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THE RELATIONSHIP OF SCHOOL ACHIEVEMENT WITH PARENTS' EMPLOYMENT STATUS, PERCEIVED SOCIAL STATUS, AND LIVING ENVIRONMENT AS REFLECTED IN FINDINGS OF THE 2017 NATIONAL ASSESSMENT OF BASIC COMPETENCIES (NABC)

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Abstract

The social class that the individual belongs to, determines his or her cognitions, emotions and behaviour (Manstead, 2018), that is why it is essential to examine its effect on academic achievement. The concept of social class is not reduced to material circumstances or salary in recent studies, but the access to social and cultural capital is also taken into consideration. The types of capital form the individual's self-concept and behaviour, thus the academic achievement (Pusztai, 2009). Besides the actual social status, the perceived status affects the ways of thinking and behaviour. In our study, we analyse the results of the National Assessment of Basic Competencies (NABC) in relation of social factors: regularity of parents' work, perceived standard of living in case of families and living environment. The results reveal the effect of types of schooling, but the social factors affect the achievement moderately.

Keywords: parental background ▪ socioeconomic status ▪ assessment of competencies ▪ academic achievement

INTRODUCTION

Previous psychological studies examined several aspects of social class membership and found it to be related to factors such as health, language use, aesthetic preferences, subjective well-being and cognitive performance (Kraus & Stephens, 2012). A common assumption underlying studies of the relationship between social class and behaviour is that social class should not be confined to income or financial situation, but access to social and cultural resources

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should also be taken into account, since the three types of capital simultaneously influence individuals' cognitive, affective and behavioural patterns (Manstead, 2018). The present analysis focuses on differences in Hungarian students' school achievement related to their perceived social status and their parents' employment status as reflected in findings of the National Assessment of Basic Competencies (NABC).

SOCIAL CLASS – PERCEIVED SOCIAL CLASS

The distribution and interrelations of economic, social and cultural capital within a society result in a stable internal structure, which is primarily related to economic capital (Pusztai, 2009). Objective factors such as education, income and employment not only indicate but also determine the context in which individuals live (e.g. what schools they attend, what jobs they do, or whom they share their living environment with). This context in turn has an impact on individuals' behaviour (Kraus & Stephens, 2012; Stephens et al., 2014; Manstead, 2018).

Subjective factors primarily include individuals' perception and appraisal of their social status. The concept of subjective social class is an important element of the social cognitive theory of social class proposed by Kraus and Stephens (2012), which refers to the position where individuals place themselves in the social hierarchy. Differences in the financial situation and living conditions of the working class and the middle class result in different self-concepts based on their subjective perception of their class compared to other classes, which is closely related to the behavioural differences stemming from differences in welfare, education and employment. If differentiating behaviours are clearly observable and consistently associated with individuals' financial situation, level of education and the prestige of their job, they become potential signals of individuals' social class membership (Manstead, 2018). Kraus and Stephens (2012) studied the impact of subjective social class on individuals' thinking, emotionality and social behaviour irrespective of their objective social class memberships. Lower classes' cognitive orientation is characterized by contextualism, that is, members of lower classes are oriented to features of the external environment, especially to constraining forces and threats, whereas the orientation of higher classes is characterized by solipsism, that is, members of these classes are oriented to their own internal states (e.g. emotions, personal objectives). This leads to several differences in self-concept, individual behaviour and interpersonal relationships, which the authors underpinned by the following findings of their meta-analysis:

- Coping with threat: members of lower classes – having to deal with increased uncertainty and threat – are more sensitive to potentially threatening events in their environment.
- Sense of personal control: members of lower classes have a weaker sense of personal control, that is, they are less likely to believe they can control their life as opposed to members of higher classes.
- Community-based versus personal self-concept: members of subjectively lower social classes have a self-concept that is largely based on their relationships with others, while members of higher classes prefer to define themselves by individual personality traits.
- Those categorizing themselves into lower social classes are more empathetic due to their sensitivity to contextual features.
- Members of lower classes are more likely to attribute actions to situational factors, while members of higher classes tend to make dispositional attributions.
- A subjectively lower social class membership entails interdependence with a focus on others, while members of higher classes are characterized by independence (Stephens et al., 2014).

The importance of subjective factors was already pointed out by Albert Bandura (1989), whose assumptions are in line with the social cognitive theory of social class. He suggests that human motivation, subjective well-being, and performance are based on beliefs rather than on reality. Individuals' beliefs about their own abilities determine their behaviour, that is, the way they feel and think about themselves and how they motivate themselves. Beliefs influence individual behaviour through four major processes (Bandura, 1993; Caprara & Bandura, 2008):

1. Cognitive processes: specificity of objectives, elaboration of anticipation scenarios, confidence in the improvement of abilities.
2. Motivational processes: causal attributions (perceived causes of success and failure), achievement expectations, conscious objectives.
3. Affective processes: intensity of distress, efficiency of coping with stressors and level of performance anxiety in threatening situations.
4. Selection processes: decision-making situations, selection of an environment and activity.

