuju u grupi, daju jasne usmene upute i upute za rad, jasno objašnjavaju zadatak i ciljeve učenja u grupi. Drugi čimbenik u sadržaju zasićen je česticama o vrsti i prirodi suradničkoga zadatka, a prvenstveno je određen česticama o samoj strukturi suradničkoga zadatka. Analiza zasićenosti stavki, sugerira da primjenu suradničkoga učenja u nastavi Srpskoga jezika karakteriziraju suradnički zadatci različitih vrsta (visoko strukturirani i niskostrukturirani) i različite prirode (stvarni suradnički i pojedinačni zadatci u suradničkom okruženju, tj. zadatci s malo suradnje). Izražena je tendencija nastavnika da stvaraju visokostrukturirane zadatke (nastavnik unaprijed određuje uloge i aktivnosti učenika, vremenski plan aktivnosti) od zadataka s niskom strukturom (nastavnik određuje grupni zadatak, ali ostavlja odluke o tome tko će što raditi u grupi). Što se tiče prirode suradničkoga zadatka, izražena je tendencija nastavnika da primjenjuju manje suradničke zadatke u svojem radu s učenicima četvrtoga razreda, što ne podrazumijeva nužno suradnju i

međuovisnost učenika, grupne rasprave i grupno odlučivanje, već je dovoljno da svaki pojedinac uspješno izvrši svoj dio zadatka kako bi se grupni zadatak mogao riješiti.

### ***Podskala - Formiranje suradničkih skupina u nastavi Srpskoga jezika iz perspektive nastavnika (FKSN)***

Eskploratornom faktorskom analizom izdvojena su dva čimbenika koji objašnjavaju 54,81 % varijance formiranja podskale suradničkih skupina (Tablica 4). Ispunjeni su svi uvjeti za faktorsku analizu: mjera reprezentativnosti KMO iznosi 0,60. Bartlettov test sferičnosti je statistički značajan ( $\chi^2 = 695,429$ ;  $df = 21$ ;  $p = ,000$ ). Prvi čimbenik pretežno je definiran stavkama koje se odnose na veličinu suradničkih skupina. Sukladno tome, ovaj je čimbenik nazvan - Veličina suradničkih skupina (FKSN1). Sve čestice o sastavu skupina prema različitim načinima formiranja (heterogeni nasuprot homogenim) i kriterijima formiranja (opći uspjeh, sjedenje itd.) grupirane su u drugi čimbenik, zbog čega je i nazvan - Sastav suradničkih skupina (FKSN2). Između čimbenika postoji pozitivna korelacija srednjega intenziteta ( $r = 0,31$ ).

Tablica 4.

Prvi faktor - Veličina suradničkih skupina - pretežno određuje percepciju nastavnika o formiranju suradničkih skupina (objašnjeno 33,39 % varijance) u nastavi Srpskoga jezika. Ovaj je faktor prvenstveno određen česticama o veličini suradničkih skupina. Zasićenja čestica sugeriraju da nastavnici određuju veličinu skupine kako bi formirali male (četiri člana) i velike skupine za suradnički rad (šest članova). Sadržajno, drugi čimbenik - Sastav suradničkih skupina - sastoji se od čestica o sastavu suradničkih skupina prema različitim kriterijima i načinima grupiranja. Pregled i analiza zasićenosti čestica koje čine drugi faktor sugerira da sadašnju nastavu Srpskoga jezika predstavljaju suradničke skupine učenika različitoga općeg uspjeha, sličnih interesa, formirane prema mjestu sjedenja i temeljene na prijateljskim odnosima učenika.

