Psihologijske teme 18 (2009), 1, 55-74

Izvorni znanstveni rad – UDK 316.62-053.5
371.212:373.3/.5

Students' Social Behaviour in Relation to their Academic Achievement in Primary and Secondary School: Teacher's Perspective

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Abstract

Social skills include different behaviours which help an individual enter and interact in interpersonal relations. On the other hand, these skills are also learnt through the very same experience. Social skills are an important factor of students' acceptance and popularity among peers and also a factor of their academic achievement. In our research, we tried to establish how primary and secondary school teachers rate their students' social skills; we explored gender differences in evaluated social skills and investigated relations between social skills and students' academic achievement.

907 students participated in the study, of whom 470 were seventh-grade primary school students (231 boys and 239 girls), and 437 third-grade secondary school students (176 boys and 261 girls). Merrell's School Social Behaviour Scales (1992) were used for the assessment of students' social skills and homeroom teachers filled in the questionnaire for each participating student. Results showed that teachers assessed girls as socially more competent on all subscales regardless of their school level. Academic behaviour was the only subscale on which there were significant differences between primary and secondary school students, although girls scored higher again at both levels. Correlations between students' social behaviours and their academic achievement were higher in boys and higher between socially desired behaviour and academic achievement compared to socially undesired behaviour. In the category of desired behaviour, self-management/compliance and academic behaviour were significant predictors of male and female students' academic achievement. The strongest predictor of students' academic achievement was their academic behaviour.

Further on, we also discuss pedagogical implications of the study.

Keywords: social skills, academic achievement, students, primary and secondary school

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Definition of social skills

Social skills include different socially acceptable behaviours which enable an individual to enter interpersonal relations and interact with others. For example, Elliott and Busse (1991) proposed there were five main categories of social skills behaviour: cooperation (helping other people, sharing and abiding by rules); assertion (initiating behaviours, asking for things and responding to behaviours of others); responsibility (communication with adults and demonstration of care); empathy (showing concern for the feelings of others); self-control (ability to respond appropriately to conflict or 'corrective feedback' from an adult).

Gresham (1986) defined social skills as one of the structural elements of social competence besides adaptive behaviour and social acceptance. He defined adaptive behaviour as a developmental category, which is shown in independent and responsible behaviour of an individual and is determined by his mental and chronological age (Reschly, 1990). When assessing individual's adaptiveness we should also consider cultural and environmental contexts with their demands and expectations to an individual. Social skills are described as situation-specific behaviours, which predict and/or are related to important social outcomes, for example social acceptance, popularity, behaviour assessment by significant others.

Merrell (1999) also defined social skills as a component of social competence, which is a more general measure of one's quality of social behaviour. Social competence is usually defined as the ability to act effectively and appropriately in different social situations (Chen, Liu, Li, Li and Li, 2000). Merrell (1999) pointed out that the connection between social skills and quality of peer relations is reciprocal.

In educational context when investigating relations among peers and between students and adults/teachers, social skills are a more commonly used term than social competence. Social skills include different behaviours which help individuals enter and interact in interpersonal relations more or less successfully. On the other hand, these skills are also learnt through the very same experience – in different relationships individuals learn different social skills, gain and model them. The relationship between social skills and interpersonal relations is reciprocal: social skills affect the quality of one's relations, and vice versa.

Caldarella and Merrell (1997) defined five of the following dimensions of social skills:

- Peer Relations: include social skills which reflect a child or a youth who treats his or her peers in a positive manner. Such skills are for example: complimenting or praising others, offering help or assistance, inviting others to play or interact.
- Self Management: these skills reflect a child or a youth who is able to control his or her temper, follow the rules and limitations, make compromises with others, and accept criticism well.

- Academic skills: include skills that reflect a child or youth who might be called an independent and productive worker by his or her teacher. Skills such as accomplishing tasks or assignments independently, completing individual seatwork/assignments, and heeding teacher directions best describe academic behaviour skills.
- Compliance: describes a child or a youth who is compatible with others by complying with social rules and expectations, appropriately using free time, and sharing things. Caldarella and Merrell (1997) also pointed out that the label compliance was chosen because it appears to be the term that best describes the component skills included therein. However, the majority of researchers who identified a similar dimension used the term "cooperation" instead.
- Assertion: includes social skills that refer to a child or a youth who might be called "outgoing" or "extroverted" by others. More specifically, it includes such skills as initiating conversations with others, acknowledging compliments, and inviting others to interact.

Social competence in relation to students' psychosocial position in their classroom and their academic achievement

Many researchers stress that learning, development and schooling are interwoven in a social matrix and we cannot understand them outside that context (e.g. Cole, 1985; Rogoff, 1990). When investigating relations between academic and social variables authors often emphasize the study of educational goals in comparison with social goals. For example, Wentzel (1998) pointed out that different social goals (for example being accepted by peers in a social environment, forming friendships and responsible behaviour) have a lot in common with educational goals. It has been shown that social competence is a factor of student's peer acceptance and popularity, students' emotional well-being, and is even seen as a protective factor in one's development (Chen *et al.,* 2000; Merrell & Gimpel, 1998; Newcomb, Bukowski & Pattee, 1993). Also, prosocial behaviours, like willingness to help others or comply with them, are positively related to students' academic achievements (Wentzel, 1998). Ray and Elliott (2006) proposed a model where students' social skills and self-concept influence academic achievement through their effect on academic competence. A research of a Slovene sample of students also confirmed that socially desirable behaviour is directly and significantly related to primary and secondary school students' academic achievement in mother tongue and mathematics (Peklaj *et al.,* 2008).

