

## Chapter # 17

### THE RELATIONSHIP BETWEEN PARENTS' EDUCATION AND STUDENTS' SELF-ASSESSMENT OF THEIR OWN STUDY PREREQUISITES AND ASPIRATIONS

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#### ABSTRACT

In this chapter, we explore the importance of self-assessment for students in achieving success in their studies. Self-assessment involves evaluating one's own learning processes and outcomes. However, we focus on secondary school students' self-assessment of their study predispositions, aspirations, and motivation for success. This includes their knowledge, competencies, abilities, talents, and educational goals. Academic success encompasses various factors such as learning objectives, skills acquisition, satisfaction, persistence, and post-college performance. The study investigates the influence of parents' education on their children's careers. The authors examined the self-assessment of educational prerequisites and aspirations of 900 secondary school students aged 15-18 years. The results show that more than half of the respondents believe they have the necessary technical study prerequisites. However, self-assessment of study predispositions is not related to gender or field of study. The study also found that students' aspirations to succeed are related to their mother's education, not their fathers'. Overall, self-assessment is a crucial tool for students to achieve success in their studies. By evaluating their study predispositions and aspirations, students can set educational goals for themselves and work towards achieving them. The study also highlights the importance of parental education in influencing their children's educational aspirations.

*Keywords:* self-assessment, prerequisites and aspirations for the study, academic success, parents' education.

#### 1. INTRODUCTION

Student self-assessment is an essential prerequisite and tool for successful learning. It is also its purpose and should be purposefully cultivated during schooling. Student self-assessment is the subject of interest of pedagogues, psychologists and sociologists studying its use in education and its role in the overall development of the personality, processes of socialisation and the fulfilment of the fundamental life roles of an individual, especially as a participant in the labour market. It can take several forms and relate to (educational) processes and their products. It is usually consistent with the evaluation of external evaluators. The influence of family and school shapes self-assessment, and it can also focus on the individual's prerequisites for studying the chosen field and identifying their aspirations to succeed. This paper examines these two outcomes of self-assessment in their uniqueness and, at the same time, concerning the achieved level of education of the student's parents, assuming that this level can influence both outcomes. The results of empirical research can be helpful in the theoretical completion and updating of the concepts of study prerequisites and study aspirations, as well as for educational practice, which is forming them purposefully and unintentionally.

## 2. SELF-ASSESSMENT OF STUDY PREREQUISITES AND ASPIRATIONS

The issue of student self-assessment is a subject of research interest for several reasons, mainly didactic, psychological, and sociological. From a didactic point of view, it is shown to positively affect learning outcomes since it functions as a feedback tool within the formative assessment. Through self-assessment, students collect information, identify, assess, and reflect on their own works based on explicit criteria and standards (Karaman, 2021). Dividing self-assessment into several types seems useful for educational practice. The first allows students to compare their performance with desired goals and revise it accordingly. Another self-assessment type requires students to assess their performance on a test by marking, grading, or ranking. Thirdly, self-assessment with rubrics, scripts, or checklists is also common for students to assess their work. (Karaman, 2021; Andrade, 2010; Hattie & Timperley, 2007; Brown & Harris, 2013). Andrade (2019) states, based on several pieces of research, that when the act of self-assessing is given a learning-oriented purpose, students' self-assessments are relatively consistent with those of external evaluators, including professors, teachers, researchers, and expert medical assessors. Andrade (2019, p. 10) aptly emphasises the importance of self-assessment: "Self-assessment is the act of monitoring one's processes and products to make adjustments that deepen learning and enhance performance. Although it can be summative, the evidence presented in this review strongly suggests that self-assessment is most beneficial, in terms of both achievement and self-regulated learning, when it is used formatively and supported by training."

Another type of self-assessment not mentioned by the authors would be self-assessment preceding the actual teaching or learning process, which is more psychological. It would be possible to list the self-assessment of personality, intellect, motivation or other prerequisites for education and learning. These assumptions are intertwined, and clear boundaries cannot be drawn between them. The "synthetic" concept of "prerequisites for studying the chosen field" was used in the following research on the population of secondary school students as it is comprehensible to this age group. It included personal (will, interest, recognition of the value of education) and academic prerequisites (represented in students mainly by previous results learning and success in the admission procedure). In the research, the internal motivational prerequisites for studying were named the variable "educational aspirations" and also determined by self-assessment. The sociological reason for the interest in the self-assessment of young adolescents can be connected with its application in the formation of their relationships in peer groups (which are primarily school classes), the gradual linking of studies with practice and the formation of relationships to the future profession and later search for a place in the labour market.