There has been little social psychological research on the impact of social class and financial situation on identity formation. Easterbrook and colleagues (2018) conducted two studies with a representative British sample, in which they found that individuals' socioeconomic status (SES) had as much importance in identity formation as gender or ethnicity. Furthermore, the objective indicators of SES largely predicted the impact on identity: participants with a higher SES assigned greater importance to their related identities (Manstead, 2018). Stephens and colleagues (2014) focus on the way social class influences individuals' self-

concept in various spaces and contexts of socialization such as the home, the school and the workplace, which may be considered as the gates to society. The authors suggest that social class mobilizes characteristic cultural selves entailing characteristic patterns of cognition, affect and behaviour, which result in different self-concepts.

ASPECTS OF THE RELATIONSHIP BETWEEN SOCIAL STATUS AND SCHOOL ACHIEVEMENT

An important aspect of any analysis of the relationship between social capital and school achievement is the support for social mobility provided by education (Pusztai, 2009). It has been established that the school performance gap between children with lower and higher status has not decreased; in fact, it has increased with the expansion of education (Van Laar & Sidanius, 2001), while schools should reduce the impact of social inequalities in an ethos of meritocracy. Education reproduces these inequalities by setting norms and values that are familiar and thus advantageous to middle-class children (Manstead, 2018). Van Laar and Sidanius (2001) derive differences in school achievement from an unequal group-based distribution of power and resources, which they explain by considerations based on the Social Dominance Theory.

Defense strategies employed to maintain positive self-esteem are often unsuccessful because students using such strategies often separate their positive self-image from school achievement, which is the primary factor underlying poor performance (Van Laar & Sidanius, 2001).

In addition to students' perceived social status, school achievement is also largely influenced by students' perceptions of the uncertainty of their parents' employment status. Children accurately perceive the uncertainty of their parents' situation (Barling et al., 1999). Awareness of the uncertainty increases children's arousal level, which in turn hinders cognitive performance (e.g. concentration, memory). Hindered cognitive performance considerably reduces school performance in the long term. This is mostly observable in cases when the father's employment status is uncertain, while the mother's uncertain situation only affects those children who strongly identify with their mother (Barling et al., 1999).

CURRENT INTERNATIONAL STUDIES OF THE RELATIONSHIP BETWEEN SOCIAL STATUS AND SCHOOL ACHIEVEMENT

Several international studies have been conducted in the field over the past years. Some of these studies analysed specific aspects of the relationship between

families' SES and school performance. Doren and Grodsky (2016) examined the moderating effect of mothers' cognitive and other abilities on the relationship between families' SES and school achievement. The data obtained from participants born in 1979 revealed that mothers' abilities largely influenced the relationship between income or welfare and enrolment in higher education in early adulthood. Hannover and colleagues (2013) analysed data obtained from immigrant German adolescents with respect to the relationship between their school and family-related self-concepts and school achievement. The results showed that adolescents whose school-related self-concept did not in any way involve Germany reached significantly poorer performance than those whose self-concept included a German identity in addition to, or dominating over, their ethnic identity, irrespective of their family-related self-concept. Adolescents' family-related ethnic self-concept did not have any effect on school achievement.

Some of the related studies employ multivariate statistics in order to analyse simultaneous effects of several set of factors on school on performance. Klapproth and Schaltz (2015) conducted a study with Luxembourgian secondary school students focusing on the effects of demographic factors and school track on school achievement. The results showed that boys, immigrants, those from schools of lower SES districts and those attending the lower school track were at higher risk of poor performance. Tsai and colleagues (2017) compared the results of the 2012 PISA study obtained in six countries including three East Asian countries (South Korea, Japan and Taiwan) and three Western countries (Germany, the Czech Republic and the USA). Using the MIMIC procedure, the authors analysed the data at two levels (differences within and between schools).

Merry (2013) examined the background of the moderate PISA results obtained in the USA. The author points out, among others, that the observed differences in school achievement between the USA and its northern neighbour, Canada are due to low performers' achievement, since no difference was found between high performers in the two countries.

School achievement is largely facilitated by cultural and social experiences gained outside school. Bennett and colleagues (2012) used an interview technique to reveal differences between children from families with different social status in their involvement in out of school activities. The authors explained the observed differences by structural and not by cultural factors.

