

*Izvorni znanstveni članak/  
Original scientific paper  
Prihvaćeno: 12.5.2017.*

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## SCHOOL – WHERE ONE GROWS, LEARNS AND ACQUIRES SOCIAL EXPERIENCE

**Abstract:** *Students' perceptions of school as a positive social environment and place of interactions were researched on a sample of 2661 seventh and eighth grade students in the Republic of Croatia (15 counties). The social environment and interactions scale was developed within the Project. For the purpose of this paper, 13 variables were used on a 5-scale negatively polarized Likert-type ordinal scale. The results obtained through One sample t-test confirm that students from the sample perceive school as a positive social environment and place of interactions. According to canonical discriminant analysis, the canonical discriminant functions were determined, revealing variables which discriminate participants on dependent variables. Age differences, i.e. differences between students in grade seven and eight were observed with respect to their perception of school as a positive social environment with positive interactions. A higher positive perception of school as a positive social environment and interactions is observed among younger students (7<sup>th</sup> graders) as opposed to their older friends (8<sup>th</sup> graders). Furthermore, female students, as opposed to male students perceive the role of school as a positive social environment and place of interactions at a higher level.*

**Keywords:** *school, social experiences, interaction, primary school*

### 1. Introduction

Along with family, school is the most important place in the upbringing of a student. Its role has changed over the course of time and every society that invested in its development had guaranteed improvement in the long run. However, the development of society which is primarily tied to development of technology and innovation, i.e. the competence of young people who will develop those technologies and innovation, imposes the need for more and more active investing in the social aspect of schools. School as a place of growing up, learning and gaining social experiences creates a habitus for social competences of students according to which they will function in the modern society; loving, helping, communicating, cooperating, solving problems, overcoming failure, forgiving... That world is, as Armstrong (2008) would poetically say, an amazing place and learning how the world works is in the center of the development of a student. This modern world that develops exponentially seeks competences that relate to survival. Children in class have a mission "to survive", i.e. fight for their rights, be recognizable and seen by their

peers. "To survive" in class means to stand up to various forms of peer violence or abuse. "To survive" in class means to have the right to a different opinion, own attitude, dress style, behaviour. Children are taught to survive in a microworld where sometimes the laws are not very different from the adult world. Survival in a swirl of neoliberalism (which also relates to upbringing and education) that imposes the material things as the essence of success, knowledge as merchandise that sells and that is initially tied to making new merchandise. However, said society has more and more problems with adolescents; from various forms of behaviour disorders, addiction problems, virtual worlds in which adolescents look for their recognition, affiliation and personality. These are the new challenges for new schools to take on, schools of the future, the future that has begun. We are almost afraid to predict what a school will look like in, say, 100-200 years. Or maybe what it should look like? The continuous journey into the school's uncertainty is a sort of a feature of society and worry for the future. Do we have a reason to worry?

## **2. The school in which children grow up**

Along with family, school is the most important place in the upbringing of a student, or any person for that matter. It is a place of learning, discovering, social experiences. The place in which the student comprehends and discovers an amazing world, comprehends its laws, specificities, dangers. The school is a student's second family, and family is the foundation of every society. Considering the appearance of dysfunctional families, families that fall apart, families that spend less and less time with their children, the role of school in the social and upbringing sense is highlighted. Its role stresses the educational compensation of family omissions in order to develop a student into a humane person in the process of growing up. A modern humane school is a community in which students live, gain experiences and helps them grow up (Hentig, 1997). Growing up of a student is the most important and most sensitive period in the development of a grown up person. Omissions made in this risky period follow the individual through his entire life. The imperative of every society is that families and schools invest in students and give them a foundation for developing into a stabile psychophysical person with the required competences for the adult. James Heckman expressed in his prologue of the Nobel prize he won in 2000 with Daniel McFadden in the area of economics (microeconomics) an idea that should guide every society, and that idea refers to the fact that children are our greatest investment, and that investing in their early stages of development implies the biggest long-term success of every society. So, the best investment for every society is investing in children, i.e. into schools in which children grow up and learn and prepare for the adult world. The role of children's growing up in school can be viewed from several points:

- A sense of love and acceptance;
- Social experience;
- Learning.

A sense of affiliation is a primary human need and it means that school is a place where a student feels safe and protected. People who feel accepted have enough confidence to explore problems, take risks and play with different options more freely and learn from reflecting on their mistakes (Johnson at al., 1984). Also, education is an expression of love towards children and adolescents who need to be welcomed into the society and unreservedly be offered a place in the educational system and the local community (Delors, 1998: 13). School as a student's second home has to be a place of love and acceptance because that is how a student learns to give love. Love is "merciful acceptance and respect towards others and oneself" (Caddy and Platts, 1994: 14), i.e. mental energy and spiritual strength, but also a source of a human being's social energy (Gerken, 1993). An old socio-centric paradigm of school left out love as an essential part of the school ethos, it even meant rigidity and punishment as a substitute for love. However, love is in the principle of every humanity. Brajša (1995) emphasizes love as one of the seven secrets of a successful school. A successful school is a place of growing up in love where trust and mutual respect are developed. There are two kinds of love between a parent and a child, which can be projected to that of a teacher and student. It is about gentle and authoritative love. Gentle love means the capability of dominating in relaxed, warmhearted and love-filled relations; without forcing, threatening, comparing, humiliating. It is about the harmony of relations that need to dominate in school. Authoritative love is a capability of being kind without giving in to children, i.e. a school should be a place with clearly set rules. Authoritative love rejects permissiveness even from clearly agreed rules, for example behaviour (Biddulph and Biddulph, 2003). So, school as a place of love and respect creates a foundation for a stabile psychophysical development of a student.