Study predispositions (preconditions, prerequisites) are a set of knowledge, (key or transversal) competencies, (cognitive) abilities, talents, study aspirations and study motivations. The breadth of understanding of this concept depends primarily on why we deal with them and for what purpose we define them. That is usually the case in admission procedures at a secondary school or university, requiring transparent operationalisation into an effective tool for measuring them. Since 2015, a uniform entrance examination has been introduced in the Czech Republic for all secondary school study programs ending with a school-leaving examination. It consists of a test in the mother tongue and mathematics, and its minimum weight in the admission procedure is 40%. It is criticised, among other things, because it does not work with the cut score (Malach & Vicherková, 2018). Our research examined study prerequisites in the form of their subjective reflection by interviewing secondary school students using a simple and understandable question "Do you think that you have the prerequisites for the chosen field of study?" Students chose one of the offered variants: a) definitely yes, b) rather yes, c) I don't know, d) rather no, and e) definitely no.

Setting educational aspirations is crucial as it motivates and drives individuals to achieve their desired educational goals (Fraser & Garg, 2011). Despite its significance, the professional community has no singular definition or agreement regarding the term (Quaglia & Cobb, 1996). Essentially, educational aspiration refers to an individual's aspirations or hopes of attaining something in education. In some instances, the term aspiration, may be used interchangeably with expectation (Hong, 2022). An individual's current state, including their talents, prior education, determination, and motivation, typically characterises their ability to achieve a specific educational goal, such as obtaining a particular degree or field of education.

Educational aspiration is a term that has been studied and explained using various psychological, pedagogical, and sociological theories. According to psychological research, it is a part of the performance motivation construct we need to achieve. Strong achievement motivation is crucial for students' engagement, overcoming difficulties, and ultimately completing their studies. When individuals have the motivation to achieve their goals, they are more likely to pursue work that they perceive as valuable and compete with others (Covington, 2000). This drive can come from an internal or external source. Intrinsic motivation is when interest or enjoyment sparks it in the task, and it is organic to the person, not a product of external pressure. On the other hand, extrinsic motivation comes from outside the person. From a pedagogical perspective, educational aspirations are viewed as a characteristic of the learner that can be cultivated educationally to improve their skills and abilities.

According to a study by Quaglia and Cobb (1996, p. 131), it is possible to impact students' aspirations by indirectly influencing whole group aspirations. This fact has enormous implications for schools, which should strive to create an environment that fosters aspirations. However, not only schools play a role in helping young people develop and achieve their aspirations. Professionals and volunteers who work closely with youth are also essential. As Gutman and Akerman (2008) note, numerous studies have shown that aspirations are significant predictors of educational and occupational attainment among young people (p. 15). While data on educational aspirations is comparatively easily accessible, no common agreement exists on measuring the concept. Typically, researchers will ask survey participants to select from a range of educational options to gather data on their idealistic and realistic aspirations. For instance, a common question might be, "What is the highest level of education you would like to achieve?" (Trebbels, 2015). Aspiration is a subjective variable reflecting an individual's desires and ideas about their education, learning, and career goals. The aspiration of the respondents for the status of a successful student requires the characterisation of the concept of academic success all actors of education usually perceive in different ways and not in all its breadth. York, Gibson and Rankin (2015) created a model of academic success, which (includes) academic achievement, attainment of learning objectives, acquisition of desired skills and competencies, satisfaction, persistence, and post-college performance. According to the fifteen interviewees of teachers, Fauziyyah, Maharani, Rosdiani and Suparman (2018) state that the construct good student has four aspects or categories. The first draws from their academic skill. The second aspect depends on the student's personality, and the third is based on their proficiency, with the reflection defining the last category. However, it must be admitted that survey respondents aged 15-18 may have had their own subjective concept of academic success containing only one or a few elements from the complete model of academic success according to York et al. (2015) or just some of its four aspects according to Fauziyyah et al. (2018).

As part of our research, we asked our survey respondents: "Do you want to be successful at secondary school?" They had the option to choose from five different answers, including "definitely yes," "rather yes," "I do not know," "rather not," and "certainly not."