Other studies similarly focused on the role of schools in the reproduction of inequalities. Jennings and colleagues (2015) analysed the impact of SES and ethnicity-based inequalities on American secondary students' test results and school attendance. The authors found that schools showed an even larger difference in students' school attendance, and the efficiency of education increased SES-based inequalities while reducing those related to ethnicity. Teachers play a key role in - school success by their attitudes and expectations towards students. Pit-ten Cate and Glock (2018) found differences between teachers' implicit and

explicit attitudes towards students with different levels of education. Teachers' responses to the Implicit Association Test revealed that they had a more positive attitude towards children of parents with a higher level of education, while their explicit attitudes did not show any difference either in learning and social behaviors, learning motivation and objectives, or educational opportunities, which suggests that students' family background and school achievement are closely related. Tobisch and Dresel (2017) asked German teachers to judge students with different ethnic and socioeconomic backgrounds in terms of teachers' achievement expectations and achievement goals and students' achievement-related personality traits. Teachers set accurate achievement expectations and goals for immigrant students, while they overestimated majority and high-status German students' abilities. Judgments of students' personality traits also showed differences according to ethnicity and SES.

Dorius (2013) analysed the trends in educational inequalities between 1870 and 2010. Inequalities across countries in terms of enrolment rates and the number of completed years followed a U-shaped curve, which suggests according to Dorius that cross-country differences are gradually disappearing, and secondary schools are also expected to follow a similar trend. The author drew two major conclusions. On one hand, the expansion of education had a revolutionary effect: enrolment rates and the number of completed years considerably increased over the past 100 years, and even underdeveloped regions such as North Africa or West Asia largely benefited from the expansion. On the other hand, the transition to mass education initially resulted in large differences across countries. The educational innovation initiated by Protestant European countries increased cross-country inequalities, which have only started to decrease recently.

Wiederkehr and colleagues (2015) studied the impact of subjective factors on school performance. They point out, among others, that school performance serves as a feedback on self-efficacy, as a result of which low-status students are easily trapped in a vicious circle.

HUNGARIAN STUDIES

Previous Hungarian studies have established that performance differences between identical grades of different schools occasionally reflect differences of several years in terms of intellectual development. This is in line with OECD data: educational outcomes of Hungarian schools show large variance (Csapó, Molnár & Kinyó, 2009). Findings of PISA studies suggest that performance differences across Hungarian students are largely due to differences in socioeconomic background; in fact, students' general social status is more important in this respect than individual students' family background. In other

words, differences between schools play a crucially important role in performance differences.

Tóth and colleagues conducted a longitudinal study encompassing 12 grades and found that performance differences across schools and grades emerged as early as at the time of enrolment and did not change until the third grade, which suggests that the selection of students is determined at the time of primary school selection. Differences increase over time, and selection has an even larger impact on performance at secondary school (Tóth, Csapó & Székely, 2010).

Anikó Fehérvári (2012) examined the relationship between the selectivity of various forms of secondary education and poor school achievement reflected in findings of competency assessments. She revealed that vocational school students' level of knowledge did not increase over time. Moreover, while students of grammar schools and secondary technical colleges showed improvement in reading literacy between 2008 and 2010, vocational school students' performance decreased, and school directors also reported an increasing knowledge gap.

There are large differences across different forms of secondary education as well as across different vocational and talent development training programmes (Bagdy, Kövi, & Mirnics, 2014; Bagdy, Mirnics, & Kövi, 2014). A society-level problem is high dropout rates along with drug-addiction problems (Grezsa és mtsai, 2015; Grezsa és Surányi, 2014), which suggests that schools are unable to adequately motivate and educate students so that they meet the requirements of higher grades (Csapó, 2015). On the other hand, positive atmosphere in school is a protective factor against problems such as substance abuse (Kövi et al., 2016).

Krisztián Széll (2015) analysed data obtained in the National Assessment of Basic Competencies (NABC) (partly in comparison to OECD PISA data and methodologies) with respect to the relationship between social disadvantage and school achievement at establishments of primary educational institutions. Roland Hegedűs (2016) explored regional differences revealed by the PISA study. He found that certain indicators of economic development (GDP, tertiary graduation rate, population structure) had an impact on students' school performance. School performance was largely determined by the financial background of education: where larger funds were allocated to education, students reached better performance. These variables showed an exponential relationship: increasing funding was not accompanied by increasing performance above a certain level. Varga and colleagues (2016) revealed that the competence assessments conducted between 2003 and 2013 showed better results than the amounts of funds allocated to education would have predicted. This observation refines the findings of international assessments, since the 495 points Hungary scored in the PISA study equals in terms of funding an average yearly amount of USD 5200 assuming an exponential relationship, whereas the average amount of funds allocated to education was USD 3137 in Hungary.

STUDY

A secondary analysis of data obtained in the 2017 National Assessment of Basic Competencies (NABC) was conducted to examine the relationship of students' mathematical and reading literacy with parents' employment status (TA 031 and TA 033), perceived social status (TA 40), and the social status of the living environment (TA 48). The analysis included data obtained from eighth and tenth-grade students.