From a social aspect, school is a microworld where a student encounters a wide range of social experiences and specificities. In this microworld, a student learns about the laws of behaviour and dealing with various social situations. The importance of social experiences in school is especially important considering the appearance of various forms of behavioral disorders.

Students with insufficient social experience, i.e. students who rarely socialize with other students; do not communicate, do not cooperate, i.e. they manifest internalized forms of behavioral disorders, stop their development of social competence. With their absence, inactivity, disappointment, sorrow, repressed anger or dissatisfaction, some students endanger the healthy psychophysical development characteristic to their age. Although those students are not a great problem at first, they are even more dangerous than students who manifest active forms of behavioural disorders, since they lead to development of psychological dysfunctions. Furthermore, in adulthood, such social anomalies (repression, depression, loneliness), i.e. absence of social support imply, for example, that those people are more prone to stress and various diseases (Cohen and Wills, 1985) and/or suicidality (Wortman, 1983). Hymel at al. 1990 (according to Katz and McClellan, 1999: 23) point out that low levels of interaction (social repression) disable the application of social skills, which leads to repression: "Early social repression can be a risk factor in early development and should not be overlooked. "So, school as a place of social experiences should be a place:

- where every student has many friends to study with, make arrangements, solve problems, sympathize, help...
- where everything is not about grades, but also about capabilities, and one of the most important capabilities to be developed by a school is social competence
- where every student is an equal part of a heterogeneous community; without negligence, rejection, humiliation, jest, i.e. a place where teachers are equal in communication with students.

Emphasizing the social aspect of a school as a part of the school of the future which is a humane and social community, it should be a place:

- of growing up, learning and socializing on rich and valuable content to which students can look forward to;
- where children's friendships, joy and mutual help are encouraged
- on the verge of human relations on which eco-awareness is developed and which works as a social eco-community;
- where the real world enters the classrooms and where humane and social duties are presented in topics from life... (Previšić, 1999: 13).

Every school is a unique social ambient where teachers, students and parents gain a lot of social experience. The functioning of a school depends greatly on the way in which people in school accept their roles, what are their mutual relationships and how they feel in school (Domović, 2003: 7). Social experiences gained in school determine the level of success of the process of a student's socialization, i.e. the development of their social competence. Socialization is a primary function of a school (upbringing and education) which is aimed at forming a positive student's personality (Mijatović, 2000: 250).

The old paradigm of school put emphasis on the cognitive aspect of a school. However, today, it is recognized that for a student's success, especially later in life, their social competence is crucial. Eldar and Ayzazo (2009) emphasize that social competence is necessary for effective achievements in school and in life. Success in the life of every person is an individual category, but social interaction is in common for everybody. Lack of this social interaction, followed by emotional experiences cannot be replaced by a dominant development of the cognitive area. The civilizational level which we are on now was achieved in a social environment, and according to Hancock and Wingert (1997: 36): "The early social and emotional experiences are the beginnings of human intelligence." In fact, the primary role of schools is to teach in a social environment and to develop abilities needed to function in society.

### **3. Teaching through interaction**

In the sociocentric paradigm of the "old school", teaching was exclusively directed at achieving certain cognitive capabilities in schools which were not as much connected to social context. It was a long and difficult process of mastering certain

educational content. Furthermore, it was a synonym of something that is imposed, something that does not bring joy to children, but rather something that is imposed to the process of growing up and taken away from social interactions with peers. Some authors view today's schools negatively, they even think of it soul murdering, because it is an:

“impassable thicket of stupidity, prejudice and bad moves. Schools of our age have succeeded in something that is impossible by laws of nature: to destroy matter that once existed. Aspiration for knowledge, independence and a gift for observation - all of this is brought to school by children, but upon graduating, it is mostly gone, and it is not transformed into knowledge nor into profession (Key, 2000: 145).

However, learning is actually a synonym for playing and growing up in which the process of learning is taking place. It is not related to gaining knowledge outside the context of social experiences and interactions. According to pedagogical lexicon (Mijatović, 2000), learning is considered as constant changes of a person by their own psychological (cognitive, emotional) activity. So, the process of learning is directed at social context because it forms our cognitive, but also social competence. In fact, learning is changing the behaviour, and it includes: creating associations, thinking, problem solving and information processing (Brown, 2001).

In psychology, there is a string of teaching theories which emphasize certain specificities considering student's age, stage of development and type of learning (cognitive, emotional, motor etc.). It is school which unifies the process of growing up, learning and social experience on the level of joint effects of said components. Those components, along with family, create the student's childhood in which they prepare for the adult world.

In describing learning, Dyden and Vos (2001: 107), emphasize teaching by a curriculum which emphasizes:

- self-respect and personality development
- development of skills related to life
- learning how to study and think
- specific academic, physical and artistic skills

The authors emphasize school (curriculum), i.e. teaching that transcends specific academic achievements of students, but also skills related to real life and personality development of students.