In his meta-analytical study Ladd (1999) summarized the findings of different longitudinal studies which established that rejection by peers is relatively stable and was related not only to the problems in the area of social functioning (e.g. stronger aggressiveness, disruptive behaviour, and withdrawal, diminished prosociality) but

also to the problems in the area of achieving educational goals (e.g. missing school, repeating classes, difficulties in adapting to secondary school). The opposite, however, is true for popular students – these are students who are accepted by their peers. Characteristic for popular students are: higher degree of sociability, better problem solving skills, more positive social behaviours, and better academic outcomes (Frentz, Gresham & Elliott, 1991; Newcomb, Bukowski & Patee, 1993).

Boekaerts (2002) emphasizes that schools should structure their environment in a way to enable students achievement of educational goals, but also fulfilment of their social-emotional goals and needs (e.g. being accepted, having harmonic relations with peers, being awarded for investing effort, being respected, offering help to others ...).

Gender differences in social skills

Gender differences in social skills have been examined in the context of different studies. There are a lot of studies which have addressed gender differences in aggression (Cillessen & Mayeux, 2004). A higher level of physical and overt/direct aggression has been demonstrated for boys, while a higher level of relational/indirect aggression (Björkqvist, Lagerspetz & Kaukiainen, 1992) is typical for girls. For example, Crick and Gropeter (1995) found that girls were likely to be described as relationally aggressive significantly more than boys.

Also interesting are the results of studies on behavioural profiles of sociometric groups which have already been mentioned above. Although there are only few studies which addressed gender differences, available empirical data suggests that interpersonal behaviour problems (aggressive and antisocial behaviour) are a distinguishing characteristic of rejected boys, while intrapersonal behaviour problems (anxiety, withdrawal) are more common for girls (Hatzchristou & Hopf, 1996; Underwood, 2004). Košir and Pečjak (2007) established that perceived kindness and prosocial behaviour are positively, while impulsivity and insolence are negatively related to peers' acceptance in primary and secondary school.

The key element of our investigation was derived from the assumption that the explanation of student's behaviour and (his/hers) response to that behaviour is made on the basis of teachers' subjective perception of some student's social characteristics. Thus the teachers' perception determines how he/she manages the students, how he/she adapts his/hers teaching methods etc. At the same time teachers' reactions towards students have reverse effects on students' behaviour (Reyna & Weiner, 2001). In accordance with the self-fulfilling prophecy theory, students gradually start to act congruently with teachers' expectations. In the following paragraphs we therefore expose the findings of previous research on teachers' perceptions of gender differences in the field of social skills.

Students' social skills and teachers' perceptions of boy and girl students

There is a vast amount of empirical studies which established that teachers perceive (and in consequence act) towards boys and girls in a different manner. Different teachers' expectations including their stereotypes towards boys and girls are shown in various areas of teaching, for example when asking students questions, when punishing students for their misbehaviour, when assessing students' outcomes (Klein, Ortman & Riedman, 2002). Studies show that teachers tend to communicate less with boy students than with girl students and perceive their communication with boys as a form of behaviour control. Teachers usually praise, criticize, and correct boys more often than girls.

Although teachers usually punish boys for the same misbehaviour more severely than girls, girls are more often punished inappropriately when demonstrating behaviour which is in teachers' opinion more characteristic of boys (for example: being noisy, impulsive; Reynolds & Miller, 2003). Or, as authors stress, teachers often promote the so-called "silence girl behaviour": in different verbal and non-verbal ways they encourage girls not to draw attention to themselves, to be quiet, and to "act politely" in the class. Teachers in the first years of schooling frequently promote such behaviour as model behaviour in the class.

Even though empirical studies show differences in teachers' behaviour towards girls and boys, teachers are convinced that their behaviour is equal towards both genders (Sadker & Sadker, 1994). Authors also established that differential teachers' treatment is only mildly affected by teachers' gender – students' gender is a much more influential factor.

Such differential treatment of boys and girls can however be modified. Teachers need to become more aware of their behaviour, as Koch (1998) stresses that teachers report changes in their behaviour after they had paid more attention to it. In a special training where teachers were asked to observe their interactions with students, teachers reported of deliberate changes in their patterns of behaviour towards students (Koch & Irby, 2002). However, Levine and Orenstein (1994) stated that teachers, who gained insight into their behaviour towards both genders, often face difficulties when transferring their knowledge into practice (their own beliefs and prejudices or their own schooling experience).

The aim of our study was threefold. From homeroom teacher's perspective we wished: (1) to establish how primary and secondary school homeroom teachers rate their students' social skills. We followed the fact that school is an educational institution and that (particularly homeroom) teachers have an important role in educating students in addition to their instructional role. This means that they follow diverse educational goals, e.g. developing students' social competence for establishing and maintaining adequate relationship with their peers; connecting students within classrooms into a cohesive unit, etc. But in order to accomplish those educational goals (e.g. developing socially desirable behaviour by students as

a means to achieve social competence) the teacher must first be able to perceive students' behaviour. Those perceptions however are influenced by many subjective factors. These include teacher's expectations towards students. Finally the teacher's subjective perceptions are those which influence the teacher's behaviour towards students, like promotion of desired and prevention of undesired behaviour; (2) to explore gender in evaluated social skills differences. Exposing the role of gender in teachers' perceptions of students' behaviour helps teachers become aware of certain stereotypes that might influence different perceptions of boys' or girls' behaviour. Awareness of potential bias helps teacher evaluate student's behaviour more objectively and makes subsequent interventions more effective; (3) to investigate relations between social behaviour (evaluated by the teacher) and students' academic achievement. Previous research shows that students who aim at prosocial goals and responsible classroom behaviour are academically more successful (Wentzel, 1994, 2003).

