

THE ATTITUDE OF TEACHERS TOWARDS PROSOCIAL BEHAVIOUR AND ACADEMIC ACHIEVEMENT IN SERBIA

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Abstract

Analyzing the significance and the role of school and teachers in the encouragement of prosocial behaviour of the learners in secondary schools, the following problem appeared: the connection between the teachers' encouragement of prosocial behaviour and the academic achievement in the secondary schools in Serbia through the following segments: procedures and activities used by teachers, and the interrelatedness of prosocial behaviour and academic achievement. A review of theoretical findings and a study conducted on the sample of 695 respondents are presented. The method of theoretical analysis and synthesis, the causal non-experimental method and the descriptive method are applied. The applied techniques include content analysis, scaling and evaluation. The results showed that teachers' activities partly promoted prosocial behaviour. The results of the research pointed to certain pedagogical implications: the reform of the educational system in Serbia; a change of educational objectives and tasks; establishing a continuity between all levels of the educational system and raising cooperation with parents; educational professional services to teachers in the area of raising their interest in acquiring and applying strategies and skills directed at educating prosocially oriented personalities and improving the quality of their work.

Key words: school indicators, interrelatedness of predictors, encouragement of prosocial behaviour, academic achievement, comparative analysis.

Introduction

Encouraging the prosocial behaviour of adolescents represents a big and complex issue of modern times. Although it is significant for the personality formation of adolescents with the highest qualities and moral values, prosocial behaviour is still unknown among researchers as well as educational officials. A negative trend in the 'helping behaviour' is a consequence of dominant antisocial, socially undesirable patterns of behaviour which reflect the existing social context. 'Social behaviour' is a broad construct, related to different phenomena. The elements of social behaviour are often an imminent part of some other constructs, such as 'peer acceptance' and 'social competence'. The school, an institution which educates the young, should not neglect the area of prosocial behaviour. However, a question should be asked: what is the key predictor for the interrelatedness and connection between prosocial behaviour of the young and academic achievement of pupils of high schools in Serbia?

By observing the current social context in Serbia, we can notice a specific paradox. Namely, on the one hand, numerous socio-political turbulences which accompany a transitional society, such as ours, produce a disturbed system of values, morality crisis, apathy, hopelessness, aggression and different forms of hostile behaviour, which can be an obstacle to the development and encouragement of positive social behaviour of the young. On the other hand, positive forms of behaviour such as prosocial behaviour, altruism, and empathy are the most needed during harsh times, which is shown by the examples of solidarity in the circumstances of emergency. Prosocial behaviour is a general term for different positive aspects of human behaviour whose

mutual feature is that their actions are directed towards the wellbeing of the community, cooperation and helping other people. The encouragement of prosocial behaviour and adoption of prosocial orientation is enabled by participating in the mutual process of socio-cultural activities in which all participants have an active role. Prosocial behaviour is connected with the self-concept, higher self-confidence, higher academic aspirations and anti-social impulses of regulation. There are also empirical proofs that prosocial behaviour during adolescence can serve as a long-term protective factor (Spivak, Lipsey, Farran & Polanin, 2014). Learners who are included in volunteering activities have a lower percentage of risk behaviour such as academic failure, school suspensions and leaving school.

The motivation for prosocial behaviour is diverse. An individual can express prosocial behaviour because he/she either “expects a reward, fears the consequences of not behaving prosocially, or perhaps he/she simply wishes to reduce the anxiety of the opposite side. Showing concern for others can occur in the form of proactive efforts to prevent hurting other people, spontaneous reactions to events we participate in, or other responses to the requested or needed help” (Hastings, Utendale & Sullivan, 2007: 639).

One of the possible ways of learning prosocial behaviour is by acquiring cooperative experiences. Techniques of cooperative learning enable the acquisition and development of social skills because they are the benchmark of prosocial activities, but also enable the achievement of good results in mastering the study material and developing positive interdependency between young people. Therefore, I believe that it is necessary to raise awareness about the significance of cooperative work and learning and to implement it into educational practice by teachers who are the key element, because this kind of learning is required by the contemporary way of living and working and more and more complex living conditions in Serbia.

Research Focus

It is obvious that research on the role of and significance for positive social interactions, and consequently the quality of social behaviour, shows that these do not always give the same results as far as achieving academic success is concerned. The problem is, at least to some extent, that empirical studies use different methodological approaches and procedures of research. Prosocial behaviour is operationalised in different ways, which makes comparing findings and making general conclusions difficult. The evaluation of prosocial behaviour by peers or teachers can be biased due to the influence of some other characteristics of the person whose behaviour is evaluated (gender, physical attraction, academic success, socio-economic status and the like). Finally, the correlational nature of most studies does not permit making conclusions on the direction of the interrelatedness of the variables in question. It is noticeable that there are few experimental studies which would first encourage prosocial behaviour in learners, and then study the effects of the applied program on their social and academic achievement. Such studies could contribute to identifying and interpreting the influence of prosocial behaviour on achieving academic success.

What dominates in adolescents in Serbia is a connection between different forms of social behaviour and social adaptability. However, except for the influence of behaviour on the success in the social sphere of life, researchers have tried to establish what role some forms of learners' behaviour can have on achieving corresponding academic success. It has been examined if and in what way the behavioural characteristics of individuals are related to adapting to school and achieving academic success. A great number of papers have studied the effects of negative social behaviour in comparison with positive one, just as there are a number of papers that deal with the relationship between different aspects of learners' positive social behaviour and school achievement. Thus, for example, a connection between academic success, on one hand, and empathic behaviour (Feshbach & Feshbach, 1987), prosocial interaction with peers (Green, Forehand, Beck & Vosk, 1980), prosocial behaviour (Wentzel 1993; Caprara, Barbaranelli, Pastorelli, Bandura & Zimbardo, 2000), peer relationships (Estell, Farmer, Cairns

& Cairns, 2002), social competences (Bursuck & Asher, 1986; Wentzel, 1991), on the other, have been studied. Where more complex phenomena (social competence, peer relationship, quality of friendship) are studied, prosocial behaviour makes one of the examined variables. The research on prosocial behaviour is often part of the studies which deal with socio-affective factors of school achievement.