Learning is a fundamental process which leads to development and the rhythm of learning is limited by the speed of brain development, especially during childhood (Fox, 2001). Neurological research emphasize the importance of an enriched environment which changes the structure of brain cells (Healy, 1990; Fuchs, Montemayor and Greenough, 1990). The interaction between students and the environment is a part of experiential learning, and that is an important part of an enriched environment. With the modern development of neuroscience, pedagogy needs to accept the results of that research because it emphasizes the biological conditio-

nality of a human being in the process of learning and developing neurological foundations. The interaction between a student and the environment contributes to the development of their social competence and also the development of cognitive components (Rogoff, 1990).

From a social aspect, school as a place of learning can also be viewed through the interaction of students and teachers. Interaction (communication) between students and teachers in class is a fundamental precondition for the development of educational achievements and the social development (competence) of students (Adalsteinsdottir, 2004). Quality communication between students and teachers guarantees social ability (competence) which is based on non-violent communication and social engagement. Brajša (1995) points out that quality communication ensures successful and creative survival. The author imposes questions upon the teacher: how they talk to colleagues and students (does he listen to them, does he think about it and does he talk to them about it). Communication based on relaxation, support, cordiality, emotions, i.e. "gentle kindness" is the element of a successful student-teacher relationship (Pye, 1988).

The interaction between a student and a teacher as a guarantee of quality of the process of learning imposes the need to develop trust. If a student does not trust in their teacher, they will be transferring that relationship further in life. The principle of a realistic approach (unlike the pessimistic and the optimistic) is: I have faith in those who deserve it (Bratanić, 1991). The effects of social interaction, communication between teachers and students as an integral part of the process of the quality of teaching can be viewed through the following (Klarin, 2006):

- the teacher has an important role in the emotional, social and cognitive development of a student
- helps the child in developing a safe relationship with other adults
- helps the student in developing a positive relationship with peers
- helps the child in reducing behavioural problems
- helps in developing self-respect
- affects the increased involvement in classroom activities

As participants in the educational process, both the teacher and student are directly and indirectly subjects to effects of the school's atmosphere on the results of their work (effectiveness). A positive school's atmosphere encourages motivation, intellectual curiosity, independence, orientation to solving tasks and problems, better socialization, better involvement in life and in school's work, the sense of trust, capability of making decisions etc. However, the question is how to achieve such an atmosphere. No matter the complete educational policy which determines work and conformation of the whole school system, the key role in achieving a quality, pleasant atmosphere in school belongs to the teacher. The teacher is the key person in creating a quality school no matter all the organizational difficulties they face. The responsibility upon them is great because creating a positive atmosphere in school, i.e. the quality and effectiveness of school, depends on him and his complete personality and work results.

In the last four decades, there was a lot of research about the atmosphere in school based on perception, i.e. the description of life in school by teachers and/or students. Atmosphere in school and the climate in class can be viewed as significant predictors which contribute to development of behavioral disorders in students. The most common perceptions of students who display behavioral disorders in schools and classes are: "School is a place where I feel uncomfortable, nobody understands me, I cannot engage in activities that I find interesting, I cannot wait to finish school, my teacher often punishes me etc." The role of creating a pedagogically designed and pleasant atmosphere in classes is of significant preventive importance exactly for those students.

Jurić (1993) points out that a school's climate is a specific stamp of school life that forms and are experienced by people that participate in it (principal, teacher, students and other people in school). As a fundamental characteristic of a school's climate, he states the description of interactive forms in that school. It is this interactive form which encourages students in order for them to recognize and experience school as a place in which they feel comfortable, as a place of fun, learning and satisfaction of their needs.

One of the significant factors which has an anti-pedagogical impact considering the creating of conditions for a positive school and a pleasant working atmosphere is the dissatisfaction of teachers. Lovrentjev (2005) emphasizes the dissatisfaction of teachers which contributes to the development of an unpleasant social atmosphere. Social atmosphere is created by interrelationships: relationships among students and relationships between students and a teachers. There is a closed circle of dissatisfaction inside a class atmosphere which implies an uncomfortable class atmosphere, ineffective work, unhappy teacher and unhappy students. Teachers should leave all their problems and frustrations at the front door of the school in order to not transfer their negative behaviour to students. No matter how much they try to hide their bad mood, problems or frustrations, the students will quickly notice them. The behaviour of teachers is important from the point of preventing behavioral disorders because with their complete behaviour, teachers represent a role model.

Jurić (1992) conducted a similar research on 836 students of the sixth, seventh, and eighth grade about satisfaction with class and opinions of parents about satisfaction of children. The results have shown that students of higher grades are less satisfied with school and that dominant relationships among the subjects (student-student, student-teacher, teacher-parent, etc.) are greatly dependent and critical for the class atmosphere. In order to improve the students' satisfaction with school, the teacher has a crucial role and should do the following (Jurić, 1992):

1. in the individual-professional approach, directly affect their behaviour and communication with students, thus increasing satisfaction for both sides;
2. accept the individuality of students and their personality;
3. avoid insulting sayings, irritability and impatience while communicating with students
4. encourage students during work and encourage them, point out positivity and give the student a chance to "fix";

5. use humour in class;
6. know interests and hobbies of students, and their difficulties, fears and emotions
7. ensure safety in creating class atmosphere.

