

Pre-analysis plan for: Effects of desk mate gender on confidence, attitudes toward mixed gender teams, and prejudice - Evidence from a large scale field experiment in Hungarian schools*

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Abstract

We are conducting a large scale field experiment where we randomly assign desk mates in Hungarian schools. Our main outcome variables are confidence, prejudice, and preferences for mixed gender teams. In this plan we pre-register some key decisions to follow once we receive the data.

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1 Introduction

Can gender attitudes change by exposure to a desk mate of the opposite gender? There is a growing literature with convincing empirical strategies showing that peer exposure affects attitudes. Most of these studies are based on exposure of ethnic majority people to ethnic minorities (Boisjoly et al., 2006; Burns, Corno, and La Ferrara, 2016; Carrell, Hoekstra, and West, 2015; Finseraas and Kotsadam, 2017a). With respect to gender attitudes, much less is known. Finseraas et al., (2016) and Dahl, Kotsadam, and Rooth, (2018) find that men that are randomly assigned to live and work with women in the Norwegian military discriminate less and change their attitudes toward gender equality more broadly. The exposure in the military is unique in its intensity of exposure, selection of men and women, and in being a a very special setting. Knowing whether peer exposure across gender has effects in more general settings is important. In addition, there is psychological research suggesting that childhood is a critical developmental period for identity creation and self-perception (Leaper, 2015). Our experiment thus evaluates the effects of peer exposure on gender role expectations at an age where we may expect changes to occur.

We investigate the effects of being assigned to a desk mate of the opposite sex using a large scale field experiment where we randomly assign desk mates in Hungarian schools. By testing effects on confidence, prejudice, and preferences for mixed gender teams, we contribute to three large and important literatures.

Prejudice and gender attitudes are important for the advancement of women in society. Fortin, (2005) shows that gender role attitudes across 25 OECD countries are associated with female employment rates and the gender wage gap, and Fortin, (2015) links changes in gender attitudes to the leveling off of female labor force participation in the U.S. While exposure to female role-models, teachers, and politicians have been shown to be important for changing attitudes (see e.g. Beaman et al., (2009)), the question of peer influence has

received less attention. The conditions for contact to affect attitudes are generally believed to be contingent on quite special circumstances. Those in contact should have equal status in the particular context, share common goals, be in a cooperative context, and the contact should take place under some form of authority and have a high degree of friendship potential (Pettigrew, 1998; Pettigrew et al., 2011)). It is an open question how gender peer exposure plays out in more common and less streamlined conditions.

Differences in confidence are likely to translate into differences in outcomes, educational choices, and labor market segregation. Dahlbom et al., (2011) argue that gender differences in confidence may perpetuate segregated labor markets, by means of self-selection. An indirect effect of confidence differences may also be at work via competition decisions and performance. Niederle and Vesterlund, (2007) show that male overconfidence is a key factor in explaining gender differences in willingness to compete and in selection of compensation schemes, and they argue that this may help explain the underrepresentation of women in top-level company positions. Many authors link difference in confidence to women’s underrepresentation in science, technology, engineering, and mathematics (STEM) (Dasgupta and Stout, 2014; Leaper and Brown, 2008; Tenenbaum and Leaper, 2003) and confidence with respect to mathematics has been singled out as especially important (e.g. Smeding, (2012), see Leaper and Brown, (2018) for a recent review). While both men and women are overconfident, men are generally more so than women (Niederle and Vesterlund, 2007). Several studies have shown that people behave differently with respect to competition in same sex and mixed sex settings (Booth and Nolen, 2012; Gneezy and Rustichini, 2004) but whether exposure affects confidence is an important yet understudied question.

Attitudes toward mixed gender teams may explain the persistence of sex-segregation in the labor market (Dahl et al. 2018). Employers may not hire members of the opposite sex in gender typed fields because they believe that doing so will affect the majority group in lowering their morale and thereby the group cohesiveness and the productivity of the team.

A self-perpetuating equilibrium may arise and reproduce itself simply by the degree of non-exposure to start with. By testing whether boys and girls assigned to the opposite sex as desk mate we can test whether such exposure affects attitudes toward mixed sex teams.