– Does your mother have a permanent job? If you live with your foster mother, indicate whether she has a permanent job. Please mark the response alternative which best describes your mother's (foster mother's) employment status.
– Does your father have a permanent job? If you live with your foster father, indicate whether he has a permanent job. Please mark the response alternative which best describes your father's (foster father's) employment status.
– Compared to other families, what standard of living does your family have? Which of the below descriptions applies best to the families living in your neighbourhood?

The response alternatives were as follows:

Employment status (mother/foster mother/father/foster father):

- has a permanent job
- self-employed
- regularly employed but has no permanent job and is not self-employed
- employed on a casual basis
- on maternity leave
- pensioner
- unemployed
- temporarily/permanently disabled

Subjective or perceived financial status: What standard of living does the family have?

- it is very hard for us to make ends meet
- it is hard for us to live on what we have
- our standard of living matches the average
- our standard of living is better than the average
- our standard of living is very high

Perceived social status of other families in the environment:

- most of them are very poor
- most of them are poor
- most of them have an average standard of living
- most of them are well-off
- most of them are rich

The results are only summarized in the below figures due to the large size of the original data. The original data are available at the home page of the journal: PSYC_HU[2].

The mathematical statistical methodology underlying the results is discussed in detail in the thematic edition, see (T. Kárász, 2019b) in Hungarian and (T. Kárász, 2019a) in English.

EMPLOYMENT STATUS

Eighth-grade sample

One of the most important findings is that the students' achievement in mathematics is good (1600-1800 sector) if the mother and/or the father has regular work independently from the type of schooling. The results are the best in this and in the self-employed category. If the parents do not have regular work, the students' results are lower. It is interesting that the 6-grade girls' results are the lowest if their mothers are pensioners (it is the weakest in the whole sample), and their achievement is also lower in the category of disabled father. The 8-grade boys' achievement is the lowest if their mothers are unemployed. However, it must be highlighted that the achievement of the 6-grade and 8-grade secondary school students cannot be estimated accurately due to standard errors and confidence intervals (especially in case of 8-grade high school boys) if the mother or the father does not have regular work. It is probably caused by the relatively small case numbers.

The pattern of the reading results is similar to the pattern of mathematics results. If the parents have regular work or they are self-employed, the students' achievement is the higher. But the primary school students perform lower, the means differ with almost or more than half standard deviation. The tendency is worth mentioning: if the parents have regular work, the differences are due to the type of schooling, so the primary school students' results' are lower than the 6- and 8-grade high school students'. It also must be emphasised (like in mathematics) that because of the small case numbers in some categories, the confidence intervals are wider, and the estimation is less accurate. The lack of regular work seems to effect the achievement, the differences in these categories are bigger. The 6–grade boys' results are the lowest if their mothers are unemployed or disabled (NB the case numbers are low). These results are closer to the achievement of the primary school students. The 6-grade girls perform similarly if their mothers are pensioners.

[2] http://www.kre.hu/portal/index.php/kiadvanyok/folyoiratok/psychologia-hungarica-caroliensis.html

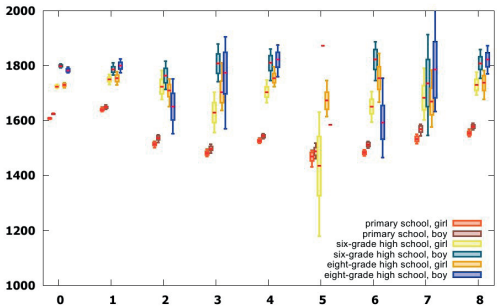

Figure No. 1: 8th graders Mathematics TA03101, Does your mother have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

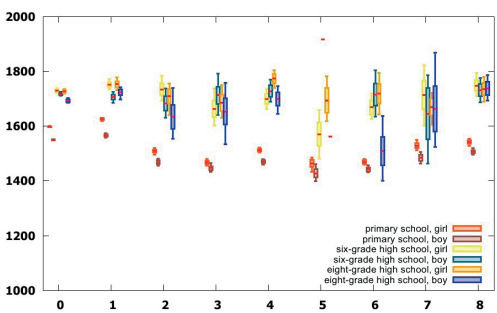

Figure No. 2: 8th graders Reading TA03101, Does your mother have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

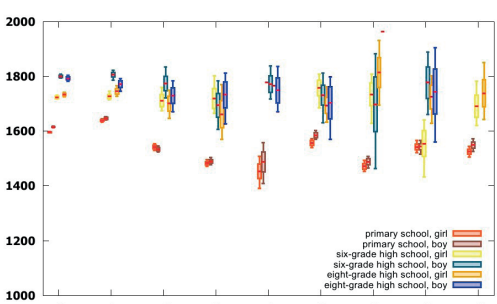

Figure No. 3: 8th graders Mathematics TA03301, Does your father have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