The student will develop the competence gained in school and petrify obtained attitudes, habits and act according to them in the community.

#### 4. Research methodology

One of the objectives of the project study was to examine students' perception of school from the point of social environment and interactions. To fulfill the needs of this defined objective, a *scale of social environment and interactions* was singled out which will be used in the further methodological part, and is a key component of the project: *The curriculum of social competence and relationships in school*. This is an ordinal negatively-polarized scale of 5 levels: 1 - I strongly disagree, 2 - I partly agree, 3 - I do not agree nor do I disagree, 4 - I agree, 5 - I strongly agree. For research purposes, a sample of student respondents was used (n=2661). Age and gender structure of the sample is shown in Table 1.

**Table 1.** - Age and gender structure of the sample

Locations of primary schools	Gender		Grade		Total
	M	F	7.	8.	
Split	171 (6,4%)	164 (6,2%)	163 (6,1%)	172 (6,5%)	335 (12,6%)
Osijek	144 (5,4%)	144 (5,4%)	144 (5,4%)	144 (5,4%)	288 (10,8%)
Beli Manastir	39 (1,5%)	28 (1,1%)	35 (1,3%)	32 (1,2%)	67 (2,5%)
Požega	54 (4,0%)	45 (3,4%)	58 (2,2%)	41 (1,5%)	99 (3,7%)
Zagreb	237 (8,9%)	270 (10,1%)	246 (9,2%)	261 (9,8%)	507 (19,1%)
Bobota	27 (1,0%)	22 (0,8%)	26 (1,0%)	23 (0,9%)	49 (1,8%)
Varaždin	89 (3,3%)	76 (2,9%)	84 (3,2%)	81 (3,0%)	165 (6,2%)
Sisak	44 (1,7%)	42 (1,6%)	47 (1,8%)	39 (1,5%)	86 (3,2%)
Banova Jaruga	22 (0,8%)	28 (1,1%)	24 (0,9%)	26 (1,0%)	50 (1,9%)
Prelog	44 (1,7%)	35 (1,3%)	41 (1,5%)	38 (1,4%)	79 (3,0%)
Bjelovar	48 (1,8%)	48 (1,8%)	53 (2,0%)	43 (1,6%)	96 (3,6%)
Pitomača	30 (1,1%)	53 (2,0%)	44 (1,7%)	39 (1,5%)	83 (3,1%)
Trpinja	12 (0,5%)	10 (0,4%)	14 (0,5%)	8 (0,3%)	22 (0,8%)
Rijeka	141 (5,3%)	136 (5,1%)	139 (5,2%)	138 (5,2%)	277 (10,4%)
Gospić	52 (2,0%)	35 (1,3%)	42 (1,6%)	45 (1,7%)	87 (3,3%)
Otočac	39 (1,5%)	36 (1,4%)	40 (1,5%)	35 (1,3%)	75 (2,8%)
Pula	27 (1,0%)	26 (1,0%)	26 (1,0%)	27 (1,0%)	53 (2,0%)
Zadar	46 (1,7%)	37 (1,4%)	41 (1,5%)	42 (1,6%)	83 (3,1%)
Knin	32 (1,2%)	52 (2,0%)	43 (1,6%)	41 (1,5%)	84 (3,2%)
Drniš	39 (1,5%)	37 (1,4%)	37 (1,5%)	39 (1,4%)	76 (2,9%)
Total	1337 (50,2%)	1324 (49,8%)	1347 (50,6%)	1314 (49,4%)	2661

The choice of the sample of students is based on partly proportional stratum which are proportional to the population (students of seventh and eighth grades of primary schools in the Republic of Croatia). According to the set objective, the following hypothesis were made:

H1 – Students see school as a place of positive social environment and interactions

H2 – There are certain age and gender differences in the perception of school as a positive social environment and positive interactions.

## 5. Research results

According to H1, descriptive indicators from a set of 13 particles are shown (table 2). The span of values is at maximum on every particle (1-5) which implies that particles cover the range of responses well; from a bare negative to a bare positive perception of the subject of measurement. It is confirmed that there are no bimodal (multimodal) particles, i.e. particles with more modes, which can mask the real differences among the respondent's answers. Considering the specificities of the distribution, all variables are slightly negatively asymmetric, which on a scale, implies a preference towards the positive values of the students' perception. The reason for that can be searched for in the asymmetry of the distributions of the answers which comes from a unambiguous perception of the respondents towards the subject of measurement, which is in line with the set hypothesis. Also, when it comes to the kurtosis of the distribution, most of the particles are platycurtic (kurtosis with negative values) while, for example, the particle p.8.4 is slightly leptocurtic. Considering the normality of the distribution, a Kolmogorov Smirnov test was conducted which is on the level of statistical significance ( $p \leq 0.05$ ) for all particles which implies the absence of the normality of the distribution, i.e. corresponding to the negative (left) asymmetry where it shows a higher perception of students towards the subject of measurement.

Since a modified (own) questionnaire was constructed for the research purposes, the reliability of ordinal variables was tested with the internal consistency method which is based on the averages of correlations among the items; interclass correlation coefficients. Cronbach alpha is 0.846 high which means that the questionnaire is reliable and can serve to other researchers. In statistics (social sciences) the usual bottom limit of acceptance for  $\alpha$  is 0.70 and above (according to Leung, 2001: 84), while with basic research (Nunnally, 1978) and medical research (Leung, 2001), the test should have  $\alpha$  of 0.90 or 0.95 to be reliable.

