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Social acceptance and self-concept in students attending heterogeneous and ability-grouped classes

SONJA PEČJAK, MELITA PUKLEK LEVPUŠČEK, CIRILA PEKLAJ and DRAGO ŽAGAR

The article presents part of the study that evaluated the effects of changes in Slovene compulsory education system over the last years. Our aim was to compare perceived self-concept and social acceptance of students who attended heterogeneous classes in the 8-year primary school (CG) and students who attended ability-grouped classes in three subjects in the experimental phase of the 9-year primary school (EG). We were also interested in the perceived self-concept and social acceptance of students who were set to different ability groups in EG. We also tried to find out if there were any differences in class cohesiveness between the two groups that experienced different type of school organisation. The sample consisted of 12 schools that experimentally introduced ability grouping in Grade 8 for the three subjects (Slovene language, mathematics, foreign language) in the school year 2000/2001 (EG). The control group (CG) consisted of 6 schools that by that time have not had entered the experimental phase of school reform yet and still retained heterogeneous classes in all subjects in the last two years of primary school. At the beginning of our study the students in this group started to attend Grade 7. There were 584 students in the experimental group (291 boys, 293 girls) and 303 students in the control group (146 boys, 157 girls). The results were obtained in three phases of assessment. The results showed very few differences between the two groups in the perception of self-concept and social acceptance. A significant decrease in academic and general self-concept was observed in both groups of students. Social acceptance and class cohesiveness in EG decreased in a one-year interval. Social acceptance reported by classmates was the highest for students in high-ability groups and the lowest for students in low-ability groups. The results thus lead to the conclusion that ability grouping probably does not have any important effect on the self-concept of students but it may impede the quality of students' social network in the school.

Over the last decade, the Slovene education system has experienced many changes in the organisation of compulsory education. The new legislation (1996-2000) extends compulsory education from 8 years to 9 years. Nine-year compulsory education consists of three 3-year cycles with the school entering age at 6. The new primary school curricula have been implemented gradually and experimentally from 1999/2000 to 2003/2004. The former school system was free from streaming, setting or any other forms of ability grouping, while the new one brings ability groups in mathematics, foreign language and Slovene language in the last two grades. The placement of student into a particular ability level depends on the student's decision. In practice, teachers and counsellors usually advise a certain ability level according to student's previous achievement, but it is upon students and their parents to make the final decision (The official website of the Slovene Ministry of Education, Science and Sport, retrieved 24. 7. 2003). The major debates currently taking place are focused on the follow up and the evaluation of the implementation of the new 9-year primary school.

In this study we focused on the effects of ability grouping vs. learning in heterogeneous classes on students' self-concept, their social acceptance and class cohesiveness.

Ability grouping and students' self-concept

Evidence regarding the effects of ability grouping on students' self-concept is rather equivocal. Some studies showed that ability grouping has an impact on student's self-concept, self-esteem and attitudes toward school and schoolwork. These results confirmed the general belief that ability grouping could be especially harmful for students in lower ability groups. (Gamoran & Berends, 1987; Lacey,

Sonja Pečjak, Department of Psychology, Faculty of Arts, Aškerčeva 2, 1000 Ljubljana, Slovenia. E-mail: sonja.pecjak@ff.uni-lj.si. (Corespondence concerning this article should be sent to this address).

Melita Puklek Levpušček, Cirila Peklaj and Drago Žagar, Department of Psychology, Faculty of Arts, Aškerčeva 2, 1000 Ljubljana, Slovenia.

1974; Oakes, 1985). On the other hand, Kulik and Kulik (1992) in a meta-analysis of 13 studies found no overall effect of ability grouping on students' self-esteem. However, it should be noted that the studies included in the meta-analysis had some methodological limitations (i.e. some of them examined setting and the other ones streaming models of ability grouping; some examined the effects of ability grouping on lower sets while the other ones on higher sets; some authors used instruments of self-esteem with questionable psychometric characteristics). Considering this, it is not surprising that the general effect of ability grouping was near zero.