2 The field experiment and sample

We execute a large-scale randomized field experiment in 195 classrooms of 41 Hungarian primary schools (after exclusions) containing 3814 students. The intervention consists of randomizing the seating chart within each classroom at the beginning of the fall semester, 2017, and encouraging adherence until the end of the semester in January 2018. Endline outcomes data are collected and will become available to the research team in May 2018.

In the spring of 2017, we contacted all primary schools in 7 contiguous counties of central Hungary via the heads of the local school districts to elicit information about room layouts and seating practices. By the end of the summer vacation, we obtained initial participation agreements with 55 schools in which most 3rd-8th grade classrooms were anticipated to meet a set of inclusion criteria. These criteria were: 1) Principals and teachers would implement our randomized seating chart in three subjects: Hungarian literature, Hungarian grammar, and mathematics. 2) All students in a classroom would receive instruction in these subjects together (e.g., no ability grouping). 3) Classroom layout would comprise free-standing desks that seat two students.

The intervention assigned students to free-standing two-person desks via unconstrained random partitioning within each classroom. We based the randomization on the class rosters from the spring semester. Shortly before the start of the fall semester, we submitted the randomized seating charts to teachers and teachers were instructed to use the charts for the duration of the fall semester until January 2018. To account for changes to class rosters during the summer via exits and entries, we instructed teachers to fill seats vacated by exiting students with entering students from left to right, front to back, in alphabetic order

of entering students' surnames. Since, (i) in expectation, students enter and exit classrooms for the same reason (repeating grades and residential moves); and (ii) student surnames are reasonably orthogonal to student grades, this replacement rule preserves randomization.

While teachers were expressly permitted to reseat students if they have to, we asked to preserve the desk-mate composition wherever possible. We measured compliance through teacher reports of the actual seating chart for September 15, 2017. The field team again recorded the actual seating chart during school visits between October and December 2017 and verified classroom layouts through classroom photographs.

Schools and classrooms that do not meet our conditions are dropped from the study. To date, we have dropped 120 classrooms for the following reasons: Withdrawal from the study (25); Less than 10 students at baseline (8); split classrooms (10); Not free-standing desks that seat two students (30); Unreliable baseline reporting (7); Did not implement the seating chart (40). Based on these school- and classroom-level exclusions, we anticipate an analysis sample of 3,814 students across 195 classrooms of 41 schools.

Decision rules for dropping future observations: We will exclude students who are randomly assigned to sit alone at a desk at baseline and who have missing values on our outcomes.

Decision rules for dropping variables: If 95 percent or more of the sample answers the same value on a variable we define this as limited variation. We will drop variables with limited variation from the analysis.

Missing values: If we have missing values on variables we will code the variables as zero and include dummy variables controlling for missing status so that we do not lose observations. If more than 30 percent of the respondents do not answer a particular question, it will no longer be seen as a main outcome variable.

3 Data and coding of main variables

We collect baseline variables via teacher reports. Outcome variables are collected via a student survey at endline. In particular, we field a 45-minute two-part in-class survey (see appendix). The first part (20 minutes) consists of a student questionnaire that elicits self-reported grades for the spring and fall semester 2017, academic self-concept, and several attitudinal measures. The second part of the endline survey consists of a reading comprehension test that is not used in this paper. Since the endline questionnaire contains a survey experiment with two vignettes, we randomly sort questionnaires, using a random number generator. Data collection will conclude in April of 2018. The research team will receive outcomes data in May, 2018.

Treatment variable: We define our *Treatment* as equal to 1 if a person is randomly assigned a desk mate that is of the other sex and zero otherwise.

Control variables: We only include control variables that are collected at baseline or stable over time. The variables we include are age (in 0.1 years), ethnicity (Roma Hungarian vs non-Roma Hungarian), and spring 2017 grades in five core subjects (Hungarian literature, Hungarian grammar, mathematics, diligence, and behavior). These variables are obtained from the classroom teacher. For 13 classrooms we do not have data from the teachers on whether the kids are Roma or not. As for the other control variables with missing values, we will code the variable as zero in these cases and include a dummy variable controlling for missing status.

Primary and secondary outcome variables: We have 3 different primary outcome variables: *Mixed gender teams*, *Confidence* and *Prejudice*.