Table 2. - the descriptive statistics of the scale

variables	mean		min	max	mod	std. dev.	variance	skewness		kurtosis		T test - one sample	
	stat.	std. error						stat.	std. error	stat.	std. error	stat.	st. sig.
P8.1 In my school - good relationships are encouraged	3,62	,021	1	5	4	1,096	1,201	-,714	,047	,005	,095	29,186	,000
P8.2 In my school - teachers and students respect each other	3,31	,023	1	5	4	1,191	1,418	-,403	,047	-,655	,095	13,579	,000
P8.3 In my school - cooperation and helping is encouraged	3,71	,021	1	5	4	1,064	1,133	-,679	,047	-,046	,095	34,493	,000
P8.4 In my school - friendship among students is encouraged	4,06	,020	1	5	5	1,046	1,094	-1,166	,047	,922	,095	52,242	,000
P8.5 In my school - the differences among students are accepted	3,60	,023	1	5	4	1,194	1,426	-,670	,047	-,345	,095	26,056	,000
P8.6 In my school - taking responsibility and own consequences is encouraged	3,65	,023	1	5	4	1,167	1,361	-,692	,047	-,247	,095	28,599	,000
P8.7 In my school - fights and class interference is repressed	3,46	,023	1	5	4	1,175	1,381	-,479	,047	-,538	,095	20,127	,000
P8.8 In my school - the expression of emotions without anger and aggression is encouraged	3,34	,024	1	5	4	1,261	1,590	-,393	,047	-,820	,095	13,961	,000
P8.9 In my school - resistance to negative pressure and pliability is strengthened	3,32	,022	1	5	3	1,150	1,322	-,354	,047	-,544	,095	14,565	,000
P8.10 In my school - rejected and isolated students get help	3,49	,026	1	5	5	1,329	1,767	-,539	,047	-,840	,095	19,190	,000
P8.11 In my school - gifted students are recognized	3,92	,023	1	5	5	1,189	1,413	-,999	,047	,116	,095	39,884	,000
P8.12 In my school - cooperation with parents is cherished	3,58	,023	1	5	4	1,168	1,365	-,625	,047	-,340	,095	25,673	,000
P8.13 In my school - a healthy way of life is encouraged	3,68	,025	1	5	5	1,278	1,632	-,713	,047	-,533	,095	27,310	,000

A tendency to higher values is noticed from the average values of all the variables. Considering the degrees of the negatively polarized Likert scale, this points to the scale values: 4 - I agree, 5 - I completely agree. Better transparency is achieved through insight in the mod value as a positional measure of central tendency. Almost all variables (except P8.9) have a mod value of 4 or 5, i.e. the largest number of students have a positive perception on the scale; 4 or 5. It is indicative that the highest average value belongs to variable P8.4 - *In my school-friendship among students is encouraged*,  $\bar{x}=4,06$ ,  $Mo=5$ . Even though the values of all particles are high, a *one sample* t test with the criteria value of 3 was applied, because the empirical values above 3 represent higher assessments of the social environment and interactions, while values less than 3 represent lower assessments (value of 3 on the scale is neutral). The one sample t test results (table 2) show a statistically significant difference on all variables with the criteria value of 3. The signs of differences among the compared average values (mean difference) show that the empirical values of all variables are statistically significantly higher than the criteria value. This means that the H1 hypothesis is confirmed which implies the conclusion that students perceive school as a place of positive social environment and interactions.

In order to test the H2 hypothesis, discriminant analysis was used. Even though the basic use of the discriminant analysis unifies the group prediction (category) to which an individual belongs, and based on individual results of the respondents on predictor values, in this case the difference among groups (students of seventh and eighth grades) was used to test H2. The objective is to determine which non-dependent variables (and in what measure) contribute to discrimination among groups (grades).

Although the precondition about the normality of distribution was not fulfilled, the mentioned multivariate method is approached since the normality is not "extremely disrupted", but is a consequence of slight asymmetry. The outliers are transformed, the homogeneity of the variance is within the limits of normality (coefficient of variance as an indicator), and because of the size of the sample, the central limit theorem starts to work. In order to test the equality of means among subsamples and listed particles, a univariate one-way analysis of variance (ANOVA) was used. The results of ANOVA (all variables;  $p \leq 0.05$ ) imply that average values of all listed variables differ considering the grade of students and are involved in the discriminant analysis in further processing. The homogeneity of the covariance was tested with a Box M test which is statistically significant for all particles, which implies that the matrixes of the covariance of the groups are different (Box's M=160,071,  $F=1,750$ ,  $df_1=91$ ,  $df_2=2,213$ ,  $stat.sign.=0.000$ ). The non-homogeneity of the covariance of the groups actually disables the *lege artis* implementation of the discriminant analysis. However, further in the text, the implementation of the discriminant analysis will be approached because of the following:

- The Box M test is very sensitive and it is highly likely to show statistical significance, i.e. non-homogeneity of the covariances (Tabachnick and Fidell, 1996). Also, Meyers, Gamst and Guarino (2006) state that the discriminant analysis is robust to distort the homogeneity of the variance/covariance under the condition that the sample is big and groups are of equal size, and that outliers are not clear. Furthermore, Hill and Lewicki (2006: 161) specifically point out that the Box M test for homogeneity of the variance/covariance is sensitive to deviation from normality and that it should not be taken seriously.