Weak connection between ability grouping and self-concept could also reflect the usually found low correlations between academic performance and general self-concept (the correlation coefficients are around .20). The correlations between specific academic self-concepts and academic performance are a bit higher and the relation between both variables was found to be reciprocal (Hattie, 1992; Marsh & Yeung, 1997; Skaalvik & Hagtvet, 1990).

A detailed analysis of different ability groups (low, middle, high) in the study of Kulik and Kulik (1992) revealed that in 11 of 13 studies of ability grouping the self-esteem scores rose in lower attaining students. On the other hand, the self-esteem of higher attaining students was reduced. Students in high ability groups tended to loose some self-confidence when they were in the group of students of same ability level. Some recent studies (Chapman, 1988; Ireson & Hallam, 2001; Ireson, Hallam & Plevis, 2001; Suk Wai Wong & Watkins, 2001) showed that academic facets of self-concept rose with attainment but as setting increased, self-concept in particular subjects might fall for higher attaining students and rise for lower attaining students (the so called Big Fish Little Pond Effect -BFLP, Marsh, 1987).

Ability grouping and students' social acceptance

One of the major doubts regarding the implementation of ability grouping usually considers its effects on possible labelling and stigmatisation, especially of students in the lower ability groups. The results of various empirical studies that examined relations between ability grouping and social acceptance and cohesiveness of groups are not consistent. The studies on this topic can be divided into two groups according to the obtained results.

In the first group there are studies, which showed that mixed ability grouping has better effects on pupil's social relations than homogeneous ability grouping. Newbold (1977, in Harlen & Malcolm, 1999) found out that mixed ability grouping had positive effects on social aspects of both high and low achievers and had no negative impact on achievement. Reid, Clunies-Ross, Goacher and Vile (1982) and Eilam and Finegold (1992; in Ireson & Hallam, 2001) reported on higher cohesiveness in heterogeneous classes. The importance of mixed ability grouping for social development is especially evident at primary school levels. Barker Lunn (1970) reported that pupils in heterogeneous classes were more socially adjusted and had more positive attitudes toward peers compared to pupils in homogeneous classes. In addition, pupils from homogeneous classes that were set in the lowest ability group had the most negative attitudes towards peers. Oakes (1985) and Berends (1995) found out that pupils in the lowest ability group expressed less supportive behaviour, more hostility and more angry and disruptive behaviour than pupils in other groups. Similar segregation effect of lower ability groups in older pupils was found by Chaplain (1996). According to the reported findings we could conclude that ability grouping has negative impact particularly on pupils in lower ability groups. Nevertheless, these findings should be interpreted with caution. We should also consider teachers' expectations and attitudes toward less able students. In some studies it was found that teachers tend to perceive and treat pupils from lower ability groups as less successful and with more conduct problems (e.g., Gregory, 1984).

In the second group there are studies which emphasize the advantages of homogeneous grouping. For example, Peverett (1994) stated that on the basis of current findings it is impossible to conclude that the presence or support of more able students is in any way favourable for less able students. In addition, Kulik and Kulik (1982) established more positive well-being in students in the condition of homogeneous ability grouping.

The question that also still remains unanswered considers the quality of social network and social support that students experience in different types of school organisation.

The aim of the present study was thus to compare perceived self-concept and social acceptance of students who attended heterogeneous classes in the 8-year primary school and students who attended ability-grouped classes in the three subjects in the experimental phase of the 9-year primary school. We also tried to find out if there were any differences in class cohesiveness between the two groups that experienced different type of school organisation. In addition, students in experimental group that were set to different ability groups were compared according to their perception of self-concept and social acceptance in their heterogeneous class. We were also interested in possible changes in different domains of self-concept, social acceptance and class cohesiveness during the three phases of assessment.