### ***Podskala - Načela suradničkoga učenja u nastavi Srpskoga jezika iz perspektive nastavnika (NKUN)***

Analizom glavnih komponenata otkrivena su četiri čimbenika koji objašnjavaju 50,58 % varijance podskale Načela suradničkoga učenja (Tablica 5). Svi su uvjeti za faktorsku analizu bili ispunjeni: mjera reprezentativnosti KMO je 0,75, a Bartlettov test sferičnosti statistički značajan ( $\chi^2 = 1025,179$ ;  $df = 153$ ;  $p = ,000$ ). Nakon analize sadržaja i razine zasićenosti čestica, imenovali smo čimbenike: a) Vježbanje socijalnih vještina (NKUN1), b) Promicanje interakcije licem u lice (NKUN2), c) Osobna odgovornost i grupna obrada (NKUN3) i d) Pozitivna međuovisnost (NKUN4). Prvi čimbenik prvenstveno su projicirale čestice koje odražavaju bit socijalnih vještina i ukazuju na važnost vježbanja socijalnih vještina za rad u skupinama. Sve pretpostavljene tvrdnje o promocijskoj interakciji u suradničkom učenju, tj. poželjni oblici ponašanja (razgovor, davanje objašnjenja, pružanje pomoći) za rad i uspjeh grupirani su u drugi čimbenik -

promicanje interakcije licem u lice. Treći čimbenik prvenstveno je definiran česticama koje se odnose na važnost i načine poticanja osobne odgovornosti učenika za vlastiti i rad grupe, kao i stavke koje ukazuju na ocjenu procesa i rezultata grupe. Sukladno tome, nazvan je treći faktor - Osobna odgovornost i grupna obrada. Četvrti faktor definiran je tvrdnjama o različitim vrstama i načinima strukturiranja pozitivne međuovisnosti između članova grupe. Sukladno tome, nazvan je četvrti faktor - Pozitivna međuovisnost.

#### Tablica 5.

U konstrukciji podskale Načela suradničkoga učenja slijedili smo principe suradničkoga učenja koje su razvili Johnson i Johnson (Johnson i Johnson, 2003, 2009). Prema tim autorima, suština suradničkoga učenja sastoji se od pet načela: pozitivna međuovisnost, promicanje interakcije licem u lice, osobna odgovornost, socijalne vještine i grupna obrada. Opisna analiza faktorskoga rezultata- vježbanje socijalnih vještina - posebno je važna jer je to faktor koji pretežno objašnjava percepciju nastavnika o načelima suradničkoga učenja u nastavi Srpskoga jezika (24,04 % objašnjene varijance). Prvi čimbenik uključuje čestice koje odražavaju bit i važnost socijalnih vještina učenika za suradnički rad i ukazuju na poteškoće i probleme koji nastaju zbog nerazvijenosti socijalnih vještina učenika. Nastavnici naglašavaju da učenici poštuju utvrđena pravila ponašanja, da uče učenike socijalnim vještinama potrebnim za suradnički rad dajući konkretne primjere poželjnih ponašanja te da zajednički rad učenika u skupini karakteriziraju problemi i sukobi (npr. neki učenici ne žele raditi dio svojeg zadatka, ideje određenih učenika nikad ne prihvaćaju drugi članovi skupine, a neki se učenici neprestano miješaju u rad drugih). Drugi čimbenik - Promicanje interakcije učenika licem u lice - objedinjuje stavke povezane s različitim načinima poticanja kvalitetne verbalne interakcije učenika u suradničkom učenju, odnosno poželjnim ponašanjem (razgovor, davanje objašnjenja, pružanje pomoći) za rad i uspjeh u skupini. U većini nastavnih sati srpskoga jezika nastavnici strukturiraju promicanje međusobne interakcije učenika potičući različite poželjne oblike ponašanja, a prije svega: razgovore učenika o rješenjima grupnih zadataka, uzajamnu pomoć i poticaj/ poticaj između učenika i, na kraju, međusobna objašnjenja učenika vezano za zadatak. Treći čimbenik - Osobna odgovornost i grupna obrada - prvenstveno se određuje česticama koje se tiču važnosti i načina poticanja osobne odgovornosti učenika za vlastiti rad i rad u skupini, kao i česticama koje ukazuju na važnost vrednovanja grupnih procesa i ishoda. Zanimljivo je da je prema rezultatima faktorske analize osobna odgovornost neodvojiva od ocjene grupnih procesa. Dobiveni rezultati mogu se protumačiti činjenicom da postoji uska povezanost između ova dva načela. Naime, načini strukturiranja osobne odgovornosti učenika određuju načine ocjenjivanja i vrednovanja individualnoga i grupnoga rada (Antić, 2010; Ševkušić, 2003). Četvrti faktor - Pozitivna međuovisnost - definiran je stavkama o različitim vrstama i načinima strukturiranja pozitivne međuovisnosti između članova skupine. Vrijednosti zasićenja čestica ukazuju na najmanju prevalenciju