METHOD

Targets

Targets were 907 students from 10 primary and 6 secondary schools in Slovenia. 470 were seventh-grade primary school students (231 boys and 239 girls), and 437 third-grade secondary school students (176 boys and 261 girls). The mean ages and standard deviations for primary and secondary school students, respectively, were M = 12.8 (SD = 3.9 months); M = 17.8 (SD = 4.7 months). Schools were randomly chosen, but the student sample was not representative, thus limiting the generalization of results.

Students' social skills were assessed by their homeroom teachers. 42 homeroom teachers participated in assessing students' social skills, of which 26 were primary school teachers and 16 were secondary school teachers. There were no significant differences among primary and secondary school teachers neither in years of instruction (primary school teachers: M = 16.30, SD = 7.90; secondary school teachers: M = 20.60, SD = 7.90 ($F_{41,3}$ = 0.25, $p > .05$) nor in gender structure. In primary as well as in secondary school male teachers were in minority (primary school: 12% male teachers; secondary school: 15% male teachers). Also, there were no significant differences in the structure of subject instruction (χ^2 = 1.29 (3,42), $p > .05$), though there were more language teachers in primary and more social science subject teachers in secondary school.

In the primary as well as in the secondary school all the participants were homeroom teachers of the third grade and at the same time taught subjects that enabled them to meet their students at least three times a week. Therefore it was assumed that they know the students they evaluated well.

Instruments

Merrell's School Social Behaviour Scales – SSBS-2 (2002) were used to assess students' social skills and homeroom teachers filled in the questionnaire for each participating student. The questionnaire includes 65 items which are divided into 6 subscales, of which the first three refer to adaptive, prosocial behaviour in school situations – students' social competence scale:

Peer relations (e.g. offers help to other students when needed); Self-management/compliance (e.g. follows school and classroom rules); and Academic behaviour (e.g. listens and carries out directions from teachers). Other three subscales describe socially incompetent behaviour which is directed against others and leads to socially negative outcomes – antisocial behaviour scale: Hostile/irritable behaviour (e.g. insults peers); Antisocial-aggressive behaviour (e.g. swears or uses offensive language); and Defiant/disruptive behaviour (e.g. bothers and annoys other students).

Homeroom teachers evaluated students' social skills on a 5-point Likert scale depending on how often certain behaviour was observed in a student (1 – never, 5 – frequently). Higher results on the first three subscales indicate socially more competent behaviours, whereas higher results on the last three subscales indicate socially incompetent behaviours.

The original questionnaire SSBS-2 has high reliability coefficients: internal consistency coefficients range from .91 to .98, while test-retest coefficients are somewhat lower (for the social desired behaviour subscales from .76 do .86 and for antisocial behaviour subscales from .60 to .73). Cronbach's alpha coefficients for respective subscales in our study were also high: .96 for peer relations, .94 for self-management/compliance, .94 for academic behaviour, .95 for hostile/irritable behaviour, .95 for antisocial-aggressive behaviour and .94 for defiant/disruptive behaviour.

Academic achievement - For correlations between students' social skills and their Academic achievement GPA (grade point average) at the end of the school year was used as a measure of students' academic achievement. Grades included in GPA were made on 5-point evaluating scale from 1 (not sufficient) to 5 (excellent).

Procedure

Written consent was obtained from parents for all participating students and also from their homeroom teachers. Teachers were then asked to fill in the SSBS-2 for each student. Questionnaires were applied in March, April and May 2007.

After the retrieval of questionnaires all the data was entered into an SPSS data file and the following statistical analyses/measures were performed/calculated: basic descriptive statistics, reliability measures, two-way ANOVA, Pearson correlation coefficients, and hierarchical regression analysis. As a measure of effect size η^2 was calculated. We acknowledge the fact that compared data is not completely independent because one homeroom teacher evaluated the behaviour of the whole classroom of students (from 23 to 28).

RESULTS

Teachers' ratings of students' social behaviour with regard to their gender and educational level

Homeroom teachers assessed the characteristics of students' social behaviour. Based on these teachers' ratings we tried to establish whether there were any differences in assessed social skills of participating students. Two-way ANOVA was performed to establish these differences in teachers' perceptions. The results are shown in Table 1.

Table 1. Results of the two-way ANOVA testing differences in various social skills between groups of students with regard to their gender and educational level

Behav.	*Social skill*		Primary school		Secondary school		F *(df = 1)* (η^2)		
			Boys	Girls	Boys	Girls	Educat. level	Gender	Int.
Desired	Peer relations	M	3.49	3.67	3.43	3.74	0.00	21.55** (.02)	1.59
		SD	.83	.84	.78	.73			
		N	231	238	176	260			
	Self-Management/ compliance	M	3.76	4.10	3.67	4.00	3.39	43.92** (.05)	0.02
		SD	.85	.72	.83	.67			
		N	231	238	176	260			
	Academic behaviour	M	3.77	4.17	3.46	3.96	20.58** (.02)	61.48** (.06)	.080
		SD	.97	.77	.93	.76			
		N	231	238	176	260			