Early prosocial behaviour protects from antisocial behaviour later on. There is evidence which suggests that encouraging prosocial development can protect children from antisocial development and potentially decrease their problematic aggressive and destructive behaviour (Rothbart, Derryberry & Hershey, 2000; Flannery, et al., 2003; Hastings, Rubin & DeRose, 2007; Twenge, et al., 2007).

Self-regulatory processes which help to define the aims, such as: socially responsible behaviour, interpersonal trust and styles of solving interpersonal problems, represent significant predictors of socially competence behaviour. To explain the development of social and intellectual competences, we can use the critical re-evaluation of the process of socialisation and the ways in which this process is connected with children's goals, their trust in others and their ability to solve interpersonal conflicts in a socially acceptable way.

The choice of strategies to teach, i.e. teaching methods, considerably affect the impact of the teaching process. It is the teacher who should decide how the objectives of teaching within teaching activities will be structured; at the same time it is important to define the social situation in which teaching takes place clearly so that learners will know what kind of behaviour is expected from them. The way in which teachers structure the objectives and outcomes of learning determines how learners will take part in tridimensional interaction. Models of interaction determine the cognitive and socio-emotional outcomes of teaching.

Unlike competitive social situations in which success, i.e. reward, of one learner comes at the expense of the failure of another, in cooperative situations, which are characterised by a positive interdependence of reward, both success and reward are a result of mutual action of all members of the group. Since rewards (compliments, recognition) are given to the group and are based on group achievement, the success of one learner helps another learner to be successful. Thus, restructuring the basic dimension of the life in the classroom, including the models of communication between peers, on one hand, and between the teacher and the learners, on the other, creates a social situation which is essential for the encouragement and internalisation of prosocial skills. Prosocial behaviour can be developed only if it is an integral part of the learning process.

While analysing the significance and the role of school and teachers as representatives of the educational process in the encouragement of prosocial behaviour of the young in secondary schools, the following *problem of research* has arisen: the connection between the teachers' encouragement of prosocial behaviour of the young and the academic achievement in the secondary schools in Serbia through the following segments:

1. What are the procedures and activities which are used by teachers and how does that reflect on the behaviour of learners?
2. The interrelatedness of prosocial behaviour and academic achievement of adolescents.

Methodology of Research

General Background of Research

Due to the fact that life in a transitional society, such as the society in Serbia, brings about a series of ambiguities, contradictories and uncertainties, it can be an aggravating factor in the processes of adopting standards, behaviours and values which are considered socially desirable. In this sense, the role of school as an educational institution is to give full support to the young on their way to maturity, and to help in the development and encouragement of those behaviours which are a counterbalance to aggressive and deviant ones, that is, the prosocial behaviours which are an imperative of a contemporary democratic society.

Aim of Research

1. To determine current procedures used by teachers in order to encourage prosocial behaviour of learners, as well as the relation between those procedures and the efficiency of their application.

2. To determine the type of interrelation between learners who have adequately developed social competence for their age, who express prosocial behaviour and who have a record of appropriate success in school and curricular activities.

General Hypothesis

It was hypothesized that teachers understood the role of the school as a motivator of prosocial behaviour and the connection between prosocial behaviour and academic achievement but also that there also was statistically relevant connection between the current procedures that the teacher used in encouraging prosocial behaviour in learners (observational learning, verbal prescription, emphasising moral values and moral reasoning, emphasising the importance of sports activities, empathy, altruistic orientation to others, etc.) and the efficacy of their application in the encouragement of prosocial behaviour in secondary school learners.

Auxiliary Hypotheses

H₁: It is assumed that there is a statistically significant connection between the prosocial behaviour of learners and the attitudes of teachers regarding the encouragement of prosocial behaviour and the identification of factors on the total sample.

H₂: It is assumed that there is a statistically significant difference in the prosocial behaviour of learners in relation to the control variables.

H₃: The attitudes of teachers confirm that prosocial behaviour is more expressed in learners who have a record of higher academic success in comparison to learners who have lower success in the educational process.

H₄: The attitudes of teachers confirm that prosocial behaviour and the influence of peer interaction are connected and determined by each other.

H₅: The attitudes of teachers confirm that the use of different methods of the encouragement of prosocial behaviour influences the building of social competences and academic achievement of learners.

Research Variables

Independent variables: The activities of teachers by which they encourage prosocial behaviour of learners. The educational work includes many activities whose aim is to socialise young people better. Instrumental conditioning, insight learning, observational learning, and cooperative learning are only some of many methods which are used in the process of the encouragement of "helping" behaviours.

Dependent variables:

1. Prosocial behaviour of learners. Prosocial behaviour refers to a wide range of behaviours which contribute to the wellbeing of others such as providing help in the performance of certain activities, giving and sharing material goods, providing physical assistance and protection, different forms of prosocial help (encouragement and cheering up, providing consolation, showing understanding and empathy, respect, interaction...). Appreciation of

others, cooperation, acceptance of social roles and norms, development of positive styles of interaction, and humanity represent aims, which are forgotten in Serbia. The significance of this research is to point out that the encouragement of prosocial behaviour is more than necessary and useful for individuals as well as the collective.

2. The attitudes of teachers about the academic achievement of learners;

3. The attitudes of teachers about the connection between prosocial behaviour and academic achievement of learners.

Control variables: the gender of learners, the age of learners, the years of service of teachers and the age of teachers.

Sample of Research

The sample included 445 secondary school teachers and 250 learners of comprehensive schools in Serbia (Table 1; Table 2) in 25 secondary schools.

Table 1. Structure of a subsample of learners in relation to gender.