pozitivne međuovisnosti učenika u trenutačnoj nastavi Srpskoga jezika u odnosu na druga načela suradničkoga učenja.

Tablica 6.

Uočene su uglavnom niske korelacije između faktora. Iznimka su korelacije između prvog (Vježbanje socijalnih vještina) i drugog čimbenika (Promicanje interakcije licem u lice), kao i između drugog (Promicanje interakcije licem u lice) i trećeg čimbenika (Osobna odgovornost i grupna obrada). Zabilježena je negativna korelacija između trećeg (Osobna odgovornost i grupna obrada) i četvrtog faktora (Pozitivna međuovisnost).

### ***Podskala - Uloge nastavnika i učenika tijekom suradničkoga učenja u nastavi Srpskoga jezika iz perspektive nastavnika (UNUN)***

Faktorskom analizom istaknuta su tri čimbenika koji objašnjavaju 51,36 % varijance podskale Uloge nastavnika i učenika tijekom suradničkoga učenja (Tablica 7). Ispunjeni su svi preduvjeti za faktorsku analizu ( $K = 0,92$ ;  $\chi^2 = 3268,005$ ;  $df = 351$ ;  $p = ,000$ ). Prvi faktor objašnjava većinu varijance (39,85 %) i uključuje četice o različitim ulogama nastavnika, a prije svega: uloge nastavnika kao planera i organizatora suradničkoga učenja, facilitatora suradničkoga učenja, evaluatora procesa i ishoda suradničkoga učenja te motivacijsku ulogu nastavnika (UNUN1). Sukladno sa sadržajem čestica i zasićenja, ovaj se faktor naziva - Uloga nastavnika u odnosu na ciljeve i ishode suradničkoga učenja. Drugi je čimbenik definiran tvrdnjama o ulozi nastavnika kao regulatora društvenih odnosa, afektivnoga partnera u interakciji i kognitivno-dijagnostičku ulogu. U skladu s tim imenovan je još jedan faktor - Uloge nastavnika u odnosu na učenike kao partnere u učenju (UNUN2). Sve pretpostavljene čestice o ulogama učenika u suradničkom učenju grupirane su oko trećega čimbenika - Uloge učenika u suradničkom učenju (UNUN3).

Tablica 7.

U svrhu konstrukcije podskale Uloge nastavnika i učenika tijekom suradničkoga učenja korištena je klasifikacija uloga nastavnika koji su razvili Ivić i suradnici (2001). Unutar ove klasifikacije uloge nastavnika podijeljene su u šest kategorija: uloga nastavnika, motivacijska uloga, uloga evaluatora, kognitivno-dijagnostička uloga, uloga regulatora socijalnih odnosa u razredu kao grupi i uloga partnera u afektivnoj interakciji. Početna prilagođena klasifikacija uloga nastavnika nije empirijski potvrđena. Percepcija nastavnika o vlastitim ulogama u suradničkom učenju nije u skladu s njihovim teorijskim pretpostavkama, pa je bilo potrebno redefinirati početnu klasifikaciju uloga nastavnika. Naime, empirijska raspodjela odgovora nastavnika pokazala je da su uloge nastavnika grupirane u dvije široke kategorije. Sljedeće su uloge grupirane oko čimbenika koji pretežno objašnjavaju fenomen koji istražujemo: uloga nastavnika (nastavnik kao planer i organizator, facilitator suradničkoga učenja), motivacijska uloga i uloga evaluatora suradničkoga učenja. Drugi čimbenik definira