### **3. PARENTS' EDUCATION AND CHILDREN'S EDUCATION ASSUMPTIONS AND ASPIRATIONS**

Sociologists consider the parents' educational attainment to be part of the family's cultural capital, alongside wealth, prestige and social position. Parental income reflects the number of economic resources available to the individual. At the same time, the parents' educational attainment affects the availability and intensity of culturally educational content and relevant stimuli that the given individual receives (Kohoutek, Lounek, Šmídová & Korečková, 2021). A study by Madarasova Geckova, Tavel, van Dijk, Abel and Reijneveld (2010) found that the higher the parents' cultural capital (their education), the greater the probability of aspirations to continue their studies. A prominent role is attributed to the influence of parents and their ideas on children's education. If parents attribute high status to education, their children have high aspirations regardless of the socio-economic conditions they come from (Hrubá, 2017). It has even been confirmed that socio-psychological aspects play a more significant role than class characteristics or children's mental abilities in forming a student's educational aspirations (Katriňák, 2006). Many authors focus on parents' influence on children's choice of further study path. International PISA research (Palečková, Tomášek, & Basl, 2010; Blažek, Janotová, Potužníková, & Basl, 2019) pointed to the influence of social origin on the choice of educational and professional paths among fifteen-year-old students. Vendel (2007) concluded that external social resources were a decisive factor in students' decision to study in high school and concluded that other influential people were acquaintances of parents with work experience in the field the student was considering. Kniveton (2004) researched a sample of 348 pupils aged 14 to 18 in secondary school and found that mothers strongly influence pupils' decisions about the type of study. Zehringrová's research findings (2017) showed that the pupils' decisions about their secondary school were made mainly by themselves, without significantly adapting to their parents' wishes or the pressure of the environment. The children were most influenced by their parents, more by their mothers than by their fathers. Furthermore, this research showed that "children from families with lower socio-economic status, including lower levels of parental education, have lower aspirations for higher education" (p. 69).

Straková, Simonová, and Soukup (2020), following previous studies and research, developed the construct of "academic optimism", which includes a teacher's perception of self-efficacy, trust in students and their parents, and an emphasis on students' educational outcomes. They found that academic optimism does not directly affect students' knowledge and skills in mathematics and reading literacy but affects other aspects, such as the sense of belonging to the school. Logically, the question arises as to whether or not to introduce a similar construct, "academic optimism of the parent", for the family environment. It would express their belief in their ability to lead their child to the highest educational goals, that they are doing everything necessary, and confidence in their child that they will actively pursue education. We believe that the level of academic optimism of parents would increase with the level of their educational attainment. We consider the aspirations of students to continue further studies at a higher level of school or the aspirations to obtain a relevant exit certificate after finishing school (e.g. a university diploma) as only one specific group of aspirations. There are other groups of aspirations consisting of the desire of the student to learn or get to know something new or the desire to be a good, successful student. The last group of aspirations can be referred to as study-process aspirations. In this paper, we are

dealing with this aspiration "to be a successful student", as the direct connection between the education of each parent and their child's aspirations to be a good, successful student has not yet been investigated. We assume that children of more educated parents will have a higher level of this kind of procedural educational aspirations.

#### 4. RESEARCH METHODOLOGY

The presented research aimed to determine the proportion of students in the research group who believe they have the prerequisites to study the selected field and the proportion of pupils who aspire to be successful students based on their self-assessment. At the same time, it was investigated whether the positive statements of students regarding their study prerequisites and aspirations are related to the achieved level of education of fathers and mothers.

These objectives were converted into the following research questions.

- What proportion of students in the research group, based on self-assessment, believe they have the prerequisites to study the selected field?
- Is the self-assessment of prerequisites for study moderated by the gender of the pupils and the field they are studying?
- What proportion of students in the research group, based on self-assessment, state that they aspire to be successful?
- Is there any relationship between the achieved level of formal education of the respondents' fathers and mothers and the self-assessment of the prerequisites for studying the selected field?
- Is there any relationship between the level of formal education of the respondents' fathers and mothers and the pupils' aspirations to be successful students?