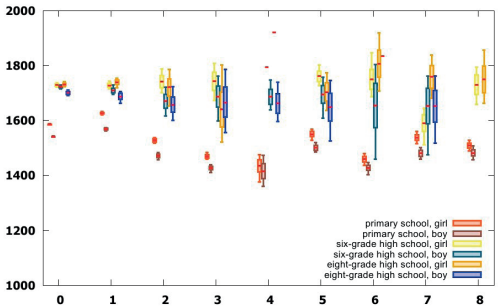

Figure No. 4: 8th graders Reading TA03101, Does your father have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

Tenth-grade sample

The achievements of the tenth graders show similar tendencies. Whether the parents have regular work or do not, the difference of the results can be observed according to the type of schooling. Technical college students perform the lowest while the 6- and 8-grade high school students have the highest results in both areas and in both sexes. The boys' and the girls' achievements are also similar from another aspect: if their parents have regular work or are self-employed, the standard error is small due to higher case numbers in these categories.

If the parents do not have regular work, the confidence-intervals of the results are wider. Like in the eighth graders' subsample, the standard errors of the results are the biggest in the categories of the 6- and 8-grade high school students. So it must be emphasised that the consequences should be drawn very carefully, especially in cases like pensioner mothers' 6-grade sons. If standard errors and the width of confidence-intervals are not taken into consideration, incorrect conclusions could be drawn, i.e. the result is the best if the mother is a pensioner.

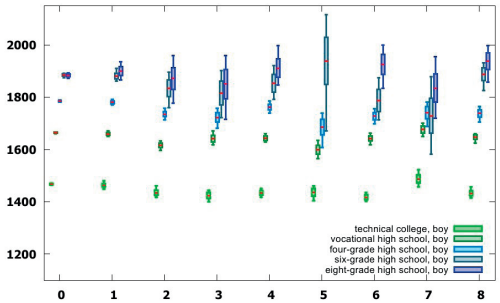

Figure No. 5: 10th grader boys Mathematics TA03101, Does your mother have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

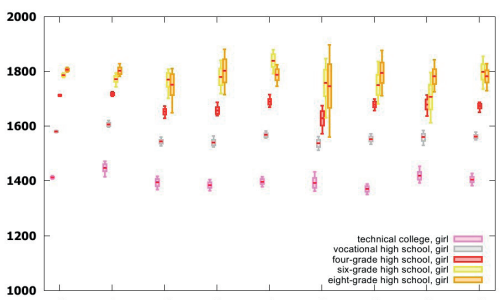

Figure No. 6: 10th grader girls Mathematics TA03101, Does your mother have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

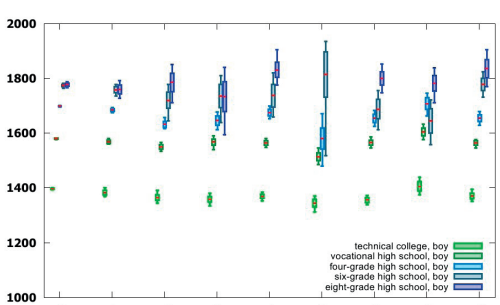

Figure No. 7: 10th grader boys Reading TA03101, Does your mother have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

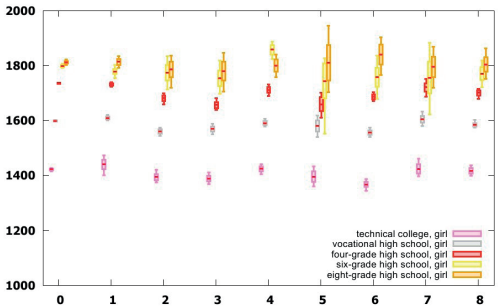

Figure No. 8: 10th grader girls Reading TA03101, Does your mother have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

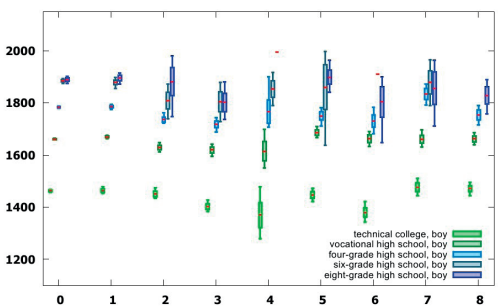

Figure No. 9: 10th grader boys Mathematics TA03301, Does your father have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