Table 1. Continued

Behav. *Social skill*			Primary school		Secondary school		F *(df = 1)* (η^2)		
			Boys	Girls	Boys	Girls	Educat. level	Gender	Int.
Undesired	Hostile/irritable behaviour	M	1.80	1.51	1.69	1.48	2.05	30.42** (.03)	0.87
		SD	.77	.63	.77	.60			
		N	229	239	176	259			
	Antisocial-aggressive behaviour	M	1.54	1.22	1.50	1.27	0.00	46.10** (.05)	1.13
		SD	.75	.43	.74	.51			
		N	229	239	176	259			
	Defiant/disruptive behaviour	M	1.79	1.44	1.81	1.49	0.46	45.51** (.05)	0.10
		SD	.87	.63	.91	.65			
		N	229	239	176	259			

Note: ** - differences are significant at the .01 level; η^2- significance of effect size

As seen in Table 1, teachers rated their students' social behaviour in primary and secondary school in a very similar way. On a 5-point Likert scale (1 – never, 5 – frequently) teachers assessed primary school students' desired behaviour with an average of 3.8 points, while in secondary school the average rating was 3.7. This indicated that teachers observe socially desirable behaviour quite frequently in students. When assessing undesired behaviour, the average rating was around 1.6 for primary and secondary school students, indicating that undesired behaviour is observed rarely. This could indicate that teachers' showed positive attitude of students' social behaviour or that they used mild criteria assessment.

Statistically significant differences in teachers' perspective were found between boys and girls on all evaluated subscales. Girls were assessed as socially more competent, e.g. teachers viewed them as having more positive peer relations, as being more cooperative and compliant with school rules and expectations, and as being more competent in performance and engagement in academic tasks. In contrast, boys were assessed as demonstrating more irritating and annoying behaviours, as being more aggressive and violating school rules more often, as more demanding of teacher's and students' attention and as more disruptive. As for the significant differences regarding educational level (primary or secondary school students), teachers viewed primary school students as more competent only in terms of social skills in the area of academic behaviour. We can conclude that teachers observe less productive academic behaviour in secondary school students – fewer secondary school students complete their academic assignment in time, they are less attentive to teachers and their directions, and cooperate in group work less eagerly.

Consistent with recent statistical guidelines on the importance of effect sizes rather than null hypothesis significance testing (Bachman, Luccio & Salvadori, 2005), we also calculated the effect sizes *(η^2)* for each of the significant effects in the two-way ANOVA. Gender accounted for less than 5% of total variability in

social skills (see Table 1). Educational level of academic behaviour accounted for only 2% of variability in the results.

Social skills as predictors of students' academic achievement

Considering different empirical findings on the connections between social and academic variables, we were interested in finding how different social variables are related among each other and to students' academic achievement, by boys and girls respectively. We used Pearson correlation coefficients to determine these relations. We once again demonstrate that correlations reflect teachers' perceptions of these relations and do not reflect the actual situation. The results are shown in Table 2.

Table 2. Intercorrelations between variables of social behaviour and students' academic achievement (GPA) by boys and girls

Variables	Gender	1	2	3	4	5	6
1. Student academic achievement – GPA	Boys Girls	-					
2. Peer relations	Boys Girls	.43** .38**	-				
3. Self-management/ compliance	Boys Girls	.41 .00	.77** .75**	-			
4. Academic behaviour	Boys Girls	.62** .56**	.78** .71**	.86** .82**	-		
5. Hostile/irritable behaviour	Boys Girls	-.22 -.19	-.48** -.49**	-.74** -.75**	-.57** -.55**	-	
6. Antisocial-aggressive behaviour	Boys Girls	.00 -.28	-.46** -.37	-.69** -.61**	-.59** -.54	.89** .84**	-
7. Defiant/disruptive behaviour	Boys Girls	-.34 -.29	-.51** -.49**	-.78** -.76**	-.68** -.65	.93** .90**	.89** .85

**p < .01; GPA – students' academic achievement

Results of teachers' perceptions of the connections between social variables and academic achievement show that all social variables are significantly correlated among each other as well as to students' GPA. We found high intercorrelations between different forms of behaviour within each group of behaviour (desired/undesired) for boys and for girls. This shows that children with more adaptive behaviour have better relationships with their peers and that they have better academic outcomes. On the other hand, this also indicates that children who express more hostile behaviour, act more aggressively and defiantly.

Variables of desired behaviour are positively (medium to high) and variables of undesired behaviour are negatively (low to medium) correlated with academic achievement for both girls and boys. Among desired behaviour variables,

correlation between academic behaviour and students' achievement is high. This shows that students who: finish their work in time, who are able to work independently, pay attention to teachers and their orders, collaborate with classmates in group work etc., have higher GPA. All forms of undesired behaviour had negative (low to medium) correlations with students' academic achievement regardless of gender. Undesired behaviour is related to poorer academic achievement. Students, who demonstrate more irritable, aggressive and disruptive behaviour, have lower GPA.

We were also interested in investigating the predictive power of each form of (un)desired behaviour for students' academic achievement and also gender differences in predictive power of these variables. Based on the fact that teachers' perceived differences between desired and undesired behaviour are mostly influenced by gender and not by educational level (see Table 1), we decided to perform hierarchical regression analysis separately for boys and girls.

First, we included all variables for desired behaviour, and then in the next step we added variables for the undesired behaviour. Results show that desired behaviour is a significant predictor for academic achievement for both genders; for boys, desired behaviour explained 48% of variability in their academic achievement (R = .70), for girls, desired behaviour explained 37% of variance in their academic achievement (R = .60). Students' undesired social behaviour did not contribute to their academic achievement – ΔR was low and insignificant (.01 for boys and .02 for girls).