METHOD

Participants

The sample consisted of 12 schools that experimentally introduced ability grouping in Grade 8 for the three subjects (Slovene language, mathematics, foreign language) in the school year 2000/2001. This group represented experimental group (EG). The control group (CG) consisted of 6 schools that by that time have not have entered the experimental phase of school reform yet and still retained heterogeneous classes in all subjects in the last two years of primary school. At the beginning of our study the students in this group started to attend Grade 7. There were 584 students in the experimental group (291 boys, 293 girls) and 303 students in the control group (146 boys, 157 girls). The two groups were matched according to the students' age (at the beginning of the study the average students' age was 12.5 years), the school environment (rural or urban) and the size of school (small or big school). The number of students in each of the three ability groups varied among the three subjects and also differed from school to school. In Slovene language, the number of students in a particular group ranged from 4 to 15 (low-ability group), 11 to 21 (medium-ability group) and 8 to 23 (high-ability group). In foreign language, the number of students ranged from 6 to 19 (low-ability group), 7 to 25 (medium-ability group) and 11 to 24 (high-ability group). In mathematics, the number of students ranged from 8 to 18 (low-ability group), 9 to 28 (medium-ability group) and 10 to 18 (high-ability group).

Measures

Self-concept. To measure different domains of students' self-concept we used SDQ III questionnaire (Marsh and O'Neall, 1984). The original version of the questionnaire contains 136 items. They represent 3 subscales of academic self-concept, 9 subscales of non-academic self-concept and 1 subscale of general self-concept. The shortened version of the questionnaire was prepared for the purpose of this study. It contains 50 items and 5 domains of self-concept: verbal self-concept (10 items), academic self-concept (9 items), emotional stability (10 items), relations with peers (10 items) and general self-concept (11 items). The students answered the questionnaire on a 6-point scale ranging from 1 = false through 6 = true. The internal consistencies of the subscales obtained from the first data collection were the following: verbal SC: α = . 75, general-school SC: α = .74, emotional stability:α = .78, relations with peers: α = .81 and general SC: α = .82.

Social acceptance and class cohesiveness. Students' social acceptance was measured by positive nomination sociometric technique. Students were asked to write all names of peers in the classroom they most keep company with. Students from the experimental group separately nominated peers from their heterogeneous classes and from their ability-grouped classes in mathematics, Slovene language and foreign language. Students from the control group nominated peers from their heterogeneous classes. The frequencies of positive nominations for each student were computed. Students' sociometric status represents their social acceptance score. Sociometric status of each student (SS) was calculated in the following way: SS = (number of choices by class-mates – average number of choices in EG and CG)/(total N – 1).

Index of cohesiveness (IC) was computed separately for heterogeneous classes and ability-grouped classes in the experimental group. In the control group, index of cohesiveness was computed for heterogeneous classes. Index of cohesiveness for each class was calculated in the following way: IC = sum of actual mutual choices in particular class/sum of all possible mutual choices in that class.

Students' social acceptance and class cohesiveness were measured only in the second and the third wave of data collection. Namely, during the first wave of the study the students in the experimental group went through major changes in the class organization, i.e. they were assigned to high, middle and low sections in the three subjects and they just started to get acquainted with their new class-mates. Thus, for the first wave of data collection we could not ensure that the results of social acceptance and class cohesiveness of experimental and control group would be comparable.

Procedure

The data were collected three times. The first wave of data collection (Wave 1) was held at the beginning of the school year 2000/2001 when the control group started to attend Grade 7 and the students in the experimental group passed on to Grade 8 (one year ago they automatically passed on from Grade 5 to Grade 7). In that school-year students from the control group remained in the same (heterogeneous) class whereas the students from the experimental group were divided into three ability groups in the three subjects (mathematics, Slovene language and foreign language). At other subjects (e.g., biology, history, geography,..) they remained in the heterogeneous classes. The second data collection (Wave 2) was held at the end of the same school-year and the third data collection (Wave 3) at the end of the next school year (2001/2002) when the students from the control group were finishing Grade 8 and the students from the experimental group Grade 9.

At the beginning of the study, parental consent was sought and granted for all the students to participate. Each session took 1 hour and took part in classes. Students filled in the questionnaire of self-concept in all three waves of data collection and they nominated class-mates they most kept company with in the second and the third wave. The students from EG separately nominated their classmates from the heterogeneous class and from each of the ability group they attend in the three subjects.