Gender	Frequencies	χ^2	Percentage	df	p
Male	104		41.6		
Female	146		58.4		
Total	250	35.2	100.0	1	0.01

Table 2. Structure of the sample in relation to age and years of service of teachers.

		%
Age	18-30	15.0
	31-45	26.7
	46-60	25.0
	Over 60	33.3
Years of service	0-10	20.0
	11-20	36.7
	21-30	28.3
	31-40	15.0

The sample is not gender-balanced, and it does not represent the entire population of teachers and learners, but it is significant in its size; therefore, certain generalizations are possible, but within the respondents who are included in the sample. A detailed procedure of the research which includes validity and reliability will be presented in the remainder of the paper.

Methods, Techniques and Instruments of Research

Taking into account the characteristics of the research and the way of collecting data in this research, the following methods have been applied: the method of theoretical analysis and synthesis, the causal non-experimental method and the descriptive method (the method of research survey). The techniques that have been applied are the content analysis, scaling and evaluation.

In line with the examined problem and used research methods, we used corresponding statistical procedures which would enable the presentation of the obtained data and their analysis. The following processing methods and data analyses were used: descriptive statistics, factor analysis as a form of multivariate data processing by method–categorical principle components analysis, instrument reliability (Cronbach's Alpha), variant analysis (ANOVA) to determine differences among variables Kolmogorov-Smirnov test and Shapiro-Wilk test, Bartlett's Test.

Instruments

In this research the following instruments were used:

The PPPA-N evaluation scale – encouraging prosocial behaviour in adolescents (for teachers) and PPPA-U evaluation scale – encouraging prosocial behaviour in adolescents (for pupils), constructed for the needs of this research. For the purposes of the research, their reliability and validity have been tested. The validity of the data was checked by the Kaiser-Meyer-Olkin (KMO) test, whose values of 0.738 indicated that the data were adequate for the application of this technique. The reliability of the instruments has been measured by the Cronbach's alpha coefficient (Table 3), which indicates that these instruments have good metrical characteristics.

Table 3. Reliability of the scale PPPA-U for learners and PPPA-N for teachers.

	Cronbach's Alpha	Items and subscales
Questionnaire for learners	.843	47
Questionnaire for teachers	.916	39
Factors of prosocial behaviour – learners	.736	6
Factors of prosocial behaviour – teachers	.769	3

The structure of instruments: I The efficacy of the pedagogical methods and educational procedures for the prosocial development of a person; II The role and influence of the teacher on the encouragement of prosocial development and behaviour; III Carrying out the activities aiming at the encouragement of prosocial behaviour – a hidden curriculum.

The evaluation scale PP-ŠP– prosocial behaviour and academic achievement (for teachers). The Cronbach's alpha coefficient is 0.907 and meets the criteria of reliability. The normality of distribution has been tested by Kolmogorov-Smirnov and Shapiro-Wilk tests, and the results have the level of significance of 0.001. The structure of instruments: I Prosocial behaviour and academic success of pupils, II Prosocial behaviour and academic achievement in relation to the gender of pupils, III Prosocial behaviour of pupils and the influence of peer interaction in class, IV Prosocial behaviour and the influence of teachers.

Results of Research

Regarding the nature of the problem we dealt with, our subject and objectives of the research, we applied a statistical technique – Factor analysis.

In order to reduce variables of the PPPA-N scale - the encouragement of prosocial behaviour of adolescents for teachers and, consequently, apply the statistical technique factor analysis, the validity of the data was first examined by the Kaiser-Meyer-Olkin (KMO) test (Table 4).

Table 4. KMO and Bartlett's tests on the sample of teachers.

	Kaiser-Meyer-Olkin measure of sampling adequacy	.738
Bartlett's test of sphericity	Approx. Chi-Square	1759.649
	df	741
	Sig.	.001

The validity of the data was checked by the Kaiser-Meyer-Olkin (KMO) test, whose value of 0.73 shows that the data were valid for the application of this technique. To control the interrelatedness of the factors, we applied the orthogonal varimax rotation, with Kaiser Normalisation. The results obtained by the Kaiser-Meyer-Olkin (KMO) test showed statistical significance ($Sg=0.01$) smaller than 0.05.

Being that there has been an evaluation of the adequacy of data in order to apply the factor analysis, insight in Scree plot, factor analysis showed that three factors from the PPPA-N questionnaire for teachers stood out prominent with 46.06% of the explained variance (Table 5).

Table 5. Factors for teachers obtained by the PPPA-N scale.

	Loadings			Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.605	31.732	32.734	12.605	31.732	32.734	7.609	18.925	18.925
2	2.593	6.385	38.256	2.453	6.385	38.256	5.462	14.921	32.846
3	2.209	5.920	44.149	2.209	5.920	44.149	4.439	10.391	46.065

The first factor that stood out explained 18.92% of the variance, which referred to the nourishing of tolerance and solidarity among learners, insistence on the respect of differences among learners, expressing positive and optimistic attitudes to learners, encouraging the sense of justice and peer communication, praising learners. The items included in this first factor named *focus of the teacher on encouraging prosocial behaviour* referred to the efforts and engagement of the teachers directed at creating adequate psycho-social atmosphere in class, which resulted from the efforts of the teacher to create relationships characterised by friendly and cooperative relationships, relationships of mutual trust and respect, dominated by the respect for individual differences. This factor also indicated the engagement of the teachers directed at raising peer communication and the sociometric status of learners to a higher level in quality.

The second factor that stood out explained 14.92% of the variance, which referred to acquiring necessary knowledge, skills and values, encouraging cooperation both between learners and between the teacher and learners, developing empathy and openness in learners. The items included in this factor named *focus of the teacher on cooperation, openness and empathy* proved the similarity of the answers that the teachers gave, which confirmed the hypothesis that in their work teachers mostly supported the formal acquisition of knowledge - the educational dimension of the teaching process. It turned out that teachers tried to act as role models to their learners by acting in a prosocial way in their work and their relationship with learners, co-workers and other people, opting for respecting learners and their rights and cooperating with them. This factor also indicated that teachers believed in the necessity of building a relationship of empathy with their learners, since, on one hand, putting oneself into their psychological state would create a higher level of understanding and trust both in the

teacher-learners relationship and in the learners-learners relationship, while, on the other hand, it would also contribute to the development of social skills of learners and improvement of their social relationships.