čestice koje operacionaliziraju ulogu nastavnika kao regulatora društvenih odnosa u grupi, afektivnoga partnera u interakciji i njegovu kognitivno-dijagnostičku ulogu. Prvi faktor – Uloge nastavnika u odnosu na ciljeve i ishode suradničkoga učenja - dominantno objašnjava fenomen koji ispituujemo (39,85 %), odnosno predstavlja ocjenu nastavnika o vlastitoj ulozi u suradničkom učenju. Analiza sadržaja i zasićenje stavki grupiranih oko dominantnoga čimbenika ističu uloge kojima nastavnici stvaraju preduvjete za nastanak suradničkoga učenja (nastavnik kao planer i organizator suradničkoga učenja, nastavnik kao predavač), a zatim pružaju podršku i pomoć učenicima i vode proces suradničkoga učenja (nastavnik kao voditelj, motivator i evaluator suradničkoga učenja). Drugi faktor - Uloge nastavnika u odnosu na učenike kao partnere u suradničkom učenju - određen je česticama koje se tiču uloge nastavnika kao regulatora društvenih odnosa, kao afektivnoga partnera u interakciji i kognitivno-dijagnostičku ulogu nastavnika. Tijekom primjene suradničkoga učenja, nastavnici potiču interakciju i razmjenu s učenicima, vode iskrene i otvorene razgovore s učenicima, potiču učenike da izraze osjećaje i iskustva vezana uz grupno učenje (nastavnik kao afektivni partner u interakciji), određuju spremnost učenika za obavljanje grupnih aktivnosti te otkrivaju njihove interese (kognitivno-dijagnostička uloga nastavnika), uspostavljaju dobre odnose s učenicima i pomažu im uspostaviti dobre međusobne odnose, zajedno sa skupinom rješavaju zadatke, rješavaju sukobe u grupi i ispravljaju neprihvatljiva ponašanja učenika u skupini (nastavnik kao regulator društvenih odnosa). Treći faktor - Uloge učenika u suradničkom učenju – uključuje čestice o ulogama učenika. Kada je ovaj faktor u pitanju, zasićen je česticama o učeniku koji obavlja različite i komplementarne uloge, a prije svega: ulogom zapisničara, istraživača, ocjenjivača, promatrača i kontrolora. Naime, nastavnici koriste obrazovne postupke za strukturiranje različitih uloga učenika u kojima dolazi do izražaja inicijativa i neovisnost učenika u istraživanju, njihova sposobnost reguliranja društvenih odnosa i ponašanja u skupini, kao i sposobnost kontrole i vrednovanja rada u skupini.

Tablica 8.

Postoji statistički značajna visoka korelacija između faktora (Tablica 8).

## **Rasprava**

Općenito, rezultati faktorske analize pokazuju da se percepcije nastavnika o strukturiranju suradničkoga zadatka uglavnom podudaraju s početnim teorijskim znanjem, odnosno da postoji podudarnost između zaključaka koji proizlaze iz deskriptivne analize ekstrahiranih čimbenika i teorijskih pretpostavki. U pogledu strukturiranja suradničkoga zadatka, percepcija nastavnika grupirana je u dva ključna aspekta: a) načini strukturiranja suradničkoga zadatka (kako nastavnici osmišljavaju suradnički zadatak) i b) strukturu suradničkoga zadatka (što čini strukturu i suštinu suradničkoga zadatka). Drugo, opisna analiza ekstrahiranih čimbenika nadalje implicira da su percepcije nastavnika pretežno usmjerene na načine strukturiranja suradničkoga