Prejudice: We base our measure of prejudice on the misperception of the abilities of the other sex with respect to mathematics. We elicit their beliefs about the abilities of the other sex in Question 10 of the survey, which reads: "Now think about how good the boys and

how good the girls are at Hungarian language, literature, and mathematics. In your opinion when it comes to Hungarian language, to literature and to mathematics, are the boys better, or are the girls better, or are they equally good?" They can answer "THE BOYS are much better than the girls", "THE BOYS are somewhat better than the girls", "The boys and the girls are EQUALLY good", "THE GIRLS are somewhat better than the boys", or "THE GIRLS are much better than the boys". While there are three separate questions for each of the subjects, we will take their answers on mathematics as our main subject of interest and create three indicator variables: "Boys perceived as better", "Girls perceived as better" or "Perceived as equally good".

To measure actual abilities by gender we use the baseline math grades. If the class average of one sex is statistically significantly higher (in a t-test) than the class average of the other sex we will say that this sex is better. *Prejudice* is then defined as 1 if the other sex is believed to be inferior than what it actually is and zero otherwise. As a secondary outcome we will also investigate the beliefs about the abilities directly, without accounting for the actual abilities within the class.

Mixed teams: We measure preferences for gender mixed teams based on Question 12, which reads: "Now think of an assignment that a group of children must solve together. What do you think, which group would be able to do this assignment better?" The answer categories are:

a) A group only of boys b) A group only of girls c) A group with both boys and girls in it d) I don't know

We create the variable *Mixed teams* and code it as one if the students answer "A group with both boys and girls in it" and zero otherwise.

Confidence: We create our confidence measure based first on the answer to Question 8, which reads: "Compared to your classmates how good are you at language/literature/mathematics?" The answer categories are: Among the worst, average, among the best, I don't know. Again,

the questions are posed for the different subjects separately and we will focus primarily on mathematics.

We create three different variables:

1) *Overconfidence*, which equals 1 if the students answer "Among the best" and is below the 75th percentile of the baseline class grade distribution or if the student answers "Average" and is below the 25th percentile of the baseline class grade distribution. It equals zero otherwise. This variable will be a secondary variable.

2) *Underconfidence*, which equals 1 if the students answer "Average" and is above the 75th percentile of the baseline class grade distribution or if the student answers "Among the worst" and is above the 25th percentile of the baseline class grade distribution. It equals zero otherwise. This variable will be a secondary variable.

3) *Confidence*: Using the two measures above we create our main variable. It is equal to zero if the students self assessment aligns with their position in the baseline class grade distribution, -1 if underconfidence is equal to one or 1 if overconfidence is equal to one.

Other secondary variables will also be analyzed. The variables *Boy cleverest* and *Girl cleverest* will be dummy coded based on the answer to Question 11, which reads: "Now think of the classmate of yours whom you consider to be the cleverest. Is this classmate a boy or a girl?" The answer categories are: "Boy", "Girl", or "I can't say who is the cleverest". The variables will be equal to one if they answer boy or girl respectively and zero otherwise (I can't say is included in the zero).

We will analyze *Cross-sex friendship* with the answer to questions 5b and 5c, which read: "b) Among your best friends, how many are boys?" and "c) Among your best friends, how many are girls?". The variable is coded as one if the respondent has at least one person of the other sex as a close friend. We will also create the variable *Share of other sex as friends* to be equal to the share of the other sex in the total number of b+c. Another interesting variable is if the students disliked sitting next to the person. It will also be interesting to

investigate whether the students are affected so that they like the subject or not.

We will do secondary analysis of *Prejudice* and *Confidence* using Hungarian language and literature. Niederle and Vesterlund, (2007) point out that differences in overconfidence are task dependent and gender differences have generally been found in masculine tasks. Lundeberg, Fox, and Punócohaí, (1994) find men to be more confident than women regarding exam questions related to math, but not regarding exam questions related to learning, memory, or experimental design. Beyer and Bowden, (1997) show that gender differences in the accuracy of self-perceptions are significant for masculine tasks (where men are generally overconfident and women underconfident), while no differences were found for feminine or neutral tasks. Mathematics is a typical example of a masculine-typed task (e.g., Beyer and Bowden, (1997)), that is not supported by actual differences in results at lower levels or at young ages (Dahlbom et al., 2010; Niederle and Vesterlund, 2007).