The third factor which stood out explained 10.39% of the variance. It referred to learners displaying socially competent behaviour, building better interpersonal relationships as well as applying different types of learning (observational learning, verbal prescription) for the sake of achieving academic success. The items included in this factor named *focus on academic success and achievement* showed a similarity in teachers' answers: they believed that prosocial behaviour had to be promoted by the dominant ways of encouragement, such as observational learning and verbal prescription. They also indicated that teachers agreed that the academic success of learners was possible only if they had developed social skills and built correct and meaningful relations with others, i.e. if learners had built and developed prosocial behaviour which they would apply in the relationships with their teachers, other learners and other people.

To determine the connection as well as the (positive or negative) relationship between these factors, the Spearman correlation coefficient which measures the degree of interrelatedness of two ordinal variables was used. The obtained results (Table 6) did not come up to our expectations, but they could be a consequence of the dominance of the educational dimension in this school since a comprehensive secondary school emphasised the acquisition of knowledge and preparation of pupils for university, whereas the other, educational, dimension was neglected and the development of social competences and encouragement of positive social behaviour were marginalised. On the other hand, the ambition and focus of learners on personal success and achievement in school could have negative repercussions on learners' openness to others, helping and empathic sensitivity since it was our hypothesis that schools developed a competitive atmosphere which by itself was not compatible with the encouragement of the positive patterns of behaviour.

Table 6. Interrelatedness between prosocial behaviour of learners and the focus of teachers on the encouragement of prosocial behaviour, the focus on cooperation, openness and empathy and the focus on academic success and achievement of learners.

Factors	L	Focus on the encouragement of prosocial behaviour	Focus on cooperation, openness and empathy	Focus on academic success and achievement
Empathy in learners	Correlation coefficient	-.016	-.167	-.057
	Level of significance	.943	.457	.801
	N	250	250	250
Social response	Correlation coefficient	-.145	-.220	-.222
	Level of significance	.520	.325	.320
	N	250	250	250
Active helping	Correlation coefficient	-.051	.004	.168
	Level of significance	.822	.985	.454
	N	250	250	250
Sensitivity to others	Correlation coefficient	-.394	-.271	-.375
	Level of significance	.070	.223	.086
	N	250	250	250
Openness to others	Correlation coefficient	-.025	.075	-.059
	Level of significance	.914	.740	.793
	N	250	250	250
Cooperation with teachers	Correlation coefficient	-.192	-.029	-.045
	Level of significance	.391	.897	.844
	N	250	250	250

Note: *Correlation at the level of 0.05. **Correlation is at the level of 0.01.

The research showed that there was no connection at the level of statistical significance between, on one hand, the prosocial behaviour of learners operationalised through: social response, active helping, sensitivity to others, openness to others and cooperation with teachers and, on the other hand, teachers' focus on encouraging prosocial behaviour and learners academic success and achievement (Figure 1).

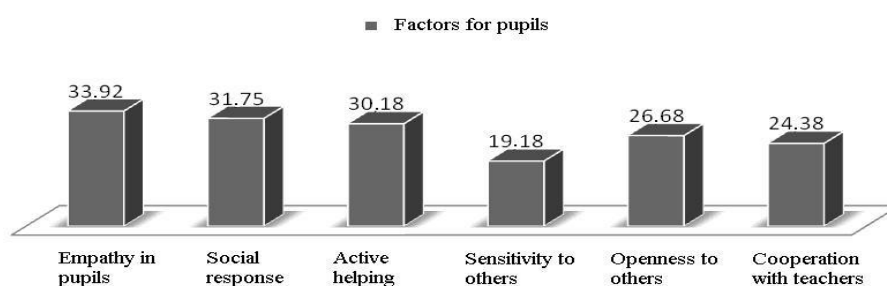


Figure 1: Factors for learners.

The first fact which can be seen in Table 7 is the statistically noteworthy connection between the empathy in learners and the focus of teachers on the development of cooperation, openness and empathy in learners, with the statistical significance at the level of 0.05. It can be concluded that the activities of teachers towards the development of empathic relations (the identification with the mental state of others) in learners co-vary with the empathy in learners themselves under the assumption that it is one of the important factors for the development of empathy in learners. Our results confirm the significance of the programme which is applied in the United States - *Developmental Studies Centre's Caring School Community*, which has the aim of encouraging prosocial behaviour (Kidron & Fleischman, 2006). The connection between empathic sensibility of learners and focus of teachers on the application of procedures which serve to develop empathy and cooperation in learners can be the consequence of the identification with prosocial procedures and activities of teachers in similar situations which go hand in hand with the verbal prescription in regard to respecting prosocial norms, on which teachers insist during their teaching process.

Table 7. Connection between prosocial behaviour of learners and the focus of teachers on the encouragement of prosocial behaviour, the focus on cooperation, openness and empathy, and the focus on academic success and achievement of learners.

Factors	L	Focus on the encouragement of prosocial behaviour	Focus on cooperation, openness and empathy	Focus on academic success and achievement
Empathy in learners	Correlation coefficient	-.406	.545*	-.326
	Level of significance	.149	.035	.235
	N	250	250	250
Social response	Correlation coefficient	-.362	-.174	-.076
	Level of significance	.203	.535	.788
	N	250	250	250
Active helping	Correlation coefficient	-.421	-.228	.000
	Level of significance	.134	.414	1.000
	N	250	250	250

Sensitivity to others	Correlation coefficient	-.495	-.408	-.493
	Level of significance	.072	.131	.062
	N	250	250	250
Openness to others	Correlation coefficient	-.289	-.562*	.093
	Level of significance	.317	.029	.742
	N	250	250	250
Cooperation with teachers	Correlation coefficient	-.081	-.313	-.064
	Level of significance	.783	.257	.822
	N	250	250	250

Note: *Correlation is at the level of 0.05. **Correlation is at the level of 0.01.