RESULTS

Perception of different domains of self-concept: Effects of Group (EG vs. CG), Wave (1, 2, 3) and Group × Wave

Mixed design ANOVA as a type of repeated measures design was used to test the effect of different types of school organisation (Group) on students' self-concept, the effect of within-group changes (Wave) in students' self-concept and their interaction (Group × Wave). Table 1 shows descriptive statistics and the above-mentioned effects.

The only significant difference between the two groups was found in the domain of academic self-concept. Students from EG who experienced ability grouping perceived themselves more favourably in this domain of self-concept than students from CG who remained in heterogeneous classes in all subjects. Within-subjects changes were also found in some domains of self-concept. The perception of academic self-concept decreased through time. Pairwise comparisons of means showed the significant difference in academic self-concept only between Wave 1 and Wave 3 ($p<.01$). In general self-concept, the results showed a decrease from Wave 1 to Wave 2 and then an increase again in Wave 3. The significant interaction indicated that the trends of change in general self-concept differed between

Table 1

Self-concept of students from experimental and control group: Means (*SDs*) and *F*-values of mixed factorial ANOVA

Self-Concept (SC) Areas	Wave			Effects (F)		
	Wave 1	Wave 2	Wave 3	Between-subjects	Within-subjects	Interaction
Relations with Peers						
EG (n = 436)	45.56 (8.03)	45.49 (8.40)	45.19 (8.26)			
CG (n = 244)	44.98 (8.06)	45.02 (8.06)	46.52 (8.95)	0.03	2.94	7.27**
Verbal SC						
EG (n = 441)	43.47 (7.72)	43.91 (7.50)	43.94 (8.18)			
CG (n = 242)	43.26 (7.54)	43.24 (7.53)	43.62 (7.86)	0.52	1.50	0.53
Academic SC						
EG (n = 442)	36.41 (7.28)	35.65 (7.65)	35.71 (8.77)			
CG (n = 243)	34.61 (7.80)	34.58 (7.81)	33.33 (7.80)	10.34***	6.64**	2.85
Emotional stability						
EG (n = 421)	42.29 (7.86)	42.20 (8.27)	42.19 (8.62)			
CG (n = 240)	42.09 (7.87)	42.08 (7.82)	42.94 (7.56)	0.07	1.34	1.75
General SC						
EG (n = 441)	47.58 (8.47)	46.00 (7.32)	46.15 (10.01)			
CG (n = 244)	45.92 (8.40)	44.44 (6.85)	46.59 (9.97)	2.51	13.30***	7.37**

Note: The number of subjects in the analyses varied according to the number of missing data in particular domains of self-concept. SC = Self-Concept; EG = experimental group; CG = control group. *** $p<.001$, ** $p<.01$.

experimental and control group. The students who experienced homogeneous ability grouping (EG) lowered their general self-concept from Wave 1 to Wave 2 and then kept it stable from Wave 2 to Wave 3. On the other hand, the students who experienced mixed ability grouping in all subjects (CG) also lowered their general self-concept from Wave 1 to Wave 2 but then improved it at Wave 3. The interaction effect also indicated that students in experimental group perceived themselves more favourably in the first two waves of data collection than students in control group but in the third wave the picture was reversed. The students in the entirely heterogeneous classes improved their general self-concept and had higher results in this domain of self-concept than their counterparts from ability-grouped classes. The significant Group × Wave interaction was also obtained in the domain of relations with peers. The perception of self in relations with peers remained fairly stable from Wave 1 to Wave 3 in the experimental group while it increased from Wave 1 to Wave 3 in the control group. But only in the last wave of data collection the stu-

Table 2

Self-concept in students from high-, medium- and low-ability groups: Means (*SDs*) and *F*- values of mixed factorial ANOVA