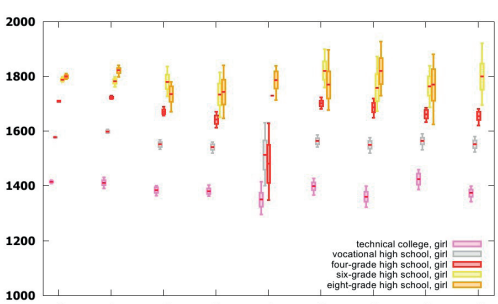

Figure No. 10: 10th grader girls Mathematics TA03301, Does your father have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

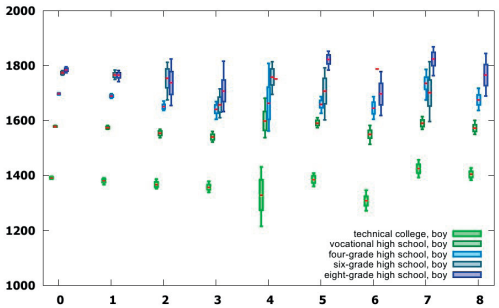

Figure No. 11: 10th grader boys Reading TA03301, Does your father have a permanent job?
Legend: 0 – has a permanent job; 1 – self-employed, 2 – regularly employed but has no permanent job and is not self-employed; 3 – employed on a casual basis, 4 – on maternity leave; 5 – pensioner; 6 – unemployed; 7 – temporarily/permanently disabled; 8 – other

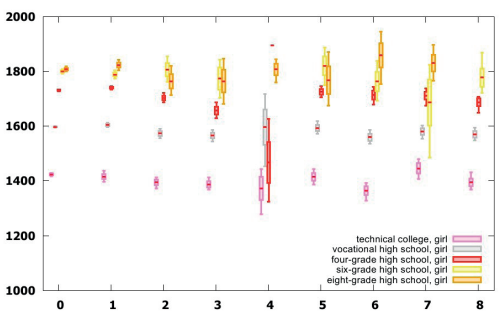

Figure No. 12: 10th grader girls Reading TA03301, Does your father have a permanent job?
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PERCEIVED SOCIAL STATUS

The analyses referred to the students' perception based on social comparison. They were asked to assess their families' wealth in comparison with other families.

Eight-graders' perceptions

The results reveal the difference according to the types of schooling: primary school students achieve a little lower, while the 6- and 8-grade students' results are higher in both areas and in both sexes. The standard errors are big in case of those students for whose families it is very hard or hard to make ends meet

among high school students, so there must be relatively fewer students among them who live in difficult material circumstances compared to other groups.

Slighter difference can be observed between the achievement of students whose families' standard of living matches the average and is above the average, than between the results of students whose families has average standard of living and for whose families it is hard or very hard to make ends meet. In the latter case the achievement is lower, but the conclusions must be drawn carefully because of the standard errors.

There are differences between the sexes: boys perform better in every category, particularly wealthy 6-grade high school boys, they were the best achievers, while primary school girls whose families live in very difficult material circumstances performed the lowest. Conversely, girls have better results in reading except for 6-grade high school boys, they performed very well.

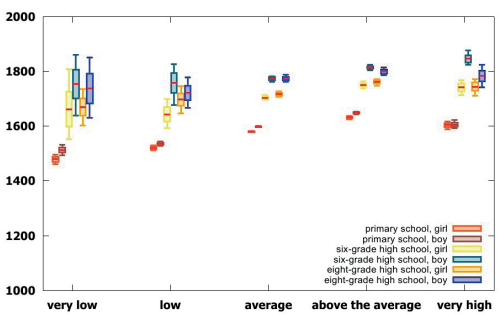

Figure No. 13: 8th graders Mathematics TA04001, Perceived financial status of the student's family

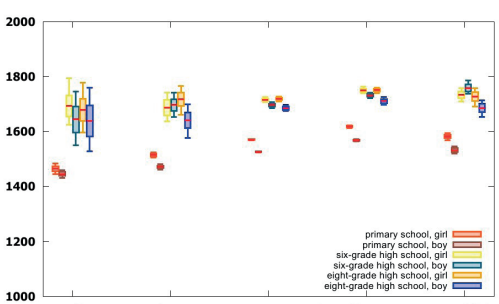

Figure No. 14: 8th graders Reading TA04001, Perceived financial status of the student's family

Tenth-grade sample

The most striking pattern is the difference in relation of the types of schooling in this subsample, so the technical college students achieve the lowest, while the

6- and 8-grade high school students perform the highest in both areas and in both sexes. The effect of perceived social status can be experienced in the respect of the bigger standard errors in case of students for whose families it is hard or very hard to make ends meet mostly in case of 6- and 8-grade students. Typically, much fewer students can be found in this category, so the extent of the standard error (by which their achievement can be estimated) exceeds.

Regarding the medians of the results in connection with the perceived social status, no difference of achievement can be observed, wealthy 8-grade high school girls' results are a little better among the girls.