Another statistically significant interrelatedness at the level of significance 0.05 was the connection of the negative direction of learners' openness to others and teachers' focus on developing cooperation, openness and empathy in learners. This actually proved the inverse proportion of the obtained factors, i.e. that the teacher's focus on developing cooperation, empathy and openness to others in learners negatively influenced learners openness to others regarding their availability and openness when it was necessary to give help to those who needed it. The inverse proportion of these factors could be explained by inadequate activities that teachers applied in order to encourage learners' openness and availability to others. Namely, teachers' lack of information on the axiological dimension – the value that prosocial behaviour had primarily on the social development and functioning of the young, staying only at the verbal level of what should be done without an immediate application of what was said as well as an incorrect choice and application of teaching methods, procedures and types of learning were consequences of this negative correlation.

The distribution of the responses to the factors obtained by the PPPA-N scale for teachers revealed the order of the obtained factors for teachers: focus on encouraging prosocial behaviour, focus on cooperation, openness and empathy as well as focus on learners' school success and achievement. It was demonstrated that among the factors obtained by factor analysis the best distributed factor was the one named *focus on encouraging prosocial behaviour* (SD=9.615), which consisted of the items that described teachers' engagement in applying verbal prescription in order to respect prosocial norms, nurture tolerance, solidarity and differences among learners, nurture a sense of justice in learners, build a positive attitude to school and education in general, and encourage quality communication not only between the teacher and the learners but also between peers. One place behind was the factor *focus on academic success and achievement* with significant distribution (SD=8.198), which referred to the behaviour of the teacher which makes him/her a role model to learners in prosocial actions, the inclusion of school professional services in encouraging prosocial behaviour and nurturing communication and cooperation with others, the choice of teaching materials which provided support in acquiring and adopting necessary knowledge and skills, and building socially desirable attitudes. The factor with the least expressed distribution obtained through factor analysis (SD=5.368) was *focus on cooperation, openness and empathy*, which was based on the teacher's focus on encouraging social skills, nurturing the need to do sports and applying observational learning as a dominant way of nurturing peer communication and adopting prosocial patterns of behaviour.

In order to obtain relevant data during the investigation of the influence of the aforementioned variables on the prosocial behaviour of learners, we have applied Mann-Whitney U test, which is a substitute for the T-test, in order to evaluate whether the samples belong to the so-called U-distribution. For the purpose of our research we have applied ANOVA as the procedure for determining the influence of independent and control variables on dependent variables.

Table 8 indicates that there is a statistically significant difference in relation to the gender of learners, at the level of 0.05. A statistically significant difference is reflected in the level of openness to others. The factor labelled as "the openness to others" is more prevalent in females,

as expected, and it can be explained by educational patterns and stereotypes which are related to the gender roles in the given social context.

Table 8. Differences of prosocial behaviour of pupils in relation to the gender of learners.

Factors	Gender	N	Mean Rank	Sum of Ranks	Mann-Whitney U	p
Empathy in learners	Male	104	119.06	12382.50	6922.500	.232
	Female	146	130.09	18992.50		
	Total	250				
Social response	Male	104	130.58	13580.50	7063.500	.348
	Female	146	121.88	17794.50		
	Total	250				
Active helping	Male	104	123.46	12840.00	7380.000	.706
	Female	146	126.95	18535.00		
	Total	250				
Sensitivity to others	Male	104	118.73	12348.00	6888.000	.210
	Female	146	130.32	19027.00		
	Total	250				
Openness to others	Male	104	110.38	11480.00	6020.000	.005
	Female	146	136.27	19895.00		
	Total	250				
Cooperation with teachers	Male	104	121.53	12639.50	7179.5	.462
	Female	146	128.33	18735.50		
	Total	250				

The obtained results have confirmed our expectations and they once again confirm the previous results of the research regarding the higher level of empathy in girls and the finding that caring for others, willingness to express solidarity, understanding, giving support and security are more expressed and more important in girls than in boys. There is no statistically significant difference between other variables, which means that adolescents of both female and male genders do not show differences in the manifestations of prosocial behaviour which are covered by other factors.

Table 9 shows that in relation to the factor labelled as active helping there is a statistically significant difference between learners of first, second, third and fourth grades, but that there is also a statistically important difference in relation to the factor labelled as sensitivity to others, at the level of 0.01. Within the factor of active helping at the significance level of 0.01, it can be noted that the learners from the second grade have the most expressed prosocial orientation, while the set of prosocial activities which are included in the factor of sensitivity to others is most expressed in pupils from the fourth grade, and least expressed in learners from the second grade. A statistically significant difference in the manifestations of prosocial behaviour through the factors of the empathy in learners, the openness to others and the cooperation with teachers in relation to the grade has not been found, which is also confirmed by the obtained results. The obtained data partially confirm our assumption that prosocial behaviour increases with age, because the obtained results show that prosocial behaviour increases with age in certain segments, and in other segments remains unchanged. On the basis of identified forms of prosocial orientation in our research, we reach the identical conclusions which were presented by Eisenberg through the pluralistic model of prosocial orientation (Eisenberg, et al., 2006).

Table 9. Differences in prosocial behaviour of learners in relation to age.