Self-Concept (SC) Areas	*Wave*			*Effects (F)*		
	Wave 1	Wave 2	Wave 3	Between-subjects	Within-subjects	Interaction
Relations with Peers						
low (n = 45)	42.42 (6.86)	42.24 (8.14)	42.58 (9.18)			
medium (n = 101)	45.61 (8.00)	45.92 (8.51)	44.82 (9.04)			
high (n = 87)	46.99 (8.24)	47.62 (7.89)	46.57 (8.03)	0.25	0.75	0.39
Verbal SC						
low (n = 46)	37.22 (6.04)	37.61 (5.39)	37.65 (7.02)			
medium (n = 103)	42.51 (7.00)	43.32 (6.66)	42.36 (8.37)			
high (n = 87)	48.99 (5.83)	49.18 (6.69)	49.66 (6.22)	0.35	0.64	0.68
Academic SC						
low (n = 42)	31.76 (5.53)	31.38 (4.38)	30.76 (5.97)			
medium (n = 104)	34.98 (6.71)	34.16 (7.61)	33.16 (6.69)			
high (n = 88)	42.01 (6.51)	41.74 (6.11)	43.10 (10.80)	3.07*	0.67	2.06
Emotional stability						
low (n = 43)	39.77 (6.90)	38.79 (6.58)	39.63 (7.56)			
medium (n = 95)	41.65 (7.78)	40.93 (8.65)	39.66 (9.23)			
high (n = 88)	44.18 (8.11)	45.30 (8.32)	46.27 (8.05)	5.83**	0.09	3.83**
General SC						
low (n = 45)	44.91 (8.17)	45.38 (5.91)	45.11 (7.53)			
medium (n = 101)	47.21 (8.40)	45.72 (7.61)	44.08 (11.04)			
high (n = 89)	49.63 (7.98)	47.11 (7.67)	48.21 (10.44)	5.75*	3.87*	2.60*

Note: Only the results of the analyses that included the students who attended the same ability-group in the three subjects are presented. The number of subjects in the analyses varies according to the number of missing data in particular domains of self-concept. ** $p < .01$; * $p < .05$.

dents from experimental group showed lower perceptions of their relations with peers than their counterparts from the control group.

Perception of different domains of self-concept in experimental group: Effects of Group (high-, medium-, low ability group), Wave (1, 2, 3) and Group × Wave

In this part of the Results section we only present the results of the analyses that were done on students in EG who attended the same ability-group in the three subjects (Slovene language, mathematics, foreign language). Namely, when we did separated analyses of differences between the students from low-, medium- and high-ability groups in each of the three subjects it turned out that the results were very similar across the subjects.

Table 2 shows that students from the three ability groups significantly differed in the following domains of perceived self-concept: academic self-concept, emotional stability and general self-concept. All the results show the same direction of differences in all three wave of data collection. The students from the low-ability groups had the lowest self-perceptions and the students from the high-ability groups had the highest ones. The students from the medium-ability groups usually fell between the other two groups with their results of self-perceptions.

Within-subjects analysis showed a change in the self-concept of high-, medium-, and low-ability grouped students only in the domain of general self-concept (a trend of change may be seen in Table 1). The significant interaction indicated different trends of changes in general self-concept according to the students' ability group. Students from the low-ability groups showed a slight increase in their perception of general self-concept, students from the medium-ability groups impaired their perception of general self-concept during the study and students from the high-ability group showed a decrease in their perception of general self-concept from Wave 1 to Wave 2, but then an increase from Wave 2 to Wave 3. The significant interaction appeared also in the domain of perception of one's own emotional stability. The perception of self as emotional stable person increased during the study only in students set in high-ability groups while it decreased especially in the group of students who were set in medium-ability groups.

Social acceptance and cohesiveness of heterogeneous classes in EG and CG

To compare social acceptance and class cohesiveness of the two groups that experienced different school organisation we only used the results of peer nominations that students of both groups accomplished in their heterogeneous classes.