zadatka, dok je u pozadini struktura samoga suradničkoga zadatka. Treba istaknuti da nijedan način strukturiranja suradničkoga zadatka, a time i struktura samoga suradničkoga zadatka, nije sam po sebi bolji i učinkovitiji, ali da postoji apriori veći obrazovni potencijal određenih strukturnih rješenja u poticanju određenih nastavnih ciljeva u razvoju učenika. Kao treće tumačenje, potkrijepljeno rezultatima faktorske analize, ističemo mogućnost da nastavnici stavljaju odluke o strukturiranju suradničkoga zadatka u stvarni školski, socijalni i kulturni kontekst, koje često karakteriziraju nepovoljne okolnosti u smislu didaktičko-metodičke, vremenske i prostorne organizacije nastave. Percepcija nastavnika o strukturiranju suradničkoga zadatka implicitno sadrži poruku o vjerovanjima nastavnika o tome što su trenutačne i potencijalne razvojne sposobnosti učenika. Percepcije nastavnika, posebno u odnosu na strukturu suradničkoga zadatka, otkrivaju da se primjenjuju rješenja koja imaju manji obrazovni potencijal za pokretanje i razvijanje znanja više kvalitete i viših mentalnih procesa kod učenika u nastavi Srpskoga jezika. Štoviše, u stvarnim školskim uvjetima odluke nastavnika o strukturiranju suradničkoga zadatka uvjetovane su nizom parametara, prvenstveno prirodom nastavnih sadržaja, ciljem lekcije, organizacijom nastave, kao i osobnim karakteristikama nastavnika i učenika (Antić, 2010; Ivić i sur., 2001).

U smislu formiranja suradničkoga zadatka, percepcija nastavnika grupirana je u dva ključna aspekta: a) veličina uradničkih skupina i b) sastav suradničkih skupina. Oko toga, činjenica da je iz perspektive nastavnika za formiranje suradničkih skupina u nastavi Srpskoga jezika primarno pitanje veličine skupine u odnosu na njezin sastav ističe se kao značajan nalaz faktorske analize. Pretpostavlja se da nastavnici prvenstveno imaju na umu brojne prednosti rada u malim skupinama u uvjetima razredne nastave (npr. mogućnost bolje interakcije, ravnopravnije sudjelovanje članova grupe u radu) ili da su njihove percepcije oblikovane iz praktičnijih razloga zbog kojih im je lakše formirati se, organizirati te nadgledati rad manjih suradničkih skupina.

Uzmemo li u obzir nalaze faktorske analize, kao i polazna teorijska polazišta, može se zaključiti da je teorijski model načela suradničkoga učenja koji su razvili Johnson i Johnson (Johnson i Johnson, 2003, 2009) u velikoj mjeri empirijski potvrđen. Za razliku od teorijskoga modela, koji predviđa pet načela suradničkoga učenja, empirijski podatci upućuju na četiri načela, a stavke o važnosti osobne odgovornosti i grupne obrade grupirane su oko istoga čimbenika. Još jedno zanimljivo otkriće faktorske analize je udio svakog načela u objašnjavanju obilježja suradničkoga učenja u nastavi Srpskoga jezika. Iako načela nisu hijerarhijski uređena, u teorijskom se modelu pozitivna međuovisnost ističe kao polazno načelo i preduvjet za ostala načela. Nalazi faktorske analize sugeriraju da pozitivna međuovisnost od svih načela suradničkoga učenja objašnjava najmanji dio karakteristika suradničkoga učenja u nastavi Srpskoga jezika, unatoč tome što percepcije nastavnika ukazuju na najveći udio socijalnih vještina i promicanje interakcije između učenika u tumačenju karakteristika suradničkoga učenja u nastavi Srpskoga jezika. Dva su moguća objašnjenja za dobivene rezultate faktorske analize. Prvo, uzimajući u obzir specifičnost nastave Srpskoga jezika, prirodu