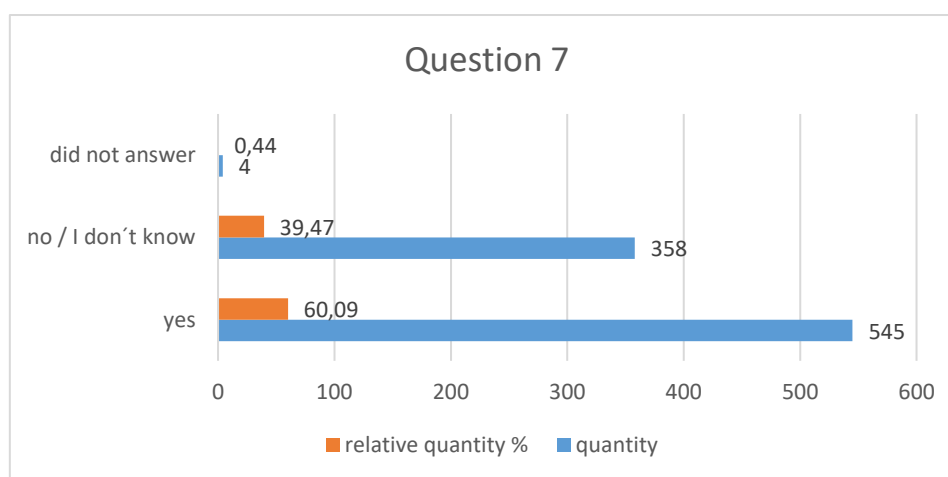
The research was carried out within the TACR project at the Faculty of Education of the University of Ostrava. The data were collected using an author's questionnaire containing 29 items (20 closed and nine open or semi-open). Five items and their results are presented in this paper. Data collection was carried out from September 2020 to February 2021 on a deliberately selected research sample of 907 respondents (students of 6 technical secondary schools) in the Moravian-Silesian Region of the Czech Republic. Most of the research group consisted of boys (884, i.e., 97.46%), and only 21 (2.32%) respondents were girls. Three-quarters (630, i.e., 69.40%) of respondents studied a four-year engineering field completed with a school-leaving examination, and only a third of 266 (29.33%) respondents studied another field of study (non-engineering). Students' answers to item 10: "Your father's education level is: (primary, apprenticeship - no school-leaving examination, secondary with the school-leaving examination, higher vocational and university)" confirmed that more than half of the respondents (471, 51.93%) had a father with a secondary school diploma or other higher education and 417 (45.98%) respondents had a father with a primary or secondary education without a school-leaving examination. Question 8: "Your mother's education level is: (primary, apprenticeship - no school-leaving examination, secondary with the school-leaving examination, higher vocational and university examination)." The answers: more than half of respondents (593, 65.38%) stated that their mother's education level was a secondary school with a school-leaving examination and higher, and a third of respondents (306, 33.74%) answered that their mother's highest educational attainment was primary or secondary without a school-leaving examination (apprenticeship).

## 5. RESULTS

The introduction of a specific questionnaire item or the formulation of a research hypothesis usually precedes the presentation of research results in graphs or tables for clarity.

Question 7: "Do you think you have the prerequisites for the selected (technical) profession?" More than half (545, 60.09%) of the respondents answered that they think they have the prerequisites for the selected (technical) profession, 358 (39.47%) respondents answered they do not think (or do not know) they have the prerequisites for the chosen (technical) profession and four respondents did not answer (0.44%).

*Graph 1.  
Self-assessment of study prerequisites.*



In hypothesis H1, the relationship between subjectively assessed assumptions about the study and the student's gender was assumed. "Students-boys more frequently think they have the prerequisites to study at a technical secondary school than students-girls."

*Table 1.  
The relationship between study prerequisites and gender.*

Pearson's chi-square = 0,087602    degree of freedom = 1    significance    p= 0,767248			
Question 1	Question 7 (yes)	Question 7 (no / I don't know)	Line totals
boy	531 (530,34)	349 (349,66)	880
girl	12 (12,66)	9 (8,34)	21
<b>Column totals</b>	543	358	901

Since the calculated chi-square value is less than the test criterion value and the significance value is greater than the chosen significance level of 0.05, no statistically significant relationship was found between the students' gender and the self-assessment of study prerequisites. The formulated hypothesis was not confirmed. Thus, self-assessment of study prerequisites is not related to gender.

The relationship between parents' education and students' self-assessment of their own study prerequisites and aspirations

Hypothesis H2 assumed a connection between subjectively assessed prerequisites for study and the field focus of secondary school studies: "Students of engineering specialisation more frequently think they have prerequisites for study than students of other specialisation".

*Table 2.  
The relationship between the field of study and study prerequisites.*

Pearson's chi-square = 0,506606      degree of freedom = 1      significance      p= 0,476612			
<b>Question 4</b>	<b>Question 7 (yes)</b>	<b>Question 7 (no/I don't know)</b>	<b>Line totals</b>
<b>four-year field of study completed by school leaving exam (engineering)</b>	385 (380,26)	245 (249,74)	630
<b>another field of study</b>	154 (158,74)	109 (104,26)	263
<b>Column totals</b>	539	354	893

Since the calculated chi-square value was less than the test criterion and the significance value was greater than the chosen significance level of 0.05, no statistically significant relationship was demonstrated between self-assessment of study prerequisites and study focus. The formulated hypothesis was not confirmed. The self-assessment of prerequisites for the study is thus not related to the field of study.