However, the results of the discriminant analysis in the further text should be taken more as a trend (indition) than a conclusion.

As visible in Table 3, a statistically significant discriminant function is obtained ( $p_{(F1)}=0.000$ ). Canonical correlation  $r=0.17$  points to a weak connection among groups (subsamples). A low value, i.e. a measure in which the discriminant function discriminates among categories, is obvious from the value of the characteristic root (0,30).

**Table 3.** - Basic values of the discriminant analysis

Fun.	Eigenvalue	% Variance	Cumulative %	Canonical correlation	Wilks' Lambda	Hi -square	Df	Statistical significance
1	,030	100,0	100,0	,171	,971	78,706	13	,000

In order to interpret the discriminant function (factors), the discriminant coefficient or ponders are important (Table 4). These are standard forms of beta (as in regression) which display a partial contribution of every variable in determining the discriminant function, which point to the degree of agreement of an individual variable and the discriminant function. In principle, the discriminant coefficients and correlations are harmonized (partly in this example; Table 4).

The structure of the discriminant function is well projected (determined) by the stated variables (Table 4). It is about a Pearson's coefficient of correlation (structural coefficients) for every variable with the discriminant function (discriminant load).

**Table 4.** - Standardized coefficients and the structure of the discriminant function

Variables	Correlations with DF*	Standardized coefficients of DF
P8.10 In my school - rejected and isolated students get help	,792*	,546
P8.3 In my school - cooperation and helping is encouraged	,760*	,542
P8.8 In my school - it is taught how to express emotion without anger and aggression	,599*	,240
P8.2 In my school - teachers and students respect each other	,585*	,189
P8.4 In my school - friendship among students is encouraged	,562*	,228
P8.12 In my school - cooperation with parents is cherished	,525*	,083
P8.13 In my school - a healthy way of life is encouraged	,462*	-,019
P8.11 In my school - gifted students are recognized	,456*	-,031
P8.9 In my school - resistance to negative peer pressure and pliability is strengthened	,410*	-,141
P8.1 In my school - good interpersonal relationships are encouraged	,296	-,380
P8.6 In my school - taking responsibility and accepting consequences of own actions is encouraged	,289	-,125
P8.5 In my school - differences among students are accepted	,274	-,135
P8.7 In my school - fights and class interference is repressed	,249	-,016

\*DF – discriminant function

From the centroid distribution in the one-dimensional space of the taken discriminant function (Table 5), the direction of grouping of average values of the discriminant function is clear.

Discernment of the groups of respondents according to the criteria of affiliation to a class is obvious, considering the directions from the structure of the matrix, in a way that students of seventh grades are on the positive pole, and the students of the eighth grades on the negative pole.

Table 5. - Functions on group centroids

Grade	Function
Seventh	,171
Eighth	-,176

The highest correlation with the discriminant function is shown by the *in my school - rejected and isolated students get help* ( $r=0,792$ ) variable. It also discriminates the students involved in the sample the most, according to the criteria of affiliation to a grade, in a way that the said statement is more characteristic for students of seventh grades.

Also, other isolated latent characteristics (9 out of 13 total), which make the structure of the discriminant function ( $r \geq 0.40$ ), are in most part characteristics of younger students, i.e. students of seventh grades, in a way that they show a larger tendency to perceive school as a place of positive social atmosphere and interactions.

So, students of seventh grades have more positive perceptions towards the particles; rejected and isolated students get help, cooperation and helping is encouraged in school, they are taught how to express emotions without anger and aggression... unlike their older colleagues, eighth grade students. Furthermore, all particles represent positive correlations with the discriminant function, and considering the centroid distribution, they discriminate the mentioned sample and are more characteristic to younger students; i.e. students of seventh grades (although only those which have  $r \geq 0.40$  are used to interpret the levels of discrimination). According to presented results, younger students have a more positive perception of school as a place of positive social environment and interactions.

Considering the sought gender differences in the perception of school as a positive social environment and interactions, a discriminant analysis was also used. In this case, the results of the univariate ANOVA imply that average values of some mentioned particles do not differ considering the students' grade, and are excluded from further processing (Table 6).

Table 6. - Results of ANOVA

Variables	df	Mean Square	F	Stat. sig.
P8.1 In my school - good interpersonal relationships are encouraged	1	25,027	20,994	,000
P8.2 In my school - teachers and students respect each other	1	7,586	5,360	,021
P8.3 In my school - cooperation and helping is encouraged	1	21,154	18,795	,000
P8.4 In my school - friendship among students is encouraged	1	18,650	17,148	,000
P8.5 In my school - differences among students are accepted	1	10,713	7,532	,006
P8.6 In my school - taking responsibility and accepting consequences of own actions is encouraged	1	19,435	14,353	,000
P8.7 In my school - fights and class interference is repressed	1	9,616	6,980	,008
P8.8 In my school - it is taught how to express emotion without anger and aggression	1	19,956	12,609	,000
P8.9 In my school - resistance to negative peer pressure and pliability is strengthened	1	1,749	1,323	,250*
P8.10 In my school - rejected and isolated students get help	1	2,312	1,308	,253*
P8.11 In my school - gifted students are recognized	1	2,907	2,058	,152*
P8.12 In my school - cooperation with parents is cherished	1	2,089	1,531	,216*
P8.13 In my school - a healthy way of life is encouraged	1	,111	,068	,794*