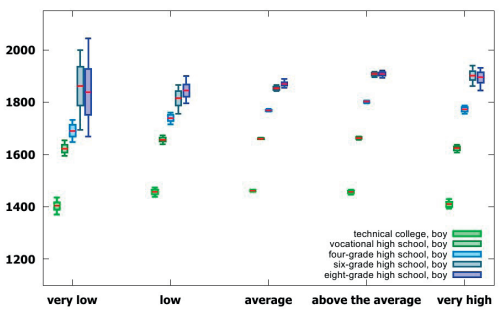

Figure No. 15: 10th grader boys Mathematics TA04001, Perceived financial status of the student's family

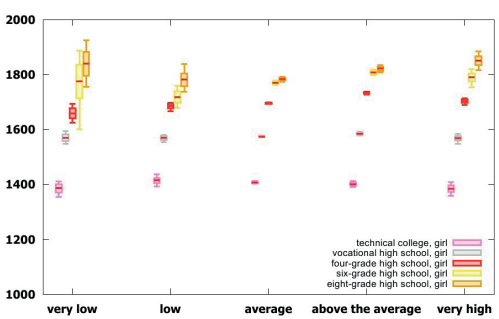

Figure No. 16: 10th grader girls Mathematics TA04001, Perceived financial status of the student's family

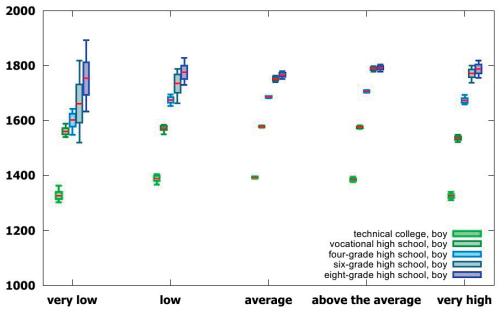

Figure No. 17: 10th grader boys Reading TA04001, Perceived financial status of the student's family

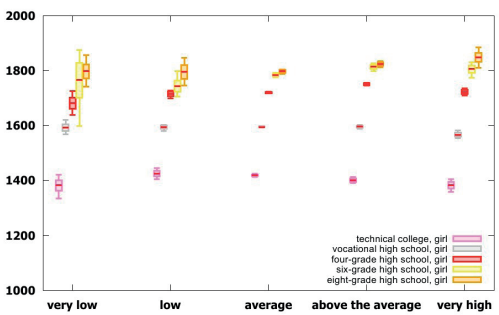

Figure No. 18: 10th grader girls Reading TA04001, Perceived financial status of the student's family

PERCEIVED LIVING ENVIRONMENT

Similarly to the previous question, it refers to the students' perceptions about their standard of living, this time regarding their environment.

Eighth-grade subsample

The analysis of the results also leads to the same pattern here: the differences of the achievements are due to the type of schooling, so the primary school students achieve lower than the 6- and 8-grade high school students in both areas and both sexes. The standard errors are also big in case of 6- and 8-grade high school students for whose families it is hard or very hard to make ends meet. The results of the very poor 8-grade school girls have particularly big standard errors. Therefore, it can be said that there are fewer among them who live in difficult material circumstances. The standard of living which is above the average does not really increase the achievement regarding the medians, but the results of the students for whose families it is hard or very hard to make ends meet is lower than the other groups'. The difference between the sexes also

can be observed here: boys perform better in mathematics, while girls have higher results in reading.

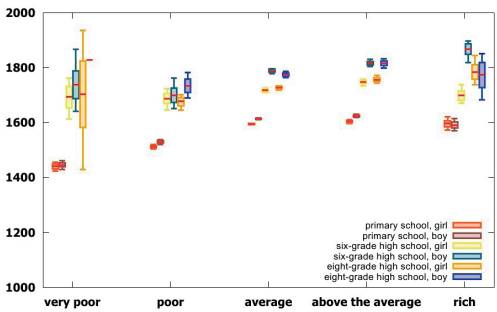

Figure No. 19: 8th graders Mathematics TA04801, Perceived social status of other families in the environment

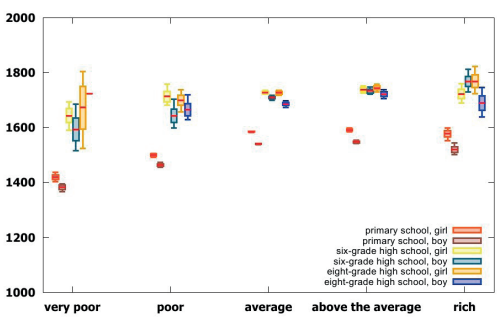

Figure No. 20: 8th graders Reading TA04801, Perceived social status of other families in the environment

Tenth-grade sample

The data of the tenth-graders show the same pattern as well. So the differences of the achievement can be seen in relation with the type of schooling. The effect of the living environment can be experienced moderately: the students for whose families it is very hard to make ends meet perform a little lower than the others, which is more apparent in reading results. The bigger standard errors are also due to fewer case numbers here: the results of students who live in very poor environment cannot be estimated accurately especially in the case of the 6- and 8-grade high school students, because the rate of students who belong to this social class is quite low in this type of schools.