Heterogeneity with respect to the ability, confidence, and attitudes of the person as well as the desk mate will be explored. Here there are many different possible specifications. For example, whether the desk mate is better than average or better than you is likely to matter

There are possibly important differences in the effects with respect to the age of the students. One line of research suggests that the years just before the teenage years are especially important as kids have then attained multiple classification skills which may lead to attitudinal flexibility (see Leaper, (2015) for an overview of theories in the literature on developmental psychology of gender). The gender composition of friendship is also changing during this period in life (Poulin and Pedersen, 2007). We will explore whether there are differences in effects across cohorts in our data.

At the contextual level we will test if the share of the other sex in the class matters.

4 Empirical strategy and main hypotheses

We will test our main variables of interest using different specifications and different samples. We have three main hypotheses:

1) Being assigned a girl as desk mate lower the prejudice of boys. To test this hypothesis we restrict the sample to boys only and estimate the following regression:

$$(1) \textit{Prejudice}_{ict2} = \beta \textit{Treated}_{ict1} + \alpha \textit{Class}_{ct1} + \gamma X_{ict1} + \epsilon_{ict2},$$

where i indexes individuals, c classes, and t is time (either baseline 1 or follow up 2). $\textit{Treated}_{ict1}$ is a dummy equal to 1 if this boy is assigned a girl desk mate, X_{ict1} is a set of individual level control variables either measured at baseline or reflecting stable characteristics (described in section 3), and the error term, ϵ_{ict2} . We will present results with and without the baseline controls but the main specification is without controls. We use robust standard errors in all estimations. The standard errors do not need to be clustered at any level as the randomization is at the individual level (see Abadie et al., (2017)). The class fixed effects are included as the randomization was conducted within classes.

The vector of individual level control variables is included in some regressions as this may increase power. To make the models fully saturated, we partition the covariate space and add these control variables as indicator variables rather than using their multi-valued codings and we also interact the control variables with treatment (Athey and Imbens, 2017). We create an indicator for missing values in the controls and include the missing indicator in the regressions in order not to lose observations.

2) Boys become more positive toward same sex teams if they are assigned girls as desk mates. To test this hypothesis we restrict the sample to boys only and estimate the following regression:

$$(2) \textit{Mixed teams}_{ict2} = \beta \textit{Treated}_{ict1} + \alpha \textit{Class}_{ct1} + \gamma X_{ict1} + \epsilon_{ict2}$$

3) Girls' confidence is affected if they are assigned boys as desk mates. To test this

hypothesis we restrict the sample to girls only and estimate the following regression:

$$(3) \text{ Confidence}_{ict2} = \beta \text{ Treated}_{ict1} + \alpha \text{ Class}_{ct1} + \gamma X_{ict1} + \epsilon_{ict2},$$

Secondary analysis will be conducted with the variables described in section 3 and we will also explore the effects on the other sex. To explore heterogeneity we will also interact the treatment variable with the baseline grades. We will also test whether the effect is different in classes with a female teacher and with a relatively high or low share of females in the class. The standard errors will then be clustered at the classroom level.

We will also use machine learning techniques to automate the search for heterogeneous treatment effects. There are many different types of machine learning algorithms and we have decided to use classification and regression trees (R package *causalTree*, (Athey and Imbens, 2016)); and random forests (R package *grf*, (Wager and Athey, 2017)). As this field is moving rapidly, however, it is possible that there will be other techniques that are relevant for us once we start analyzing the data.

Balance tests: To test for balance we will regress our main treatment variable on the control variables described above both individually and together, while controlling for class fixed effects. This will be done for different samples used to test the hypotheses. We will judge whether the randomization worked by conducting an F-test of whether the control variables jointly predict treatment status.