The results were different when we included predictors in the inverse order; in the first step the desired, and next the undesired behaviour (see Table 3). The predictive power is presented with β and partial coefficients. β coefficients show difference in the criterion (GPA) if the predictor variable is changed for one standard deviation. Different variables within categories of desired/undesired behaviour are highly intercorrelated (see Table 2), therefore partial coefficient gives better insight for the power of respective predictors of academic achievement. It represents the relationship between each predictor and GPA, a control for the effect of other variables.

As seen in Table 3, value of multiple correlation regression coefficients between undesired behaviour and academic achievement are significant for boys and girls: for boys, desired behaviour explained 19%, for girls 12% of variability in their academic achievement. Aggressive and disruptive behaviour predicts lower academic achievement, while irritable behaviour does not.

Table 3. Social variables as predictors of students' academic achievement in hierarchical regression analysis

		Boys		Girls	
	Predictors	β	Partial coefficients	β	Partial coefficients
Undesired behaviour	Hostile/irritable behaviour	.32**	.14	.26**	.12
	Antisocial-aggressive behaviour	-.12	-.09	-.23**	-.14
	Defiant/disruptive behaviour	-.20	-.08	-.01	-.01
	R	.43		.35	
	R^2	.19***		.12***	
Desired behaviour	Peer relations	.02	.02	.13	.11
	Self-management/compliance	.41***	.22	.27***	.14
	Academic behaviour	.91***	.48	.70***	.41
Desired and undesired behaviour	R	.67		.60	
	R^2	.45		.37	
	ΔR	.24***		.25***	

**p < .01 ***p < .001

All forms of desired behaviour are positively related to students' academic achievement, but significant predictors of students' academic achievement are self-management/compliance and academic behaviour. Students' academic behaviour revealed the strongest predictive power regardless of students' gender. If students' academic behaviour is changed by 1 standard deviation, students' academic achievement controlling for other two variables (compliance and peer relations) grows by .48 standard deviation for boys, and .41 standard deviation for girls. Lower, but statistically significant predictor of male and female students' academic achievement is also their ability of self-management or compliance.

DISCUSSION

The aim of our study was threefold: (1) to establish how primary and secondary school teachers rate their students' social skills; (2) to explore gender differences in evaluated social skills and (3) to investigate relations between social skills and students' academic achievement.

Teachers' ratings of students' social behaviour with regard to their gender and educational level

Homeroom teachers tended to assess all students (regardless of their gender and educational level) as socially relatively competent: on positive subscales the average score was above 3.7 and on socially negative subscales the average was above 1.6 on a 5-point Likert scale. We could assume that teachers either had a very positive attitude toward students' social behaviour or they were mild (maybe even biased) evaluators of their behaviour. Thus, it would be interesting to exclude possible bias in teachers' ratings by comparing homeroom teachers' assessments with assessments of other informants (e.g. other teachers, parents, classmates, siblings). Perhaps homeroom teachers gave somewhat more positive or less negative appraisals of students' social skills because homeroom teacher's educational function is emphasized in the development of socially more competent behaviour. Homeroom teachers and their students discuss potentially undesired behaviour, the manner of interpersonal interactions, etc. in class meetings. Those responsibilities are connected with greater benevolence to "their" students. Merrell (2002) recommends using at least two different evaluators (for example two different teachers) or even better, averaging of school- with home-based rating of students' social skills. Also, only 42 teachers participated in the evaluation of students' social skills, while for secondary school there were only 16 homeroom teachers, which possibly resulted in lower variability of the results.

Even though gender differences were statistically significant, the calculated effect size coefficient (eta square) showed that gender explained only about 5% of total variability in social skills and only 2% of variability in the results for educational level. We can conclude that gender and educational level can only account for a limited range of variability in students' social skills, although differences were statistically significant. There are others, probably individual factors (for example cognitive and, even more, individual's personality features, e.g. openness, agreeableness) which contribute more importantly to the variability of social skills.

Why are girls seen as socially more skilled than boys? Our findings are in line with other empirical studies. Merrell (2002) found statistically significant gender differences at all grade levels on the SSBS. For example, Elliott, DiPerna, Mroch and Lang (2004) examined gender differences in the context of academic enabling behaviours. They defined academic enablers as a collection of attitudes and behaviours that facilitate learning of social skills, study skills, motivation, and engagement. Female students tend to receive higher ratings than male students on teachers' reports of academic enablers. Coie, Dodge and Coppoteli (1982) found that boys were more likely to be classified as rejected than girls, which also indicated that boys are less socially competent. These findings are supported by studies which investigate gender differences in aggressive behaviour (see

introduction). It has also been proposed that the constellations of behaviours and goals for socially competent girls and boys somewhat differ because of gender-related differences in children's social experiences. Crombie (1988) even stressed that we should consider the effect of gender-role socialization when defining social competence because social skills are possibly more important, and of greater intrinsic interest, to girls than boys. This is of special importance if behaviour related to teachers is being used in assessment; it is more normative for girls than for boys to stay near a teacher and to be more adult-oriented (see Crombie, 1988, for review). Stormshak *et al.* (1999) also supported this hypothesis by establishing that girls and boys differed in acceptability of their aggressive behaviour. They proposed it was possible that, at a general societal level, aggressive behaviour rates are higher for boys than girls, and both parents and teachers are likely to view aggression as more inappropriate for girls than boys.