As visible from the results of ANOVA, on 8 variables (out of 13 total), there is a statistically significant difference among students of seventh and eighth grades considering their perception of school as a place of positive social environment and interactions. From a manifest level, it can be seen that students of seventh and eighth grades differ in a larger number of particles considering the perception of school. In order to determine the latent space; the relation of a larger number of particles in discovering sought after differences (considering the grade; age), in the further text, an implementation of discriminant analysis is approached. A discriminant function (Table 7) on a level of statistical significance ( $p_{(F1)}=0.000$ ,  $p \leq 0.05$ ) was obtained and a very low level of correlation among groups was obtained ( $r=0.11$ ).

**Table 7.** - Basic values of the discriminant analysis

Fun.	Eigenvalue	% Variance	Cumulative %	Canonical correlation	Wilks' Lambda	Chi – square	Df	Statistical significance
1	,012	100,0	100,0	,111	,988	32,809	8	,000

The matrix structure shows variables which discriminate students by gender (Table 8). The largest correlation with the discriminant factor is shown by the *in my school - good interpersonal relationships are encouraged* ( $r=0.797$ ) variable, and it is the one that discriminates students by gender the most. Also, all the other variables (criterion  $r \geq 0,40$ ) make a discriminant function.

**Table 8.** - Standardized coefficients and the structure of the discriminant function

Variables	Correlations with DF*	Standardized coefficients of DF
	1	
P8.1 In my school - good interpersonal relationships are encouraged	,797*	,447
P8.3 In my school - cooperation and helping is encouraged	,754*	,324
P8.4 In my school - friendship among students is encouraged	,720*	,288
P8.6 In my school - taking responsibility and accepting consequences for own actions is encouraged	,659*	,252
P8.8 In my school - it is taught to express emotions without anger and aggression	,618*	,175
P8.5 In my school - differences among students are accepted	,477*	,014
P8.7 In my school - fights and class interference is repressed	,459*	,112
P8.2 In my school - teachers and students respect each other	,403*	-348

\*DF – discriminant function

The direction of differences of group centroids is visible in a one-dimensional space; male students are of negative, and female students are of the positive pole (Table 9). This implies the conclusion that mentioned particles are more characteristic for the female gender.

**Table 9.** –group centroids (gender)

Gender	Function
M	-,137
F	,139

Corresponding to the carried out discriminant functions, the second hypothesis (H2) which assumed that there are age and gender differences in the perception of school as a place of a positive social environment and interactions is completely confirmed. Students of lower chronological age (seventh grade) have a higher positive perception of school as a place of a positive social environment and interactions, unlike their older colleagues (students of eighth grade). Also, female students, unlike male students, experience the role of school as a place of a positive social environment and interactions on a higher level.

## 6. Discussion and conclusion

School as a place of growing up, learning and gaining social experience is unavoidable; it is the main link in the development of a human being. Questioning the quality of school is an obligation for every society that wants to develop. Furthermore, pedagogy as a critical and creative science of education directs its research essence to various aspects of upbringing and education (school) in order to present change recommendations. Corresponding to that, an objective presents itself; to examine the perception of students about school as a place of a positive social environment and interactions. On a substract of 13 particles on which the level of school as a place of social environment and interactions is measured, a tendency of higher values is noticed, which considering the degrees of a negatively polarized Likert scale points to values of 4 - I agree, 5 - I completely agree. So, the school from the sample, according to students' perception is a place where:

- *friendship among students is encouraged* ( $x=4.06$ ,  $Mo=5$ ).
- *gifted students are recognized* ( $x=3.92$ ,  $Mo=5$ ).
- *cooperation and helping is encouraged* ( $x=3.71$ ,  $Mo=4$ ).
- *a healthy way of life is encouraged* ( $x=3.68$ ,  $Mo=5$ ).
- *taking responsibility and accepting the consequences of own actions are encouraged* ( $x=3,65$ ,  $Mo=4$ )
- *good interpersonal relations are encouraged* ( $x=3,62$ ,  $Mo=4$ )
- *differences among students are accepted* ( $x=3,60$ ,  $Mo=4$ )
- *cooperation with parents is cherished* ( $x=3,58$ ,  $Mo=4$ )
- *rejected and isolated students get help* ( $x=3,49$ ,  $Mo=5$ )
- *fights and class disruptions are repressed* ( $x=3,46$ ,  $Mo=4$ )
- *it is taught to express emotions without anger or aggression* ( $x=3,34$ ,  $Mo=4$ )
- *teachers and students respect each other* ( $x=3,31$ ,  $Mo=4$ )

The only particle whose results do not confirm the perception of school as a place of a positive social environment and interactions is *In my school - resistance to negative peer pressure and pliability is strengthened* since most students responded with; I do not agree nor do I disagree ( $x=3,32$ ,  $Mo=3$ ).