Factors	Grade	N	Mean Rank	Chi-Square	df	p
Empathy in learners	First	60	105.95	6.853	3	.077
	Second	86	126.45			
	Third	53	139.02			
	Fourth	51	132.85			
	Total	250				
Social response	First	60	144.69	5.627	3	.131
	Second	86	119.21			
	Third	53	121.22			
	Fourth	51	117.98			
	Total	250				
Active helping	First	60	121.38	10.786	3	.013
	Second	86	139.01			
	Third	53	99.65			
	Fourth	51	134.43			
	Total	250				
Sensitivity to others	First	60	138.69	11.995	3	.007
	Second	86	104.52			
	Third	53	129.02			
	Fourth	51	141.70			
	Total	250				
Openness to others	First	60	128.90	1.625	3	.654
	Second	86	119.22			
	Third	53	134.25			
	Fourth	51	123.01			
	Total	250				
Cooperation with teachers	First	60	128.59	1.084	3	.781
	Second	86	124.25			
	Third	53	131.44			
	Fourth	51	117.79			
	Total	250				

Peer interaction creates circumstances for the development of social skills, social competencies, and emotional stability. One of our sub-hypothesis referred to teachers' perception of the connection between learners' prosocial behaviour and the influence of peer interaction in class, the influence of cooperation and commitment as well as the undesirable forms of behaviour (physical abuse, offences, humiliating others...). We expected that the results would confirm the findings that supported the view about the connection between peer interaction and learners prosocial behaviour. Our study gave the following results: teachers showed agreement with the items which referred to cooperation, cooperative and helping behaviour, but, on the other hand, they mostly disagreed with the items that referred to the undesirable forms of behaviour (physical abuse, offenses, humiliating others...).

The research (Table 10) showed that teachers highly valued cooperative, helping behaviour, cooperation and nurturing care and understanding for others. They believed that learners had to be accepted by their peers and that it was the only way in which they would manage to exhibit prosocial forms of behaviour at school. Learners who were accepted by their peers and who exhibited prosocial, cooperative and responsible forms of behaviour at school most frequently had great success at school, while socially rejected and aggressive learners often had low achievements at school.

Table 10. Prosocial behaviour of learners and the influence of peer interaction in class.

Prosocial behaviour of learners and the influence of peer interaction in class	Tests of normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	p	Statistic	df	p
Pupils perform together certain school activities or solve learning tasks.	0.324	60	0.00	0.633	60	0.001
Through cooperation and by helping each other learners tend to achieve a mutual aim.	0.425	60	0.00	0.595	60	0.001
Cooperative and helping behaviours contribute to the establishment of positive, academically relevant interaction with a teacher.	0.450	60	0.00	0.564	60	0.001
Learners help each other and support one another.	0.467	60	0.00	0.539	60	0.001
Learners have a positive influence on each other.	0.357	60	0.00	0.635	60	0.001
Learners show commitment to other pupils.	0.434	60	0.00	0.586	60	0.001
Learners express friendly feelings and feelings of connection with others.	0.325	60	0.00	0.630	60	0.001
Learners express concern and understanding for others.	0.323	60	0.00	0.626	60	0.001
Learners protect each other.	0.325	60	0.00	0.630	60	0.001
Learners are violent towards each other and they physically threaten each other.	0.434	60	0.00	0.586	60	0.001
Insult and humiliate each other.	0.323	60	0.00	0.626	60	0.001
Have sensitivity to other people's needs.	0.327	60	0.00	0.626	60	0.001

Examining teachers' attitudes to whether they themselves affected building learners' social competences by applying various methods, we wanted teachers to evaluate their own social behaviour and their relationship with learners in class but also express their own opinion and evaluation of their own knowledge, skills and competences to participate in building socially competent learners and encourage the development of prosocial behaviour by using various methods of teaching and work in class, interacting with learners and giving a personal example. It turned out that the function of evaluating the state of interpersonal relationships in the collective of learners/ children the teacher worked with, on one hand, and of using the results of that evaluation to develop or apply corresponding educational strategies in order to support learners, on the other, were seen as significant functions of teachers in this area.

It can be concluded that among teachers of different age there were certain differences regarding the question of perceiving prosocial behaviour and school achievement and their interrelatedness. Namely, it was noticed that older teachers expressed a higher degree of agreement with some items than their younger fellow workers. Older teachers showed a higher degree of agreement with the statements that boys were less emphatic than girls and that girls had greater academic success than boys. The results of examining the differences at the level of the perception of the interrelatedness of prosocial behaviour and school achievement among teachers of different age showed that younger teachers valued this form of behaviour and school achievement differently, even more positively, which is also emphasised by the following authors (Lungulov, 2010). Slightly lower values were recorded in older teachers. However,

the results showed that there was no statistically significant difference in the attitudes about prosocial behaviour between older and younger teachers. On the other hand, attitudes about school achievement were statistically significant at the level of 0.01.

Statistical cross-referencing of dependent variables and the independent variable *years of service* showed that there was no difference in distribution among teachers having different working experience within these dependent variables. Teachers of different working experience equally agreed with the statements that prosocial behaviour was exhibited by secondary school learners and that such a behaviour considerably contributed to their school achievement. Also, teachers were almost unanimous regarding the relationship among learners and interaction in class, but, ours as well as the results from 1994, also pointed out that it was necessary to respect one's own emotions and needs when working with learners (Hubbard, Coie, 1994). Clearly, a number of teachers who worked at school longer believed that some measures which gave the learner greater freedom were inappropriate and that learners had to be controlled without necessarily giving them too much freedom (Oelsner, Lippold, Greenberg, 2011). On the other hand, there were some teachers of shorter work experience who also approved of applying harsher measures aiming at encouraging learners to behave adequately. Most teachers achieved a high degree of agreement not only on the topic of prosocial behaviour but also on their expectation of the school achievement of secondary school learners.

An important motive for prosocial behaviour was social responsibility, which included a feeling of personal responsibility for one's own acts and their impact on others. Induction, as a form of reasoning, is particularly important for the development of prosocial behaviour. Induction means that children are given an explanation of the consequences of their behaviour on other people. The analysis of the obtained results showed that a statistically significant number of teachers were focused on the verbal way of encouraging prosocial behaviour (through conversation on values, tolerance, verbal prescription, etc.).