Hypothesis H3 expressed the relationship between subjectively assessed preconditions for study and mother's education: "Students who think that they have preconditions for the selected profession more frequently have a mother with a high school diploma or higher than students who do not think so."

*Table 3.  
The relationship between a mother's education and study prerequisites.*

Pearson's chi-square = 2,946447      degree of freedom = 1      significance      p= 0,086067			
<b>Question 7</b>	<b>Question 8 (secondary education with school-leaving exam or higher)</b>	<b>Question 8 (primary/apprenticeship)</b>	<b>Line totals</b>
<b>yes</b>	370 (358,11)	172 (183,89)	542
<b>no / I don't know</b>	222 (233,89)	132 (120,11)	354
<b>Column totals</b>	592	304	896

As the calculated chi-square value is less than the test criterion value and the significance value is greater than the selected significance level of 0.05, no statistically significant relationship was confirmed between the examined variables. The formulated hypothesis was not confirmed. Thus, it cannot be concluded that the self-assessment of study prerequisites relates to the education of students' mothers.

Hypothesis H4 expressed the relationship between subjectively assessed preconditions for study and father's education: "Students who think they have preconditions for the selected profession more frequently have fathers with a high school diploma or higher than students who do not think so."

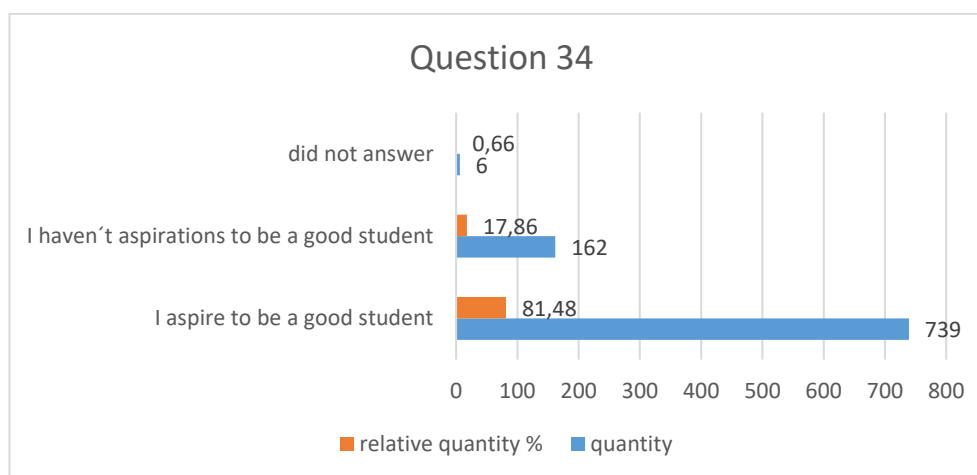
Table 4.  
The relationship between father education and study prerequisites.

Pearson's chi-square = 0,723316 degree of freedom = 1 significance p= 0,395058			
Question 7	Question 10 (secondary education with school-leaving exam or higher)	Question 10 (primary/apprenticeship)	Line totals
yes	289 (282,81)	243 (249,19)	532
no / I don't know	182 (188,19)	172 (165,81)	354
<b>Column totals</b>	471	415	886

Since the calculated chi-square value is less than the test criterion value and the significance value is greater than the chosen significance level of 0.05, no statistically significant relationship was confirmed between the examined variables. The formulated hypothesis was not confirmed. Thus, it cannot be assumed that the self-assessment of study prerequisites relates to the education of students' fathers.

Item No. 34: "Do you want to be successful in secondary school: (I aspire to be a good student, I haven't aspirations to be a good student)" offered two possible answers. It was found that the majority (81.48%) of respondents aspire to be good students. However, less than a fifth of students (17.86%) do not aspire to be good students.

Graph 2.  
Aspirations to be a good student.



The relationship between the subjective assessment of the aspirations to be successful in studies and the mother's education was formulated in hypothesis H5. "Students whose mothers have completed at least secondary school education with a school-leaving exam are more likely to say that they have the aspirations to succeed at secondary school than those whose mothers have a lower education".