5 Power calculation

In testing our different hypotheses we are restricting the sample to one gender. The power calculation therefore uses half the sample as a basis. We also adjust the p-values for the fact that we are testing multiple hypotheses. We have already anticipated the adjustment and therefore we have restricted the number of main hypotheses to only three. To account for having three different hypotheses we follow the recommendations of Fink, McConnell, and Vollmer, (2014) and use a method developed by Benjamini and Hochberg, (1995) and

Benjamini and Yekutieli, (2001) to minimize the false non-discovery rate (see also Almeida, (2012) and Finseraas and Kotsadam, (2017b) for pre-analysis plans with the same decision rules for correction of p-values). The main advantage of the method is that it is limiting the risk of false discoveries while only adjusting the critical values based on other true hypotheses. The false discovery rate method developed by Benjamini and Hochberg (1995) implies that the m p-values of the i hypotheses are ordered from low to high and that the critical value of the p-value is then $p(i) = \alpha \cdot i/m$. In our case, with 3 hypotheses and a significance level (α) of 0.05, the critical p-value would be 0.017 for the one with the lowest p-value ($0.05 \cdot 1/3$, which is the same as a Bonferroni correction). For the second and third hypotheses, the critical p-values would be 0.033 ($0.05 \cdot 2/3$) and 0.05 ($0.05 \cdot 3/3$).

Conservatively, we expect to have a sample of at least 1500 boys or girls in our samples. We calculate power using the program optimal design and if we use the most conservative p-value of 0.017 we have a minimum detectable effect (MDE) of 0.17. We therefore think that our study is well powered to detect relatively small effects.

6 IRB approval and consent

This study was reviewed and approved by the IRB offices at the Hungarian Academy of Science (data collection and analysis); and at the University of Wisconsin-Madison (data analysis). We obtained consent at multiple points. First, we asked school administrators and teachers to consent to participate in the study. Second, we had the teachers ask the parents to consent to data collection about their children.

7 Archive

The pre-analysis plan is archived before any endline data is received. We archive it at the registry for randomized controlled trials in economics held by The American Economic Association: <https://www.socialscienceregistry.org/> on March 22 2018. We will receive the endline data in May 2018.

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Write your name! Do not use your nickname!

Family Name	Christian/Given Name(s) (write all your given Names)

Which Grade/Class are you in? (e.g: 3/a)

	/	
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When were you born?

Year:

--	--	--	--

 Month:

--	--

 Day:

--	--

3rd Year

MTA Social Sciences Research

„Lendület” RECENS Research Group
„Lendület” RECENS Kutatócsoport

DESK PARTNER RESEARCH

2018. 

YOUR TEACHER will complete these tables.

School's name or official stamp

.....

Student ID Number (see separate sheet)

--	--	--	--	--	--

Test date

Month:

--	--

 Day:

--	--

Test Start Time

Hour:

--	--

 Min.:

--	--

Test End Time

Hour:

--	--

 Min.:

--	--

Comprehension

A

The research is supported by the National Research, Development, and Innovation Office in the framework of the Youth Research (FK) 125358 competition.



General Information about the Exercises

Please read the following information carefully, and then start answering the questions in the notebook!

The test notebook consists of two parts.

In Part 1, we ask questions about you, or rather we are interested in your opinions. Here it is important for us that we get to know what you think.

In the test notebook's second part you will find comprehension exercises. Please read the assignments carefully, and answer the questions to the best of your knowledge!

Start doing the exercises from the beginning of the notebook! (i.e. start at the beginning?)

Always indicate your answer to the question by shading the corresponding circle. As shown in the image below.



Please make sure that you **only mark one answer for each question!**

If you have already marked an answer, but then change your mind, clearly cross out the first mark or put an X over it, and then shade in the answer you think is correct in the way shown below!



Good luck (with the work)!





Part 1

STUDENT

QUESTIONNAIRE





1. What grades did you receive at the END OF LAST SEMESTER in the following? Think of the report card you received this January.

Mark the appropriate number in each row! Only shade in one circle!

	1	2	3	4	5	I don't remember
a) Behaviour	☐	☐	☐	☐	☐	☐
b) Diligence	☐	☐	☐	☐	☐	☐
c) Hungarian Language	☐	☐	☐	☐	☐	☐
d) Literature	☐	☐	☐	☐	☐	☐
e) Mathematics	☐	☐	☐	☐	☐	☐

2. What grades did you get at the END OF LAST SCHOOL YEAR in the following? Think of the report card you received last summer in June.

Mark the appropriate number in each row! Only shade in one circle!