As Table 3 shows, the students of experimental and control group did not differ significantly in social acceptance. The analysis of within-subjects change showed that students in the experimental group slightly impaired sociometric status in heterogeneous classes during the one-year interval. Students' social acceptance among peers in their heterogeneous class might thus have felt also due to the school organisation that practiced ability grouping and therefore did not enable to experience stable classroom environment. The interaction between Group and Wave was significant. While the social acceptance of the students in the experimental group decreased during the one-year interval, it did not change for the students in the control group.

As Table 4 shows, class cohesiveness was higher in the control than experimental group in both waves of data col-

Table 3

Social acceptance of students (SS) in experimental and control group: Means (*SDs*) and *F*- values of mixed factorial ANOVA

SS	Wave		Effects (F)		
	Wave 2	Wave 3	Between-subjects	Within-subjects	Interaction
EG	1.03 (.16)	1.00 (.12)			
CG	1.00 (.14)	1.00 (.10)	2.56	4.19*	4.49*

Note: n = 530 (EG), n = 171 (CG); SS = sociometric status; EG = experimental group; CG = control group; * p< .05.

Table 4

Cohesiveness of the heterogeneous classes of experimental and control group: Mean ranks and χ^2-test (Kruskall Wallis one-way ANOVA)

Class cohesiveness		
Wave	Mean ranks	$\chi^2_{(1)}$
Wave 2		
EG	19.67	
CG	24.80	1.69
Wave 3		
EG	15.50	
CG	24.00	4.47*

Note: n = 27 (Wave 2) and n = 26 (Wave 3) classes for experimental group and n = 15 (Wave 2) and n = 8 (Wave 3) classes for the control group. In Wave 3 the reduced number of classes in CG was a result of incorrect understanding of instructions in some classes (i.e., students in excluded classes nominated not only school mates but other peers as well); * p< .05.

lection but only in the last wave the difference was statistically significant. The results thus lead to the conclusion that the students who remained in the same heterogeneous classes (CG) were more affiliated to other classmates than the students who had to change their group when having Slovene language, foreign language or mathematics on the timetable (EG).

Table 5 shows that social acceptance in heterogeneous classes differed between the students who attended high-, medium- and low-ability groups in the three subjects. This was confirmed also in separate analyses that were done for each of the three subjects taught in ability groups. Therefore, only the results of the analyses that included the students who attended the same ability group in the three subjects are reported. Social acceptance reported by classmates in the heterogeneous class was the highest for the students in high-ability groups and the lowest for the students in low-ability groups. The within-subjects analysis showed a decrease in social acceptance of EG students from Wave 2 to Wave 3 in their heterogeneous classes but rather different patterns of change according to the specific ability group. Sociometric status of the students in their heterogeneous class who attended low-ability group in all three subjects slightly increased whereas it decreased for the students in medium- and high-ability groups.

Although the results of social acceptance in students' ability groups are not reported in details, it should be mentioned that we did not find any significant differences in students' social acceptance between the three ability groups and this was confirmed in separate analyses for each of the three subjects; Slovene language $F(2, 410) = .94$, foreign language $F(2, 406) = .06$, and mathematics $F(2, 404) = .35$. Students in low-, medium- and high-ability groups were equally accepted by their classmates in the same ability section. Similarly, the results of within-subjects analysis did not show any change from Wave 2 to Wave 3 in students' sociometric status within the three ability groups in any of the three subjects; Slovene language $F(1, 410) = 1.32$, foreign language $F(1, 406) = .55$, and mathematics $F(1, 404) = .00$.