The relationship between parents' education and students' self-assessment of their own study prerequisites and aspirations

*Table 5.*  
*The relationship between a mother's education and study aspirations.*

Pearson's chi-square = 5,107974    degree of freedom = 1    significance    p= 0,023816			
<b>Question 8</b>	<b>Question 34 (I aspire to be a good student)</b>	<b>Question 34 (I haven't aspirations to be a good student)</b>	<b>Line totals</b>
<b>secondary school with school-leaving exam and higher</b>	496 (483,80)	91 (103,20)	587
<b>primary school (apprenticeship)</b>	240 (252,20)	66 (53,80)	306
<b>Column totals</b>	736	157	893

Given that the calculated chi-square value was greater than the test criterion value and the significance value was less than the chosen significance level of 0.05, a statistically significant relationship between the investigated variables was demonstrated. Students' aspirations to be successful in their studies are related to their mothers' education. Hypothesis H5 was confirmed.

In hypothesis H6, the relationship between the subjective assessment of the aspirations to be successful in studies and the father's education was formulated. "Students whose fathers have completed at least secondary school education with a school leaving examination are more likely to express that they have the aspirations to succeed in secondary school than those whose fathers have a lower education."

*Table 6*  
*The relationship between a father's education and study aspirations.*

Pearson's chi-square = 0,74950    degree of freedom = 1    significance    p= 0,386634			
<b>Question 10</b>	<b>Question 34 (I aspire to be a good student)</b>	<b>Question 34 (I haven't aspirations to be a good student)</b>	<b>Line totals</b>
<b>secondary school with school-leaving exam and higher</b>	390 (385,08)	79 (83,92)	469
<b>primary school (apprenticeship)</b>	335 (339,92)	79 (74,08)	414
<b>Column totals</b>	725	158	883

Given that the calculated chi-square value is less than the test criterion value and the significance value is greater than the chosen significance level of 0.05, no statistically significant relationship was demonstrated between the investigated variables. A student's aspirations to be successful in their studies is unrelated to their father's education. Hypothesis H6 was not confirmed.

## 6. DISCUSSION

Data quantifying the number of students who, based on self-assessment, believe they have the prerequisites to study the selected field and consider themselves ambitious to be successful cannot be compared with similar data from other researchers. It is only possible

to compare them with the current educational reality data, specifically those obtained in the common part of the school-leaving examination in the Czech Republic for the last three years (Centrum pro zjišťování výsledků vzdělávání, 2020, 2021 and 2022). The data are in quite significant agreement. In our research group, 17.8% of pupils stated they had no aspirations to be successful students. It is remarkable that in 2020, 17.5% of students failed the didactic test in mathematics, 2% more year-on-year. In 2022, 14.1% of pupils failed the Czech test, which is 3.9% more than last year. In 2021, 16.8% of pupils failed the didactic test in mathematics, but only 4.9% of graduates failed the Czech language. In 2022, the failure rate of secondary school graduates in the didactic test in Mathematics reached 10.1% and the Czech language didactic test 9.4%. An interesting question arises of whether a very similar proportion of students with no aspirations to succeed and the proportion of unsuccessful students in the school-leaving exam (primarily mathematics) is a random phenomenon or whether it can be anticipated due to the premature resignation of students to the regular completion of secondary school studies. Further research could focus on finding an answer to this question.

The research confirmed that the educational aspirations of secondary technical schools' students in the Moravian-Silesian Region of the Czech Republic are related to the level of education of mothers and are not related to the level of education of fathers. However, the self-assessment of the study prerequisites is not related to the level of education of the student's parents. This finding is contrary to Zehringrová's (2017) research, stating that mothers have a more significant influence on the choice of the future educational path of their children.

The authors are aware of the study's limits, lying mainly in the number of respondents, allowing the validity of the research conclusions to be applied only to the sample set. The authors perceive another limitation in that both investigated constructs, or variables - students' prerequisites for study and student aspirations to be successful in their studies - are relatively broad and can be broken down into sub-elements that may not be known to the respondents in full. The researchers made no effort to clarify the content and breadth of these constructs to the respondents before administering the questionnaires. This fact could influence the choice of their answers to the dichotomously formulated question.

## 7. CONCLUSIONS

More than half of the respondents believe they have the required (technical) study prerequisites. Self-assessment of study prerequisites is not related to the student's gender. Self-assessment of study prerequisites is not related to the field of study. It cannot be confirmed that the self-assessment of study prerequisites relates to the education of students' mothers. It cannot be assumed that the self-assessment of study prerequisites relates to the education of students' fathers. A significant majority of respondents aspire to be good students. Students' aspirations to be successful in their studies are related to their mothers' education. Students' aspirations to be successful in their studies are not related to their fathers' education. Empirical findings can be helpful for the theoretical completion and updating of the concepts of study prerequisites, study aspirations, and educational practice. The self-assessment competencies of young people are formed purposefully and unintentionally within the practice concerning their prerequisites for education, study aspirations and educational processes and learning and its results.