nastavnih sadržaja koji se obrađuju kroz suradničko učenje (književnost, pravopis, gramatika), kao i specifičnost konteksta učenja (koji ističe komunikaciju, interakciju i razmjenu informacija, značenje i tumačenje između učenika), razumljivo je da percepcija nastavnika ukazuje na dominantno sudjelovanje socijalnih vještina i promicanje učeničkih interakcija u odnosu na druga načela suradničkoga učenja. Ostalo, postoji pretpostavka da se percepcija nastavnika o načelima suradničkoga učenja značajno oblikuje razumijevanjem teorije grupne dinamike koja naglašava tezu o ključnoj ulozi socijalnih vještina za cjelokupni razvoj čovjeka. Prethodno istraživanje potvrdilo je pretpostavku razvoja i poboljšanja socijalnih vještina učenika kroz suradničko učenje (Ahmadpanh i sur., 2014; Ferrer, 2004; Lavasani i sur., 2011; Mendo-Lázaro, S. i sur., 2018; Mitchell, Woloshyn i Elliot, 2003) i važnosti kvalitete interakcije učenika za individualni i grupni uspjeh (Gillies, Ashman i Terwel, 2008). Prema nastavnicima, kako sugeriraju rezultati faktorske analize, učenici uglavnom prihvaćaju odgovornost kroz vlastiti dio zadatka i na taj način pokušavaju olakšati rad ostalim članovima skupine, a najčešći način poticanja osobne odgovornosti učenika je slučajnim pozivanjem jednoga člana da predstavi rezultate rada skupine. Međutim, podatci također ukazuju na nedovoljno uspostavljene okvire referentnih kriterija za procjenu osobne odgovornosti učenika i grupnih procesa i aktivnosti općenito. U ocjenjivanju grupnih procesa i aktivnosti uočljivo je da se uglavnom provodi na individualnoj razini (skupina razmatra kako pojedinac radi i uči te kako poboljšati svoj rad), a zanemaruje grupno ocjenjivanje i donošenje odluka važnih za bolji rad i uspjeh grupe. Ako se procjena procesa i rezultata suradničke skupine temelji samo na procjeni pojedinačnih postignuća ili samo rezultata skupine, postoji izraženija mogućnost da se potencijali suradničkoga učenja uopće ne pojave ili da se unutar i između grupa razvijaju neprimjereni oblici natjecanja (Boud, Cohen i Sampson, 1999). Zanimljivo je primijetiti da se u trenutačnoj primjeni suradničkoga učenja pozitivna međuovisnost učenika gradi uglavnom kroz sustav nagrađivanja, koji se temelji na konačnom grupnom proizvodu, zatim na doprinosu svakoga pojedinca skupini, a najmanje kroz zajednički cilj skupine. Postoji pretpostavka da se percepcija nastavnika o važnosti pozitivne međuovisnosti učenika u grupi uglavnom oblikuje znanjem generiranim u motivacijskoj perspektivi (Watson, 1992), prema kojem se struktura nagrada smatra ključnim elementom u objašnjavanju učinkovitosti suradničkoga učenja. Uz to, pretpostavlja se da nastavnici vjeruju da je vanjska motivacija (npr. nagrada) značajniji poticaj učeničkih suradničkih aktivnosti u razrednoj nastavi od internih poticaja. Percepcije nastavnika o vlastitim ulogama i ulozi učenika tijekom suradničkoga učenja ukazuju na dva važna otkrića. Prvi značajan uvid koji proizlazi iz rezultata faktorske analize tiče se strukture uloga nastavnika i učenika u suradničkom učenju. Naime, empirijska raspodjela odgovora nastavnika ne podržava početnu i prilagođenu klasifikaciju uloga nastavnika, što predviđa postojanje šest različitih uloga nastavnika. Nastavnici većinu uloga nastavnika tijekom suradničkoga učenja ne doživljavaju niti procjenjuju kao zasebne i neovisne uloge. Suprotno teorijskoj konceptualizaciji, percepcija nastavnika o vlastitim ulogama u suradničkom učenju