Table 6 shows that cohesiveness of heterogeneous classes of the students who attended different ability groups in the three subjects (EG) significantly decreased during the one-year interval. The additional analyses that are not presented in details showed that cohesiveness of the ability groups did not vary in any of the three subjects; Slovene language: $\chi^2(2, N = 30) = 3.80$ (Wave 2) and $\chi^2(2, N = 24) = 3.25$ (Wave 3), foreign language: $\chi^2(2, N = 30) = 3.83$ (Wave 2) and $\chi^2(2, N = 24) = 0.65$ (Wave 3), and mathematics: $\chi^2(2, N = 30) = 3.20$ (Wave 2) and $\chi^2(2, N = 33) = 2.36$ (Wave 3). In addition, no significant change in class cohesiveness of ability groups was found for the three subjects; Slovene language: $\chi^2(1, N = 8) = 2.28$ (low-ability group), $\chi^2(1, N = 8) = .09$ (medium-ability group), $\chi^2(1, N = 8) = .00$ (high-ability group), foreign language: $\chi^2(1, N = 8) = 1.00$ (low-ability group), $\chi^2(1, N = 8) = .50$ (medium-ability group), $\chi^2(1, N = 8) = .11$ (high-ability group), and mathematics: $\chi^2(1, N = 10) = 3.60$ (low-ability group), $\chi^2(1, N = 10) = .11$ (medium-ability group), $\chi^2(1, N = 10) = .11$ (high-ability group).

Table 5

Social acceptance (SS) in heterogeneous classes reported by students of EG from high-, medium- and low-ability groups in the three subjects: Means (*SDs*) and *F*- values of mixed factorial ANOVA

SS in ability groups	Wave		Effects (F)		
	Wave 2	Wave 3	Between-subjects	Within-subjects	Interaction
low ($n = 55$)	.92 (.14)	.93 (.11)			
medium ($n = 112$)	1.05 (.15)	1.01 (.13)			
high ($n = 97$)	1.07 (.13)	1.03 (.11)	25.48**	5.72*	2.66

Note: Only the results of the analyses that included the students who attended the same ability group in the three subjects are presented; SS = sociometric status; * $p < .05$; ** $p < .01$.

Table 6

Change in cohesiveness of the heterogeneous classes of experimental group from Wave 2 to Wave 3: Mean ranks and -test (Friedman test)

	Wave 2 Mean rank	*Wave 3* Mean rank	
Cohesiveness	1.79	1.21	9.00**

** $p < .01$.

DISCUSSION

The effect of ability grouping on personal and social characteristics of students has rarely been the subject of research interest. Usually, this research problem only accompanies the research on achievement in different classroom and school organisations (e.g., Ireson & Hallam, 2001; Slavin, 1987, 1990). Since personal and social characteristics of students are tightly connected with students' attainment they certainly deserve a special attention in studying the effects of ability grouping on students' outcomes.

The first aim of this study was to compare self-concept of the students in the 8-year primary school who experienced heterogeneous grouping in all subjects (CG) and self-concept of the students in the 9-year primary school who experienced ability grouping in some subjects (EG). The results showed only few differences between the two groups in the perception of self-concept. The interaction between the effect of ability vs. heterogeneous grouping and the within-group changes in self-concept was found in the domain of general self-concept and relations with peers. Students attending ability-grouped classes had more favourable self-perceptions in these two domains of self-concept than their age-mates attending heterogeneous classes in the first year of data collection. In the second year (i.e. the last year of schooling), students from heterogeneous classes substantially improved their self-concept while the other group did not show any change. However, students attending ability-grouped classes constantly showed better academic self-concept than their age-mates from heterogeneous classes. This finding should be interpreted with caution because of the existing difference between the two groups at the beginning of the study. Anyway, the findings of the present study do not indicate that ability grouping would impede self-concept of students but it also does not have any important positive effects on students' self-perception. The results thus confirm the findings of Kulik and Kulik's meta-analysis of 13 studies that found no overall effect of ability grouping on students' self-esteem. In our study we extended the measurement of self-concept to its particular domains but we still could not find any particular differences in self-perceptions according to the type of the school organisation (except in the domain of academic self-concept). A significant decline in academic and general self-concept in a two-year interval could reflect the effect of development. Apparently, different systems of school organisation can not prevent the students' (i.e. adolescents') decline in their self-evaluations.