## REFERENCES

- Andrade, H. (2010). Students as the definitive source of formative assessment: Academic self-assessment and the self-regulation of learning. In H. Andrade & G. Cizek (Eds.), *Handbook of formative assessment* (pp. 90–105). New York, NY: Routledge.
- Andrade, H. (2019). A Critical Review of Research on Student Self-Assessment. *Frontiers in Education*, 4(87). <https://doi.org/10.3389/educ.2019.00087>
- Blažek, R., Janotová, Z., Potužníková, E. & Basl, J. (2019). Mezinárodní šetření PISA 2018. Národní zpráva. [International survey PISA 2018. National report]. Praha: Česká školní inspekce. Retrieved from [https://www.csicr.cz/Csicr/media/Prilohy/PDF\\_el.\\_publikace/Mezin%C3%A1rodn%C3%AD%20%C5%A1et%C5%99en%C3%AD/PISA\\_2018\\_narodni\\_zprava.pdf](https://www.csicr.cz/Csicr/media/Prilohy/PDF_el._publikace/Mezin%C3%A1rodn%C3%AD%20%C5%A1et%C5%99en%C3%AD/PISA_2018_narodni_zprava.pdf)
- Brown, G. T. L., & Harris, L. R. (2013). *Student self-assessment*. In J., H., McMillan (Ed.), *The SAGE handbook of research on classroom assessment* (pp. 367-393). Thousand Oaks, CA: SAGE. Retrieved from [https://www.researchgate.net/publication/233871127\\_Student\\_self-assessment](https://www.researchgate.net/publication/233871127_Student_self-assessment)
- Centrum pro zjišťování výsledků vzdělávání (2020). *Centrum zpracovalo výsledky maturitní zkoušky v roce 2020 do podrobné statistické analýzy*. [The Centre processed the results of the school-leaving examination in 2020 into a detailed statistical analysis]. Retrieved from <https://cermat.cz/aktuality/85-aktuality/298-centrum-zpravadalo-vysledky-maturitni-zkousky-v-roce-2020-do-podrobne-statisticke-analyzy>
- Centrum pro zjišťování výsledků vzdělávání (2021). *Tisková zpráva: Výsledky společné části maturitní zkoušky v řádném termínu jarního zkušebního období 2021*. [Press release: Results of the common part of the school-leaving examination in the regular term of the spring exam period 2021]. Retrieved from <https://cermat.cz/aktuality/aktualita/329-tiskova-zprava-vysledky-spolecne-casti-matriculation-examinations-in-the-council-term-of-the-spring-examination-period-2021>
- Centrum pro zjišťování výsledků vzdělávání (2022) *Tisková zpráva: Výsledky společné části maturitní zkoušky v jarním zkušebním období 2022*. [Press release: Results of the common part of the school-leaving examination in the spring examination period 2022]. Retrieved from <https://cermat.cz/aktuality/aktualita/357-tz-vysledky-mz-dt-jaro-2022>
- Covington, M.V. (2000). Goal theory, motivation, and school achievement: An integrative review. *Annual Review of Psychology*, 51(1), 171-200. <https://doi.org/10.1146/annurev.psych.51.1.171>
- Fauziyyah, G., Maharani, U., Rosdiani, A. M. & Suparman, A (2018). What Makes a Good Student: Voice from Teacher. *English Education and Applied Linguistics (EEAL) Journal*, 1(3), 243-251. <https://doi.org/10.31980/eealjournal.v1i3.1707>
- Fraser, M., & Garg, R. (2011). Educational Aspirations. In Levesque R.J.R. (eds), *Encyclopedia of Adolescence*. Springer, New York, NY. [https://doi.org/10.1007/978-1-4419-1695-2\\_147](https://doi.org/10.1007/978-1-4419-1695-2_147)
- Gutman, L. M., & Akerman, R. (2008). *Determinants of aspirations [Wider Benefits of Learning Research Report No. 27]*. London: Centre for Research on the Wider Benefits of Learning Institute of Education, University of London. Retrieved from <https://discovery.ucl.ac.uk/id/eprint/1541614/>
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81–112. <http://dx.doi.org/10.3102/003465430298487>
- Hong, Y. (2022) *The Educational Hopes and Aspirations of Left-Behind Children in Rural China. An Ethnographic Case Study*. Abingdon, Oxon, New York: Routledge.
- Hrubá, L. (2017). Sociální determinanty vysokých vzdělanostních očekávání rodičů. [Social Determinants of High Parental Educational Expectations.]. *Sociológia* 49(5), 463-481. Retrieved from [http://www.sav.sk/index.php?lang=sk&doc=journal-list&part=list\\_articles&journal\\_issue\\_no=11114197#abstract\\_14169](http://www.sav.sk/index.php?lang=sk&doc=journal-list&part=list_articles&journal_issue_no=11114197#abstract_14169)
- Karaman, P., (2021). The impact of self-assessment on academic performance: A meta-analysis study. *International Journal of Research in Education and Science (IJRES)*, 7(4), 1151-1166. <https://doi.org/10.46328/ijres.2344>