Finally, judging from the obtained results we can assume that the general hypothesis which assumed the connection of procedures which teachers used to encourage prosocial behaviour in adolescents and the efficacy of their application in the teaching process was partly confirmed.

Discussion

The positive, cordial and safe relations between teachers and learners are connected with the prosocial behaviour of learners and affect the expression of prosocial behaviour (Howes, 2000; Kienbaum, 2001; Eisenberg, Fabes & Spinrad, 2006). The items included in first factor showed that praise was the dominant educational measure that teachers applied in the area of encouraging prosocial behaviour in adolescents in secondary schools.

Empathy has been defined both as laying the foundations for prosocial development and as a mechanism of social influence on social behaviour. Quite a few theoretical frameworks, including psychoanalytic theory, social learning theory and social cognition theory, emphasize the role of parents in the understanding of the ontogenesis, socialisation, and the development of empathy and prosocial behaviour (Eisenberg & Valiente, 2002; Grusec, Davidov & Lundell, 2002). Alternative ways of control through emotional manipulation (such as disapproval or withholding love) are not believed to be tightly linked with the internalisation of prosocial values, although others do suggest that these can promote reparatory prosocial acts after a transgression by making the person feel guilty (Zahn-Waxler & Kochanska, 1990). Prosocial behaviour had to be promoted by the dominant ways of encouragement, such as observational learning and verbal prescription, which is in accordance with the models of providing service, which include consultations and team approach, and which are designed for solving individual problems of learners with the aim of facilitating academic achievement, as presented by the referenced authors (Elliott & Gresham, 1991; Skinner, Cashwell & Skinner, 2000).

The interrelatedness of learners empathic sensitivity and teachers' focus on the application of the procedures which would build the empathic relationship and cooperation between learners could be a consequence of identifying the prosocial procedures and activities of teachers in similar situations, which were connected with verbal prescription regarding the respect of prosocial norms, which teachers insisted on in their work. The conception of a curriculum which emphasises prosocial values and norms is most certainly a humanistic curriculum. Švec (1997) presented a conception of a humanistically oriented curriculum which positively influences the prosocial development of learners, which is also confirmed by our results which are in accordance with the humanistic conception.

The results of our and other researches (Greener 2000; Jackson & Tisak, 2001; Pakaslahti, Karjalainen & Keltkangas-Järvinen, 2002) mostly confirm the widely accepted stereotype that female learners express more concern for the emotional states of others, that they are more emotionally sensitive and more caring than male learners, thus they are generally more oriented towards interpersonal relations. Females achieve higher measurement results of empathy (McDonald & Messinger, 2010) at least in the cases of self-evaluation and evaluation of others.

Socially responsible learners, who trust their classmates and who resolve interpersonal problems in a socially acceptable way, achieve better academic success (Wentzel, 1991; Crick, 1996; Terwel, 2001). Our investigation of relations among peers, as well as the aforementioned researches, shows that learners and the young who are more prosocial are indeed more popular and more favoured, and they are more likely to have close friends (Clark & Ladd, 2000; Gest, Graham-Bermann & Hartup, 2001). Causal modelling analyses indicate that being more prosocial facilitates learners' greater popularity (Dekovic & Gerris, 1994). However, do more prosocial learners evoke positive and acceptable reactions in their peers, or do the facts that someone is loved by peers or has a good friend facilitate prosocial development?

The similarity between our finding and the finding of similar research (Brilhart, Galanes & Adams, 2001; Batson, 2008) is that the teacher's role in creating a good atmosphere in the classroom could be fulfilled through encouraging friendship among learners, which strengthens collectivism. This was supported by the finding about a considerable connection between the classroom atmosphere and learners' evaluation of the teacher's contribution to developing friendship ($C=0.45$), which means that the class atmosphere was more pleasant if the teacher considerably contributed to the development of friendship among learners. Developing friendship, and thus creating a pleasant classroom atmosphere, was observable in teachers who expressed tolerance and understanding for learners and encouraged them to mutual cooperation and solidarity, unlike teachers who encouraged competition and the pursuit of prestige in learners. The presence of social competencies in teachers primarily implies the presence of social and emotional awareness, which represents the similarity between the results of our research and other researches (Hastings, Utendal & Sullivan, 2007; Jenings & Greenberg, 2009). They are capable of forming strong connections and support through mutual understanding and cooperation, while, at the same time, they accept and respect cultural differences in their relations with parents and learners.

The researched aspects of prosocial behaviour in learners, such as empathy in learners, social response, active helping, sensitivity to others, openness to others and cooperation with teachers are aspects of prosocial behaviour whose formation involves family, a peer group, immediate wider and narrower social environment. The results of our research and the research by the following authors (Howes, 2000; Kienbaum, 2001; Flannery, et al., 2003) have reached the conclusion that teachers are the key predictors of positive social behaviour of learners and academic achievement. If we observe the results we have obtained in our research, within which different forms of prosocial behaviour have been included, such as empathy in learners, social response, active helping, sensitivity to others, openness to others and cooperation with teachers, it can be concluded that the data regarding the empathic relation towards others belong to two domains: the first, which states that empathy (prosocial behaviour) is a part of the socialisation process, and the second, which states that empathy is a part of the personality, which is also

in accordance with the results of our research and the previous research (Eisenberg, Fabes & Spinrad, 2006; Hastings, Utendale & Sullivan, 2007), because, there is no dominant connection between the measured subscales of prosocial behaviour in learners and the subscales which determine the devoted effort of teachers for the encouragement of prosocial behaviour and academic achievement.