We also compared self-concepts of students who were set to different ability groups (EG). It was assumed that the difference in academic performance which was an important factor in setting students to different ability groups would be evident also in students' self-concept. We expected the possible BFLP effect (Marsh, 1987) that was found in some studies (e.g., Ireson et al, 2001; Suk Wai Wong & Watkins, 2001). Namely, students in high ability groups who compare their self-concept with other highly able students might start to perceive themselves less favourably and students in lower ability groups might rise their self-concept because of the low average performance in their group. In our study, the BFLP effect was not confirmed. Students from the low-ability groups had the lowest self-perceptions and students from the high-ability groups had the highest ones in academic self-concept, general self-concept and emotional stability. We may thus conclude that self-concept rises with attainment. The results did not confirm the findings of some previous studies that ability grouping could be especially harmful for students in lower ability groups (Gamoran and Berends, 1987; Lacey, 1974; Oakes, 1985). In our study, students from the low-ability groups even slightly increased their general self-concept in the first year of experiencing ability grouping and the same was true for the students in high-ability groups in the last year of schooling. The students in high ability groups also improved their emotional self-concept in a two-year interval. These findings reject the frequently expressed doubts about the possible negative effects of ability grouping on students' self perceptions in particular ability groups.

Ability grouping as a kind of school organisation that does not enable the stable classroom environment might change the social status of students in a classroom and, accordingly, a class cohesiveness. These changes may indirectly influence the academic performance of students. We should thus recognize these changes in a classroom system's functioning and work on better connectedness between students in different learning groups. The results of the present study showed that ability grouping changed the two indicators of students' social integration: social acceptance and cohesiveness of students in their heterogeneous classes. Students who experienced ability grouping slightly impaired social acceptance in their heterogeneous classes during the one-year interval. This result was expected. The students from EG had to create and maintain their social network in several groups whereas the students in entirely heterogeneous classes did not have to cope with any change in their classroom structure. The later group had more opportunities to remain more stable and deep social ties and the results of the sociometric test probably reflected this process. Similarly, cohesiveness of the students in heterogeneous classes in EG decreased during the one-year interval. Class cohesiveness was higher for the students who experienced heterogeneous grouping in all subjects in both waves of data collection. This is another argument for the conclusion that students in heterogeneous classes have more opportunities to create close social relations then their age-mates in ability-grouped classes. The possible solution would be to advise teachers to use more cooperative learning methods, at least in heterogeneous classes of students who experience ability grouping in some subjects. In this way we could compensate the negative effects of setting students to different groups according to particular subject. These results confirmed the previous findings which showed more benefits of heterogeneous grouping especially regarding the social development of students (cf. Ireson & Hallam, 2001). The heterogeneity of classrooms stimulates the cooperation between students of different abilities. In addition, more able students may be

an important model to less able students in both academic and social domain.

In both times of assessment (Wave 2 and Wave 3) there were significant differences in social acceptance of students in different ability groups. Students from the low-ability groups had the lowest average sociometric status and the students from the high-ability groups had the highest one. However, social acceptance of low-ability group did not decrease across time, it even slightly increased. Students' social acceptance in ability groups in each of the three subjects (i.e. Slovene language, foreign language, mathematics) did not show any significant differences. In general, we might conclude that the changes in classroom organisation that students in EG experienced did neither improve nor impair the social status of students in particular ability groups.

There are some apparent limitations to the study that must be considered in the interpretation of the results. In the study we did not control the influence of teachers' attitudes and behaviours toward students of different abilities. Teachers' attitudes and behaviours in the classroom might be an important mediator between the type of school organisation and students' well-being. Ireson and Hallam (1999) and Barker Lunn (1970) found out that teacher's attitudes toward ability grouping had important influence on students' self-concept. Teachers who came from schools with mixed ability grouping and started to teach students in ability groups (that was also the case in our study) negatively influenced the self-concept of students, especially of those in middle- and low-ability groups. The second important limitation of the present study is the sample that was not selected at random. The sample included the two thirds of the schools (12 of 18) which officially introduced ability grouping for the first time in Slovene primary school system. The generalisation of the results on the whole school population that will experience ability grouping in the following years is thus impossible. In spite of this limitation, our study showed that ability grouping will probably not have negative effects on students' self-perceptions. However, we should follow the changes that the new school organisation brings in social life of students as well as take care of maintaining and promoting the quality of students' social network.

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