	1	2	3	4	5	I don't remember
a) Behaviour	☐	☐	☐	☐	☐	☐
b) Diligence	☐	☐	☐	☐	☐	☐
c) Hungarian Language	☐	☐	☐	☐	☐	☐
d) Literature	☐	☐	☐	☐	☐	☐
e) Mathematics	☐	☐	☐	☐	☐	☐

3. How much do you like the following subjects?

Mark the appropriate number in each row! Only shade in one circle!

	Really Don't like	Don't Like	Neutral	Like	Really Like	Don't know
a) Hungarian Language	☐	☐	☐	☐	☐	☐
b) Literature	☐	☐	☐	☐	☐	☐
c) Mathematics	☐	☐	☐	☐	☐	☐



4 Szövegértés–3.évfolyam



4. Please think of your best friends in your class. In the table below, write down who your 5 best friends are in the class

If you have fewer than 5 friends in your class, then write fewer names in the table. Be sure to write your friends' full names into the table, in other words both their family names and their Christian/given names. Do not use your friends' nicknames! Ask for your teacher's help if you don't know your friends' family names!

	Family Name	Christian/given name (write in all Christian/given names, do not use nicknames!)
1.		
2.		
3.		
4.		
5.		

5. Now in general think of your best friends, not just in the class but EVERYWHERE.

Write in the appropriate number in each row of the table!

	Please write in the appropriate number to the question!
a) In total how many best friends do you have?	
b) Among your best friends, how many are boys?	
c) Among your best friends, how many are girls?	
d) Among your best friends, how many are roma (gypsy)?	

6. Now think of that desk partner who you sat next to in December in Hungarian class. Write down the full name of this desk partner!

If you did not have a desk partner in December in Hungarian class, please shade in this circle, and do not fill in the table!

☐ 1

Family Name	Christian/Given Name (Write in all given names, do not use nicknames!)

7. How much did you like sitting next to your desk partner?

Mark the corresponding number! Only shade in one circle!

Really Did not like Did not like Neutral Liked Really liked Don't know Did not have
A desk partner in December

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7

8. Think of Hungarian language, literature and mathematics . The following questions relate to how good you think you are in these subjects.

In each row mark the number you consider to be true! Only shade in one circle in each row!

Let's start with HUNGARIAN LANGUAGE!

In your opinion how good are you at Hungarian language?

I am very bad at Hungarian	I am average at Hungarian	I am very good at Hungarian	I don't know
☐ 1	☐ 2	☐ 3	☐ 4
☐ 5	☐ 6	☐ 7	☐ 8

Compared to your classmates how good are you at Hungarian language?

In the class I am among the worst at Hungarian	In the class I am average at Hungarian	In the class I am among the best at Hungarian	I don't know
☐ 1	☐ 2	☐ 3	☐ 4
☐ 5	☐ 6	☐ 7	☐ 8

Compared to your other subjects how good are you at Hungarian language?

I am much worse at Hungarian than at other subjects	I am as good at Hungarian as at the other subjects	I am much better at Hungarian than at other subjects	I don't know
☐ 1	☐ 2	☐ 3	☐ 4
☐ 5	☐ 6	☐ 7	☐ 8

Now think of LITERATURE!

In your opinion how good are you at literature?

I am very bad at literature	I am average at literature	I am Very good at literature	I don't know
☐ 1	☐ 2	☐ 3	☐ 4
☐ 5	☐ 6	☐ 7	☐ 8

Compared to your classmates how good are you at literature?

In the class I am among the worst at literature	In the class I am average at literature	In the class I am among the best at literature	I don't know
☐ 1	☐ 2	☐ 3	☐ 4
☐ 5	☐ 6	☐ 7	☐ 8

Compared to your other subjects how good are you at literature?

I am much worse at literature than at other subjects	I am as good at literature as at other subjects	I am much better at literature than at Other subjects	I don't know
☐ 1	☐ 2	☐ 3	☐ 4
☐ 5	☐ 6	☐ 7	☐ 8

Finally, think of MATHEMATICS!

In your opinion how good are you at mathematics?

**I am
very bad at
mathematics**

**I am
average at
mathematics**

**I am
very good at
mathematics**

**I don't
know**

☐₁ ----- ☐₂ ----- ☐₃ ----- ☐₄ ----- ☐₅ ----- ☐₆ ----- ☐₇ ☐₈

Compared to your classmates how good are you at mathematics?