Since the question of whether to worry or not about the future, considering the endless journey into school suspense, which is a feature of time and society, is pointed out in the introduction, the results display that the sample school is a place of a positive social environment and interactions, which also confirms the starting hypothesis (H1). So, students experience school as a prism of positive social relationships and interactions. The social ethos of the school is on a high level according to the perceptions of students. It is mostly a school where friendships among students are encouraged, a place where talents are recognized and helping and cooperation are encouraged. Friendship is a sort of social *par excellence*, because through friendship, one learns, encourages, feels and acts prosocially. Friendship means humanity because it involves cooperation and helping, and honest devotion to another person. It is interactive, synergic because a social relationship involves transferring certain traits from one person to another. Friendship cannot be taught, it must be lived in a social milieu.

In the sample school, parents have a significant role since school cherishes their cooperation. Parents are an equal part of the school and their role is infallible. Sussell, Carr and Hartman (1996) state positive consequences of cooperation between school and parents which are reflected in better positive attitudes of parents towards school as a whole (especially towards teachers), better development of positive attitudes and behaviour of students, better success in school, the development of moral support to teachers in work with the students, and a better atmosphere in school. The consequence of better mutual cooperation between school and parents is growth of school satisfaction and an increase of confidence and success of the entire school (Karther and Lowden, 1997). The sample school is a place where students respect each other, where they learn to control their emotions (without anger and aggression) and where fights and class interfering are repressed. So, the students gain social competences which will develop through time and be used in everyday life. A specific emphasis is put on helping students who feel rejected and isolated. The sample schools are socially aware, especially towards the groups who need help.

It was assumed that there are certain gender and age difference in the perception when confirming the initial hypothesis in which school is a place of a positive social environment and interactions. In order to test the hypothesis, canonical discriminant analysis were implemented. Since not all the statistical preconditions to use those analysis were fulfilled, the obtained results should be taken more as indications and trends and less as generalizations.

Age differences were confirmed with the first analysis, i.e. differences among students of seventh and eighth grades considering the perception of school as a place of a positive social environment and interactions. Most variables from the

sample ( $r \geq 0.40$ ) discriminate students by age and are characteristic for younger students. It is indicative that all particles are of the positive sign, which from the values of group centroid, implies that they are more characteristic for younger students, i.e. students of the seventh grade.

From the statistical significance of the second discriminant analysis (function), the gender differences considering the perception of school are confirmed. All variables that were involved in the discriminant analysis discriminate students from the sample by gender. This means that, from the sign of values of the group centroids, the mentioned particles are more characteristic for the female gender. The results of the implemented discriminant analysis completely confirm H2 which assumed that there are age and gender differences in the perception of school as a place of a positive social environment and interactions.

The research results describe the school as a place of a positive social environment and interactions, by the perception of students from the sample. Considering the size of the sample ( $n=2661$ ) and the number of counties involved in the research (15), we can assume the sought after representativeness, i.e. that the results of this research can be displayed on the population of students of seventh and eighth grades in the Republic of Croatia. Students of final grades of primary schools (7th and 8th) were chosen for the sample because we assumed that the higher the grade, the less the perception of a positive social environment and interaction and in that case, the results would be "objective", i.e. the perceptions of students of lower grades would be even more positive. In the research draft, we assumed that students of seventh and eighth grades describe primary school best and through a prism of more negative perceptions. This implies that the results of this research obtained from a sample of students of seventh and eighth grades actually describe the whole school. The results of the discriminant analysis which imply that, for younger students, the perception of school as a place of a positive social environment and interactions is more characteristic, also goes with this interpretation. So, if the mentioned particles are more characteristic for a younger age, then we can imply that, with older age, the perception of school as a place of a positive social environment and interactions lessens. Younger students would have significantly higher average values on the presented particles of the subject of measurement. The results can also be viewed through a prism of prediction of further lowering the level of a positive social atmosphere and interactions with high school students. However, something like that has to be researched, and the results of this research display indications for such hypothesis in future research.

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## ŠKOLA KAO MJESTO ODRASTANJA, UČENJA I STJECANJA SOCIJALNIH ISKUSTVA

**Sažetak :** Na ukupnom uzorku od 2661 učenika sedmih i osmih razreda Republike Hrvatske (15 županija) istražene su percepcije učenika o školi kao mjestu pozitivnog socijalnog okruženja i interakcija. Kao dio Projekta konstruirana je skala socijalnog okruženja i interakcija. Za potrebe ovog rada korišteno je 13 varijabli na pet stupanjskoj negativno polariziranoj ordinalnoj skali Likertova tipa. Iz rezultata *One sample t* testa potvrđeno je da učenici iz uzorka školu percipiraju kao mjesto pozitivnog socijalnog okruženja i interakcija. Rezultatima kanoničkih diskriminacijskih analiza determinirane su kanoničke diskriminacijske funkcije koje čine varijable koje diskriminiraju ispitanike na zavisnim varijablama. Potvrđene su dobne razlike, odnosno razlike između učenika sedmih i osmih razreda s obzirom na percepciju škole kao mjesta pozitivnog socijalnog okruženja i interakcija. Višu pozitivnu percepciju škole kao mjesta pozitivnog socijalnog okruženja i interakcija imaju učenici niže kronološke dobi (7. razred) za razliku od svojih starijih kolega (učenici 8. razreda). Isto tako, učenice, za razliku od učenika, ulogu škole kao mjesta pozitivnog socijalnog okruženja i interakcija doživljavaju na višoj razini.

**Ključne riječi:** škola, socijalna iskustva, interakcija, učenici, osnovna škola