In the investigation of the auxiliary hypothesis whose function was to test the overall trends which could not be used to determine a direct connection between teachers and learners, the results have shown an overall trend on a larger sample, as well as the covariations in teachers' activities for the encouragement of prosocial behaviour and prosocial behaviour of learners measured through six aspects. This speaks in favour of the quite individual, sporadic attempts of teachers and specific methods to encourage prosocial behaviour in learners, in the sense that teachers do not apply similar criteria but that they are different from teacher to teacher. We assumed that the professional competence of teachers in their work with learners in the area of the encouragement of prosocial behaviour is conceived in a similar way by didactic-methodical procedures such as cooperative learning, observational learning, verbal prescription, giving positive examples of prosocial activities, and the like; however, it has been shown that this trend is not based in practice but that it comes down to the individual efforts of teachers to develop and encourage prosocial behaviour in their learners.

Regarding the reciprocity within the relationship of prosocial behaviour and academic success, it turned out that learners with higher academic achievement were prone to exhibiting prosocial behaviour, which can be explained by the fact that learners of higher academic achievement were more focused on studying and acquiring formal knowledge, and therefore they showed a higher sensibility to helping those who were in need.

Judging from the results of the study it can be assumed that teachers believed that there were two groups of learners which exhibited statistically significant difference at the level of prosocial behaviour and school achievement. The first group was made up of learners who did not exhibit prosocial behaviour and did not have significant success at school, while the other group was made up of learners who behaved prosocially towards others. In addition, if we bear in mind the results of the opinions and attitudes of teachers on the distribution of learners of different genders within the isolated categories of roles, i.e. the significance of gender differences in different roles for prosocial behaviour, it is possible to complete the description of these two groups of learners with the following statement: learners who were prosocial were considerably connected with the school and achieved higher academic success, while learners who did not behave prosocially to others were mostly recruited from the category of learners of male gender, which is a similar result to the one from the research done by Zahn-Waxler and Knafo-Plomin (Zahn-Waxler, 2000; Knafo & Plomin, 2006).

Thus, a high level of school achievement could be related to the exhibition of prosocial behaviour by girls, while close connection with the school could be not only a protective factor of exhibiting prosocial behaviour but also a factor related to the risk of victimisation through peer violence in boys (Greener & Crick, 1999).

The obtained research findings confirm that the academic achievement of learners is connected with prosocial behaviour. Thereby, a high level of academic achievement can be related to better prosocial behaviour and can be observed as the factor which contributes to the improvement of prosocial behaviour. In other words, a high level of prosocial behaviour can be an indicator of good academic achievement, but primarily within the domain of expressing positive emotions towards others. When it comes to the experience with prosocial learners, the obtained results suggest that most teachers can observe differences in the levels of their relation to academic achievement. This opens up the question of the influence of other agents of socialisation. In order to understand more thoroughly the problem of expressing prosocial behaviour and determine the nature of correlation between prosocial behaviour and academic achievement, it would be significant to differentiate and examine separately the attitudes of teachers about the components of commitment and dedication of pupils to academic activities,

because our results and certain results of other researches (Cunningham, 2007; Urbanski, 2007) suggest that learners who do not express explicit prosocial behaviour can also be dedicated to academic learning, achievement and obligations, but that they are not committed to academic life.

Conclusions

The segment of the prosocial behaviour of the young is a phenomenon to which we need to pay due attention and show how significant it is considering the role it has in the process of the personality formation of the young. This paper made a step forward towards determining the role of teachers in the encouragement of prosocial orientation in adolescents. To give an adequate answer to the problem mentioned above, first we gave an extensive review of theoretical findings of domestic and world researchers and then we presented a study conducted on the total sample of 695 respondents in secondary schools in Serbia.

After examining the behaviour and attitudes of teachers and learners, the obtained results showed that teachers' activities directed at encouraging prosocial behaviour in secondary school learners only partly promoted prosocial behaviour, which can be explained by teachers' insufficient efficiency in work, insufficient expertise but also by inertia towards modern methods and forms of work which could adequately answer to the needs and interests of learners. Besides, the inefficiency in encouraging prosocial behaviour in learners was influenced by teachers' not paying attention or time to prosocial behaviour due to their being burdened by the curriculum and solving acute disruptive behaviour at school. A somewhat bad efficiency in encouraging prosocial behaviour in learners was also affected by the very complexity of the problem since the obtained results showed that the prosocial behaviour of adolescents depended on many factors, not just on the agents of socialisation, such as the school, which was also confirmed by the theoretical implications presented in the paper.

Fair teachers who adopted altruistic values and teachers who showed understanding for learners and who encouraged them to mutual cooperation, solidarity and tolerance contributed to the prosocial development of the young.

The activities which teachers used to encourage prosocial behaviour in learners referred to strengthening intergroup relationships and solving conflicts among learners since it is well known that harmonious peer relations are the basis for the development of prosocial behaviour. However, our results showed that teachers did not deal with solving peer conflicts and problems. These data do not support the finding that teachers could affect prosocial behaviour through the influence on peer relationships.

Studying this problem, some dilemmas which can be the starting point of future studies can be identified: 1. Is high academic success at the end of the first term and at the end of the school year respectively really a predictor of the prosocial behaviour of the young or are such learners egotistically oriented and focused on personal success, i.e. could it be that learner of lower academic achievements are more open to providing help to others, cooperation and solidarity; 2. Do the work experience and educational profile of the teacher determine the procedures and activities by which he/she is guided in encouraging prosocial behaviour in learners; 3. Are the procedures and activities which guide teachers in their encouraging prosocial behaviour in learners different among teachers who have different degrees in education.

Finally, we see that the results of our study pointed to some pedagogical implications: the reform of the educational system in Serbia, especially of secondary school education, which has been in a pressing need of changes directed at answering to the needs and interests of learners; a change of educational objectives and tasks in the sense that we should take greater care of individual learners and the development of those values which contribute to improving personal relationships and quality of learners life; establishing a continuity between all levels of the educational system and raising cooperation with parents to a higher level; continuous support of educational professional services to teachers in the area of raising their interest in acquiring

and applying strategies and skills directed at educating prosocially oriented personalities and improving the quality of their work by implementing the programs which have proved extremely successful in the field of encouraging the prosocial behaviour of adolescents in secondary schools of other countries.

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