**In the class I am
among the worst at
mathematics**

**In the class I am
average at
mathematics**

**In the class I am
among the best
at mathematics**

**I don't
know**

☐₁ ----- ☐₂ ----- ☐₃ ----- ☐₄ ----- ☐₅ ----- ☐₆ ----- ☐₇ ☐₈

Compared to your other subjects how good are you at mathematics?

**I am much worse at
mathematics than at
other subjects**

**I am as good at
mathematics as I am at
the other subjects**

**I am much better at
Mathematics than at
Other subjects**

**I don't
know**

☐₁ ----- ☐₂ ----- ☐₃ ----- ☐₄ ----- ☐₅ ----- ☐₆ ----- ☐₇ ☐₈

- 9. Imagine that you are going to the zoo with some of your classmates. Your desk partner (who you sat next to in Hungarian class in December) has forgotten to bring money for the entrance ticket. You have enough money for two entrance tickets. Would you lend your desk partner the money for the entrance ticket?**

Shade just one circle in!

- a) Yes ☐₁
- b) No ☐₂
- c) I don't know ☐₃
- d) I didn't have a desk partner in Hungarian class December ☐₄

Now imagine that it is not your desk partner, but a different class mate who has forgotten to bring money with him/her. This classmate is a Roma/Gypsy [This sentence is missing in Version B]. Would you lend this Roma/Gypsy [Roma/Gypsy omitted from Version B] classmate the money for the entrance ticket? [i.e. Version B makes no mention of Roma/Gypsy otherwise it is the same]

Shade just one circle in!

- a) Yes ☐₁
- b) No ☐₂
- c) I don't know ☐₃

10. Now think about how good the boys and how good the girls are at Hungarian language, literature, and mathematics. In your opinion when it comes to Hungarian language, to literature and to mathematics, are the boys better, or are the girls better, or are they equally good?

In each row mark the corresponding number that you consider to be true!

	THE BOYS are much better than the girls	THE BOYS are somewhat better than the girls	The boys and the girls are EQUALLY good	THE GIRLS are somewhat better than the boys	THE GIRLS are much better than the boys
a) Hungarian -----	☐ ₁ -----	☐ ₂ -----	☐ ₃ -----	☐ ₄ -----	☐ ₅
b) Literature -----	☐ ₁ -----	☐ ₂ -----	☐ ₃ -----	☐ ₄ -----	☐ ₅
c) Mathematics -----	☐ ₁ -----	☐ ₂ -----	☐ ₃ -----	☐ ₄ -----	☐ ₅

11. Now think of the classmate of yours whom you consider to be the cleverest. Is this classmate a boy or a girl?

Shade just **one** circle in!

- a) Boy ----- ☐₁
- b) Girl ----- ☐₂
- c) I can't say who is the cleverest ----- ☐₃

12. Now think of an assignment that a group of children must solve/do together. What do you think, which group would be able to do this assignment better?

Shade just **one** circle in!

- a) A group only of boys ----- ☐₁
- b) A group only of girls ----- ☐₂
- c) A group with both boys and girls in it - - ☐₃
- d) I don't know ----- ☐₄

The following questions (13 & 14) are administered in Grades 6-8 only

Q13 for 6th and 7th grade [not translated yet]

[Q13 in 8th grade]

13. Please indicate whether or not you applied to grammar school in February 2018! If you applied to several high schools were any of these grammar schools?

Only shade one answer!

- a) Yes ----- ☐₁
- b) No ----- ☐₂
- c) I don't remember ----- ☐₃



[Q14 in 6th-8th grade]

14. Regardless of whether you did or did not apply to grammar school, do you think you would/will be accepted?

*0 means that they would definitely not accept you. 10 means that they would definitely accept you. You can also use numbers between 0 and 10 where the larger the number you circle the more certain you are that they will/would accept you. Only shade **one** answer!*

**Definitely will not
Accept me**

0 1 2 3 4 5 6 7 8 9 10

**Definitely
Will
accept me**

Please continue on to the comprehension exercises!

8 Szövegértés–3.évfolya