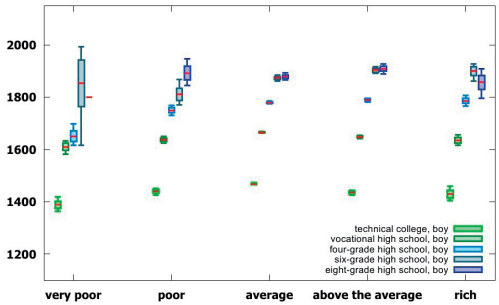

Figure No. 21: 10th grader boys Mathematics TA04801, Perceived social status of other families in the environment

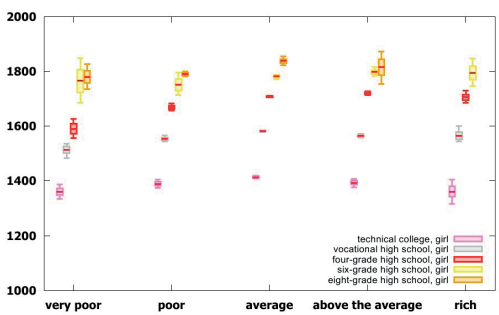

Figure No. 22: 10th grader girls Mathematics TA04801, Perceived social status of other families in the environment

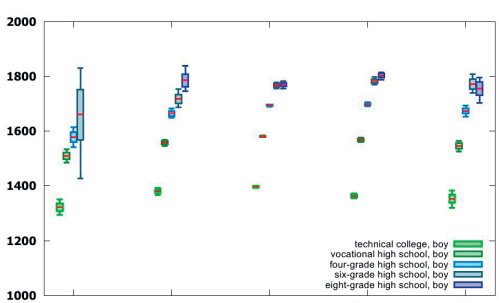

Figure No. 23: 10th grader boys Reading TA04801, Perceived social status of other families in the environment

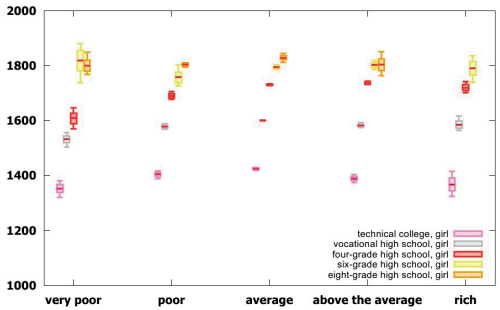

Figure No. 24: 10th grader girls Reading TA04801, Perceived social status of other families in the environment

SUMMARY AND CONCLUSIONS

The present study examined the relationship of data obtained in the competency assessment with three factors traditionally considered as social background factors: parents' employment status, financial status and the financial and social status of the living environment. Data on the latter two factors were based on students' perceptions, whose validity has been confirmed in the literature (e.g. Kraus & Stephens, 2012).

The most important finding of the analysis is that the largest differences in eighth and tenth-grade students' performance in both competencies are determined by the type of schooling. This finding may be explained by social background factors; Benő Csapó published several studies on the selectivity of education in Hungary (e.g. Csapó, 2015; Csapó, Molnár & Kinyó, 2009).

Besides the effect of the type of schooling mentioned above, the parents' regular work or its lack can lead to differences in achievement. If the parents have regular work, their children perform better, while the lack of regular work correlates with lower achievements. However, it must be highlighted that in case of 6- and 8-grade high school students the case numbers are very low in the non-regular work categories so the standard errors are big, that is why conclusions should be drawn with limitations.

Regarding the families' standard of living and the status of the living environment, similar trends can be observed. In the case of the eighth-graders the trend is more striking: the students for whose families it is hard to make end meet or live in a very poor living environment perform the lowest. It has to be noted, however, that findings on population segments where the number of observed cases is generally low (e.g. students of 6- and 8-grade high schools whose families have a low social status), should be interpreted carefully because of big standard errors, which limit the validity of the results.

In sum, the type of schooling has the main effect on the results, but the parents' regular work, the families' average standard of living, or above, and the average or better living environment can be protective factor in achievement problems. The big standard errors in the case of 6- and 8-grade high school students in categories of non-regular work and poor environment reveals the early selectivity of the Hungarian education system. The rate of students living in difficult material circumstances are low in high school especially in 6- and 8- grade schools.

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