Another possible explanation for this finding is that gender related stereotypes are at work when teachers are asked to assess students' social skills. Girls are usually seen as better students, more prosocial and caring, whereas typical behaviour for boys is characterized by higher rate of misconduct, more aggression and competitiveness, etc. The traditional male gender-role for boys is being independent, autonomous and mastery-oriented, whereas feminine gender role is characterized by being nurturing, compliant, and more prosocial. Social skills are an important component of the traditional feminine gender role (Stein & Bailey, 1973). Thus, gender-related stereotypes are perhaps the factor influencing teachers' ratings through their subjective theories which could function as a self-fulfilling prophecy.

Social variables as predictors of students' academic achievement

Intercorrelation matrix (see Table 2) shows high correlations of variables within the categories of desired and undesired behaviour. Based on those high intercorrelations an assumption can be made, which will have to be empirically established in further research. The competence of self-management/compliance might be the one to enable the student to adapt well to such diverse situations (learning and social), including behaviours such as listening and following instructions, obeying rules, behaving adequately and asking for help in a suitable way etc. Consequently, such behaviours enable the student to be more successful in peer interactions and in the learning environment. On the other hand those high intercorrelations could be ascribed to teacher's bias in describing students' behaviour – the halo effect.

Correlations were higher between socially desired behaviour and academic achievement (medium to high), than with socially undesired behaviour (low to medium). Results showed that good peer relations (student cooperating with peer in various situations, offering help, when needed, accepting peers, making

compromises etc.), and productive academic behaviour (following teacher's instructions, finishing school tasks in time, working independently) resulted in better academic achievement. On the contrary, all forms of undesired behaviour (irritable, disruptive, aggressive behaviour) were related to poorer academic achievement. These results are in line with other empirical studies, in which authors established positive correlations between students' persistency at tasks, their activity, effort investment and completion of school tasks, cooperation with others, prosocial behaviour and academic achievement (Wentzel, 1993, 1994, 1997). Also, different studies confirmed negative correlations between avoidance, effort withdrawal, using self-handicapping strategies, student' irresponsible behaviour and academic achievement (Lou & Nie, 2008; Wentzel, 1998).

The same picture on the relation of students' social behaviour and academic achievement also gave the results of hierarchical regression analysis. We were interested in the predictive power of specific forms of (un)desired social behaviour for boys' and girls' academic achievement. We found out that desired as well as undesired behaviours predict academic achievement of students.

Among the forms of undesired behaviour, only the antisocial-aggressive behaviour predicts significantly lower academic achievement (by girls). Those results can lead to a conclusion that teachers might (stereotypically) have more difficulties in accepting aggressive behaviour (verbal or nonverbal), cheating, cruelties, etc. by girls than by boys, which then might influence teacher's evaluation of student's academic achievement. The second form of undesired behaviour – hostile/irritable behaviour does not predict lower academic achievement neither for girls nor for boys. It could be that behaviours like "eases and makes fun of other students", "will not share with other students", "whines and complains" are less disturbing for a teacher than aggressive behaviour and that they have no influence on the teacher's evaluation of students' knowledge.

We established that desired behaviours explained a significant part of variability in students' academic achievement (for boys and girls). The strongest predictor of academic achievement was students' academic behaviour. Academic behaviour includes finishing academic tasks in time, passing from one academic activity to other, cooperating in different collaborative activities, etc. All these forms of behaviour show that students master self-regulatory learning skills. These skills enable students to independently plan their learning activities, to monitor and control themselves while performing different activities and to reflect upon their work. Numerous studies reported positive correlation between learning self-regulation and students' academic achievement (Boekaerts, 1997; Peklaj & Pečjak, 2002; Pintrich & De Groot, 1990; Schunk & Zimmerman, 1998; Zimmerman & Martines Pons, 1990). The second most significant predictor of students' academic achievement was self-management and the ability to comply. These include social skills such as finishing tasks individually without the teacher's warnings, listening to the teacher and following his instruction, adapting different expectations about

behaviour in school situations, showing self-management, etc. All these skills show students' ability to "read" different social situations and to know how to adapt to them in a flexible way. Consequently, these behaviours enable teachers to guide students more easily to attain their learning goals, which result in better academic achievement. Altogether, in line with expectancy theory, these could also lead to teachers' greater benevolence towards students and to biased assessment of students.

Correlations between students' school behaviour and their academic achievement are complex and reciprocal. To a certain extent, these correlations are a result of teachers' perceptions of students' behaviour and, consequently, teachers' expectations. Teachers adapt their behaviour to their perceptions, while perceptions affect the way they motivate students and how they give them feedback on their academic achievement. However, students' perceptions and their interpretations of teachers' behaviour have the strongest impact on their behaviour (Braun, 1976).

Effect sizes between behavioural variables and academic achievement, in our study, were somewhat higher than in others (Patrick, Ryan & Kaplan, 2007; Wentzel, 1997). Perhaps one of the explanations could be that academic achievement (GPA) of Slovenian students does not only reflect their knowledge, but also students' academic behaviour (their attitude towards a subject, their organisation of learning, etc.). On the other hand, academically more successful students perhaps receive more positive feedback information, etc., and show socially more competent behaviour than those students who have comprehension difficulties and consequently worse academic results.

Nevertheless, some interesting pedagogical implications can be derived from our study. Since it has been proven that social competence and academic competence are associated (Wentzel, 2003), these results bring up a question on how to promote social competence of boys and girls. At the same time it is important that teachers become aware of the fact that by the use of certain learning methods (e.g. group work), they stimulate the development of students' learning, as well as, social competencies, because in such learning environment students have to make adjustments and negotiate in order to finish learning task. Ray and Elliott (2006) already pointed out that teachers, school psychologists and administrators should consider social skills as potential intervention targets when trying to promote social and academic competence.