podijeljena je u dvije široke kategorije. U prvoj kategoriji nastavnici kombiniraju nastavnu ulogu (učitelj predavač, planer i organizator, facilitator suradničkoga učenja), motivacijsku ulogu i ulogu ocjenjivača. Drugu kategoriju čine uloga nastavnika kao regulatora društvenih odnosa u grupi, uloga nastavnika kao afektivnoga partnera u interakciji i kognitivno-dijagnostička uloga. Ostvarivanjem uloga iz prve skupine postupci i aktivnosti nastavnika unaprijed se određuju na sadržaju, ciljevima i ishodima suradničkoga učenja. To stvara preduvjete za suradničko učenje, a zatim se provodi proces suradničkoga učenja tijekom pružanja podrške i pomoći učenicima. Realizacijom uloga iz druge skupine nastavnici su usmjereni na učenike, na izgradnju socijalnih i afektivnih odnosa, na interakciju s učenicima, kao i na interakciju između učenika. Još jedan značajan uvid, potkrijepljen nalazima faktorske analize, ukazuje na dominaciju nastavničkih uloga u odnosu na uloge učenika tijekom suradničkoga učenja.

## **Zaključak**

Općenito govoreći, uzimajući u obzir nalaze o pouzdanosti i valjanosti podskala, može se zaključiti da Uпитnik sa skalom procjene za nastavnike ima zadovoljavajuće metričke značajke, odnosno pouzdan je i valjan instrument za ispitivanje obilježja suradničkoga učenja u trenutačnoj nastavi Srpskoga jezika. Podskale nastale na temelju matrice sklopa faktora imaju zadovoljavajuće pokazatelje pouzdanosti i homogenosti. Rezultati eksplanatorne faktorske analize pružili su potporu početnoj operacionalizaciji karakteristika suradničkoga učenja u nastavi jezika u uvjetima razredne nastave. Osim toga, instrument može imati značajne implikacije u rasvjetljavanju poteškoća i problema s kojima se suočavaju nastavnici prilikom primjene suradničkoga učenja u trenutačnoj nastavi jezika u radu s mlađim učenicima osnovnih škola, a neizravno i u smislu njihova profesionalnoga razvoja i početnoga obrazovanja budućih nastavnika.

Potrebno je poboljšati istraživački instrument u pogledu sadržaja čestica, kao i mogućnost da podskale budu zasebni i neovisni instrumenti. Sljedeći korak u poboljšanju konstruiranoga instrumenta uključuje njegovu primjenu u budućim istraživanjima na drugim uzorcima nastavnika (predmetni nastavnici, nastavnici stranih jezika itd.), koji predaju u okviru drugih predmeta. Štoviše, buduća bi istraživanja trebala razmotriti mogućnost povezivanja karakteristika suradničkoga učenja u nastavi jezika s različitim osposobljavanjem nastavnika za primjenu suradničkoga učenja i različitim implicitnim uvjerenjima nastavnika o suradničkom učenju. Uz to, prepoznata je potreba za ispitivanjem konvergentne valjanosti podskala i korištenjem tehnika konfirmatorne faktorske analize za ispitivanje strukture obilježja konformacijske faktorske analize učenja u nastavi jezika.

Rezultati ukazuju na zadovoljavajuća mjerna svojstva skale procjene i njezinih sastavnih podskala i podržavaju razumijevanje da je suradničko učenje višedimenzionalni konstrukt čiji sadržaj kombinira prirodu i karakter suradničkoga učenja, specifičnosti nastave jezika i rada s učenicima osnovnih škola, kao i kontekstualnu uvjetovanost suradničkoga učenja. Prethodno predstavljena sociokonstruktivistička otkrića

ukazuju da se suradničko učenje uvijek odvija u kontekstu oblikovanom mikro i makrosocijalnim, kulturnim, ekonomskim i političkim utjecajima. Iz tih razloga, svaku primjenu suradničkoga učenja oblikuju brojni čimbenici koji umjeruju njezin tijek, proces i ishode. To onemogućava generaliziranje koje bi vrijedilo jednako u svim nastavnim situacijama, bez obzira na specifičnosti nastavnoga procesa i obrazovnoga sustava općenito itd. Uz to, pedagoške vrijednosti suradničkoga učenja kao nastavnih metoda i metoda učenja nisu unaprijed određene, ali u svakoj primjeni nastavnik razvija metodu suradničkoga učenja u stvarnom kontekstu s namjerom da podrži određene ciljeve poučavanja i pokrene željene oblike učenja.