- Katrňák, T. (2006). Faktory podmiňující vzdělanostní aspirace žáků devátých tříd základních škol v České republice [Factors determining the educational aspirations of ninth-graders of primary schools in the Czech Republic]. In Matějíř, P.; Straková, J. et al.: *Nerovné šance na vzdělání: Vzdělanostní nerovnosti v České republice* [Unequal Opportunities for Education: Educational Inequalities in the Czech Republic] (pp. 173-193). Praha: Academia.
- Kniveton, B. H. (2004). The Influences and Motivations on which Students Base their Choice of Career. *Research in Education*, 72(1), 47–57. <https://doi.org/10.7227/RIE.72.4>
- Kohoutek, J., Lounek, V., Šmídová, M., & Korečková, J. (2021). Situace absolventů v podmínkách postmasového vysokoškolského vzdělávání: Stále jen reprodukce elit? [The Status of Graduates in Post-Mass Higher Education: Are We Still Just Reproducing Elites?] *Sociologický časopis [Czech Sociological Review]*, 57(1), 47–73. <https://doi.org/10.13060/csr.2021.002>
- Madarasova Geckova, A., Tavel, P., van Dijk, J. P. Abel, T., & Reijneveld, S. A., (2010). Factors Associated with Educational Aspirations Among Adolescents: Cues to Counteract Socioeconomic Differences? *BMC Public Health*, 10(154). <https://doi.org/10.1186/1471-2458-10-154>
- Malach, J. & Vicherková, D. (2018). *Refleksja na temat pojedynczego egzaminu wstępnego do szkoły średniej z maturą*. In. *Wspomaganie rozwoju kompetencji diagnostycznych nauczycieli, Katowice*. [Reflection on the single entrance exam to secondary school with the school-leaving exam. in. Supporting the development of teachers' diagnostic competences, Katowice], 265-278. Retrieved from [https://www.ptde.org/pluginfile.php/1378/mod\\_page/content/13/PTDE\\_2018\\_265.pdf](https://www.ptde.org/pluginfile.php/1378/mod_page/content/13/PTDE_2018_265.pdf)
- Palečková, J., Tomášek, V., & Basl, J. (2010). *Hlavní zjištění z výzkumu PISA 2009. Umíme ještě číst?* [Key findings from the PISA 2009 research. Can we still read?]. Praha: UIV.
- Quaglia, R. J. & Cobb, C. D. (1996). Toward a Theory of Student Aspirations. *Journal of Research in Rural Education*, 12(3), 127-132.
- Straková, J., Simonová, J. & Soukup, P. (2020). Vliv akademického optimismu na výsledky žáků středních škol. [The Impact of Academic Optimism on Achievement of Upper Secondary School Students]. *ORBIS SCHOLAE*, 2020, 14(3), 73–92. <https://doi.org/10.14712/23363177.2021.5>
- Trebbels, M. (2015). *The transition at the end of compulsory full-time education Educational and future career aspirations of native and migrant students*. Wiesbaden: Springer VS Wiesbaden. <https://doi.org/10.1007/978-3-658-06241-5>
- Vendel, Š. (2007). *Výskum školskej a profesijnej orientácie žiakov: výsledky Slovenska s dôrazom na mimobratislavské regióny*. [Research on school and professional orientation of pupils: results from Slovakia with an emphasis on regions outside Bratislava]. Bratislava: Štátny pedagogický ústav.
- York, T. T.; Gibson, Ch. & Rankin, S. (2015). Defining and Measuring Academic Success. *Practical Assessment, Research, and Evaluation*: 20(5). <https://doi.org/10.7275/hz5x-tx0>
- Zehringrová, A. (2017). *Faktory ovlivňující volbu další vzdělávací dráhy žáků deváté třídy ZŠ*. [Diplomová práce]. [Factors influencing the choice of further educational path of ninth grade elementary school students. [Thesis]. Praha: Univerzita Karlova. Retrieved from <http://hdl.handle.net/20.500.11956/93174>

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