Several limitations temper the results of our study. First, we should control the effect of teachers' and students' variables which could affect the assessment of students' social skills. Teachers' gender-role expectations toward their students as part of their implicit theories could affect the assessment of social skills of boys and girls. Some studies have shown the relevant effect of teachers' gender on perception of students' behaviour. Hatzchristiou and Hopf (1996) found that female teachers, in contrast to male teachers, perceived rejected students as having more intrapersonal behaviour difficulties and suggested that female teachers are perhaps

more attentive and more easily identify subtle intrapersonal problems (such as shyness, isolation, unhappiness), while male teachers possibly deal mainly with the overt misconduct of students. As already mentioned, students' social status could also affect teachers' assessment. Another limitation of our study comes from the measurement of social skills. We used only one measure for the assessment of students' social skills – teacher rating. Therefore one must be aware of the possibility that results are influenced by potential bias in teacher ratings (e.g. the halo effect, leniency or severity and central tendency effect). It would be advisable to combine teacher ratings with ratings of other informants, e.g. other teachers, classmates and parents in further research and to include different methods (observations, ratings, self-report). This would be in line with the emphases which different authors place on the use of a multimethod and multisource assessment approach to students' behaviour and competence across different domains (Merrell, 1999). We used two samples of students – primary and secondary school sample. Longitudinal study would enable us to make better conclusions about developmental changes in students' social skills. One should also keep in mind the specifics of the secondary school sample. There were only 16 secondary schools included in the study, most of them gymnasiums. In further studies it would be necessary to include other types of secondary schools, and to compare results from different schools.

REFERENCES

Bachmann, C., Luccio, R., & Salvadori, E. (2005). Statistical significance and its meaning. *Horizons of Psychology, 14*(3), 7-40.

Björkqvist, K., Lagerpetz, K., & Kaukiainen, A. (1992). Do girls manipulate and boys fight? Developmental trends in regard to direct and indirect aggression. *Aggressive Behavior, 18,* 117-127.

Boekaerts, M. (1997). Self-regulated learning: A new concept embraced by researchers, policy makers, educators, teachers and students. *Learning and Instruction, 7,* 161-186.

Boekaerts, M. (2002). Bringing about change in the classroom: Strengths and weaknesses of the self-regulated learning approach – EARLI presidential address, 2001. *Learning and instruction, 12*, 589-604.

Braun, C. (1976). Teacher expactation: Sociopychological dynamics. *Review of Educational Research, 46,* 185-213.

Caldarella, P., & Merrell, K.W. (1997). Common dimensions of social skills of children and adolescence: A taxonomy of positive behaviour. *School Psychology Review, 26*(2), 265-279.

Chen, X., Liu, M., Li, D., Li, Z., & Li, B. (2000). Sociable and prosocial dimensions of social competence in Chinese children: Common and unique contributions to social, academic, and psychological adjustment. *Developmental Psychology, 36*(3), 302-314.

Cillessen, A., & Mayeux, L. (2004). Sociometric status and peer group behavior: Previous findings and current directions. In J.B. Kupersmidt & K.A. Dodge (Eds.), *Children's Peer Relations: From Development to Intervention* (pp. 3-20). Washington: American Psychological Association.

Coie, J.D., Dodge, K.A., & Coppotelli, H. (1982). Dimensions and types of social status: A cross-age perspective. *Developmental Psychology, 18,* 557-569.

Cole, M. (1985). The zone of proximal development: Where culture and cognition create each other. In J.V. Wertsch (Eds.), *Culture, Communication, and Cognition: Vygotskian Perspectives.* Cambridge: Cambridge University Press.

Crick, N.R., & Grotpeter, J.K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66*(3), 710-722.

Crombie, G. (1988). Gender differences: Implications for social skills assessment and training. *Journal of Clinical Child Psychology, 17*(2), 116-120.

Elliott, S.N., & Busse, R.T. (1991). Social skills assessment and intervention with children and adolescents: Guidelines for assessment and training procedures. *School Psychology International, 12,* 63-83.

Elliott, S.N., DiPerna, J.C., Mroch, A.A., & Lang, S.C. (2004). Prevalence and patterns of academic enabling behaviours: An analysis of teachers' and students' ratings from a national sample of students. *School Psychology Review, 33*(2), 302-309.

Frentz, C., Gresham, F.M., & Elliott, S.N. (1991). Popular, controversial, neglected, and rejected adolescents: Contrasts of social competence and achievement differences. *Journal of School Psychology, 29*(2), 109-120.

Gresham, F.M. (1986). Conceptional and definitional issues in the assessment of childrens' social skills: Implications for classifications and training. *Journal of Clinical Child & Adolescent Psychology, 15*(1), 3-15.

Hatzchristou, C., & Hopf, D. (1996). A multiperspective comparison of peer sociometric status groups in childhood and adolescence. *Child Development, 67,* 1085-1102.

Klein, S., Ortman, P., & Friedman, B. (2002). What is the field of gender equity? Questions and answers. In J. Koch & B. Irby (Eds.), *Defining and Redefining Gender Equity in Education* (pp. 3-27). Greenwich, CT: Information Age Publishing.

Koch, J., & Irby, B. (2002). *Defining and Redefining Gender Equity in Education*. Greenwich, CT: Information Age Publishing.

Koch, J. (1998). Response to Karen Meyer: Reflections on being female in school science. *Journal of Research in Science Teaching*, *35*(4), 473-474.

Košir, K., & Pečjak, S. (2007). Dejavniki, ki se povezujejo s socialno sprejetostjo v različnih obdobjih šolanja. *Psihološka obzorja, 16*(3), 49-73.

Ladd, G.W. (1999). Peer relationships and social competence during early and middle childhood. *Annual Review of Psychology, 50,* 333-359.

Lau, S., & Nie, Y. (2008). Interplay between personal goals and classroom goal structures in predicting students outcomes: A multilevel analysis of person-context interactions. *Journal of Educational Psychology, 100,* 15-19.

Levine, E.S., & Orenstein, F.M. (1994). Sugar and spice and puppy dog tails: Gender equity among middle school children. ERIC Document Reproduction Service No. ED 389457.

Merrell, K.W. (1992). The utility of the social behaviour scales in differentiating students with behavioural disorders from other students with disabilities. *Severe Behavior Disorders of Children and Youth, 15,* 27-34.

Merrell, K.W. (1999). *Behavioural, Social, and Emotional Assessment of Children and Adolescents*. New Jersey-London: Lawrence Erlbaum Associates.

Merrell, K.W. (2002). *School Social Behaviour Scales: Second Edition. User's Guide.* Eugene: Assessment-Intervention Resources.

Merrell, K.W., & Gimpel, G.A. (1998). *Social Skills of Children and Adolescents: Conceptualisation, Assessment, Treatment.* Mahwah, NJ: Lawrence Erlbaum Associates.

Newcomb, A.F., Bukowski, W.M., & Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial, and average sociometric status. *Psychological Bulletin*, *113*(1), 99-128.

Patrick, H., Ryan, R.M., & Kaplan, A. (2007). Early adolescents perceptions of the classroom social environment, motivational beliefs, and engagement. *Journal of Educational Psychology, 99,* 83-98.

Peklaj, C., Kalin, J., Pečjak, S., Puklek Levpušček, M., Valenčič Zuljan, M., & Ajdišek, N. (2008). *Kompetence učiteljev in uresničevanje vzgojno-izobraževalnih ciljev v šoli*. Ljubljana: Znanstveni institut Filozofske fakultete v Ljubljani.

Peklaj, C., & Pečjak, S. (2002). Differences in students' self-regulated learning according to their achievement and sex. *Studia Psychologica, 44*(1), 29-43.

Pintrich, P.R., & De Groot, E.V. (1990). Motivational and self-regulated components of classroom academic performance. *Journal of Educational Psychology, 82,* 33-40.

Ray, C.A., & Elliott, S.N. (2006). Social adjustment and academic achievement: A predictive model for students with diverse academic and behaviour competencies. *School Psychology Review, 35*(3), 493-501.

Reschly, D.J. (1990). Best practices in adaptive behaviour. In A. Thomas & J. Grimes (Eds.), *Best Practices in School Psychology* (pp. 29-42). Washington, DC: National Association of School Psychologists

Reyna, C., & Weiner, B. (2001). Justice and utility in the classroom: An attributional analysis of the goals of teachers' punishment and intervention strategies. *Journal of Educational Psychology, 93*(2), 309-319.

Reynolds, W.M., & Miller, G.E. (2003). *Handbook of Psychology. Volume 7. Educational Psychology*. New York: John Wiley & Sons.

Rogoff, B. (1990). *Apprenticeship in Thinking: Cognitive Development in Social Context*. New York: Oxford University Press.

Sadker, M., & Sadker, D. (1994). *Failing at Fairness: How America's Schools Cheat Girls*. New York: Simon & Schuster.

Schunk, D.H., & Zimmerman, B.J. (1998). *Self-regulated Learning: From Teaching to Self-reflective Practice.* New York: the Guilford press.

Stein, A.H., & Bailey, M.M. (1973). The socialization of achievement orientation in females. *Psychological Bulletin, 80*, 345-66.

Stormshak, E.A., Bierman, K.L., Buschi, C., Dodge, K.A., Coie, J.D., & The Conduct Problems Prevention Research Group (1999). The relation between behaviour problems and peer preference in different classroom context. *Child Development, 70*(1), 169-182.

Underwood, M.K. (2004). Gender and peer relations: Are the two gender cultured really all that different? In J.B. Kupersmidt & K.A. Dodge (Eds.), *Children's Peer Relations: From Development to Intervention* (pp. 21-36). Washington: American Psychological Association.

Wentzel, K.R. (1993). Does being good make the grade? Social behaviour and academic competence in middle school. *Journal of Educational Psychology, 85,* 357-364.

Wentzel, K.R. (1994). Relations of social goal pursuit to social acceptance, classroom behaviour and perceived social support. *Journal of Educational Psychology, 86*(2), 173-182.

Wentzel, K.R. (1997). Students motivation in middle school: The role of perceived pedagogical caring. *Journal of Educational Psychology, 89,* 411-419.

Wentzel, K.R. (1998). Social support and adjustment in middle school. The role of parents, teachers and peers. *Journal of Educational Psychology, 90*(2)*,* 202-209.

Wentzel, K.R. (2003). School adjustment. In W.M. Reynolds & G.E. Miller (Eds.), *Handbook of Psychology. Volume 7. Educational Psychology* (pp. 235-258). New York: John Wiley & Sons.

Zimmerman, B.J., & Martines-Pons, M. (1990). Students differences in the self-regulated learning: Relating grade, sex, and giftedness to self-efficacy and strategy use. *Journal of Educational Psychology, 82,* 51-59.

Primljeno: 30.12.2008.