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PSYCHOLOGICAL ASPECTS OF FORMATION OF ATTITUDES
AMONG STUDENTS AT THE SECONDARY SCHOOLS TO
STUDY

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Abstract

The paper deals with the attitude to study and its determinants in the process of education and education. It captures the attitudes of students to study at two types of schools and verifies the interrelationships between attitudes to study and chosen explanatory variables. Respondents are students of grammar schools and secondary vocational schools. In order to fulfill this intention, the empirical research was carried out, the main method of which is the semantic differential and questionnaire survey.

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Keywords: Student attitudes towards study, semantic differential, student's personality characteristics, attitudes formation, attitudes determinants.

1. Introduction

We focus on the relation attitudinal characteristics of the personality, which are the attitudes towards study. We see them as a prerequisite for the development of the personality of the student as well as the premise of the efficiency of the educational process, the learning, and development of his motivational and self-regulation dispositions.

Studying becomes an important activity through which the needs of the student's personality meet the fulfillment of the desire to achieve the stated goals. The realization of social roles, relations, is one of the factors which significantly influences the social status of human.

We look at positive attitudes towards learning as a group of effective learning motifs and they are one of the most sensitive indicators of learning performance. In general, these attitudes are consistent with the ways in which they act, because they show interest in knowledge, skills, or the chosen field of study.

Student's attitudes to learning are one of the input determinants of the learning process. They are the result of complex and complicated process interactions, where a whole range of external and internal factors play a part. From our point of view, the dynamics of the individual components of attitudes play a role in the formation of these attitudes, however the multifactorial conditionality (long-term mutually supportive factors) is decisive.

We start from the psychological foundations that seem to us to be the most adequate for understanding the issues of determining attitudes to study.

The emergence of attitudes towards study is conditioned by the state of sociogenic needs and sociogenic motives which are related to the characteristics of the personality and arise during the socialization. Student's attitudes to study reflect their personality. The role of the student depends on the personality structure (personality traits). In this aspect, the role of the variables that have meaning with the so-called "me" of the student as the center of regulation (the self-regulation system of personality) and whose component is self-concept, i.e. in relation to the world, values which the person has accepted for themselves, self-esteem, self-confidence, activity-passivity of personality" (Čáp, & Mareš, 2007, p. 331).

With the development of individual I, needs evolve. From the need for autonomy, competence to the power needs, which are secondary, generalized. With the onset of schooling, the pupil gains experience of school success and failure, thus creating school performance needs.

Updating the need for exercise creates a motive, the reason for which one acts in a certain way. In the performance situation, the student realizes the tasks at a certain level, following the subjective standards of good performance (Plhánková, 2007). Performance motivation determines the individual's aspiration level and needs to be given increased attention as it relates to the development of a healthy (realistic) self-evaluation of each individual. The reason is the interconnection with the individual I.

Motivation to exercise "was explicitly expressed as "need achievement" (Woodruff, 1994, p. 9). "Motivation for performance is not a clearly constrained construct, but rather a general orientation of behavior that involves different aspects of the personality" (Schuler, Procháska, 2003, p. 15). Concrete motives that motivate performance behavior and meet performance needs, according to Murray (Plhánková, 2007; Hrabal, Man, Pavelková, 1989), need to achieve successful performance and the need to avoid failure, but also the need to avoid success. These needs serve to confirm and defend our own self and develop according to a particular school and family environment.

"Developing the pupil's performance motivation as an essential part of his/ her personality has a great impact on the quality of learning processes, life aspirations, self-regulation ability in achieving goals and overcoming obstacles." (Pavelková, 2002, p. Student's performance motivation can thus be considered as one of the student's prerequisites in the field of attitudes to study. By its indirect action it is thus in relation to the resulting attitudes to study.

Another determinant of attitudes to study is the family environment. Created attitudes are the result of interacting with a large number of conditions in a complex system such as a family. Sex differences also play a role, which are always an important determinant of educational processes. One can not forget the point of development - attitude tendencies are associated with a certain age. In the age-specific peculiarities of students, it is possible to seek explanations of the relative representation (proportion) of positive and negative attitudes towards study. Attitudes towards learning have a significant impact on the evaluation of learning outcomes, mainly because of the success and failure experience. Especially during adolescence, success in school is a dominant necessity. School grades reflect positive or negative experiences. The pupil is experiencing success or failure and is thus reversing the attitudes of the student to study.

Among the different types of secondary schools, some details in the sociological characteristics of the student families can be observed (degree of attainment and employment status of parents), the family environment, the student's personality characteristics, learning aspirations or learning outcomes. Thus, these aspects create a typical school environment, which continues to be a factor of further personality development. The school becomes a social group with which the student is identified, so his study attitudes can also be formed.

2. Problem Statement

In the research, we focused on verifying the effects of such variables, which can be assumed to be of importance and to create mutual relationships in the form of student attitudes towards study. The selected predictors are:

- Individual variables: student age, gender, parent education;
- Personality disposition: performance motivation, self-assessment;
- External variables: the intellectual-cultural orientation of the family, the family orientation to success;
- Collective variables: type of school, class, attitude to the studied field; School performance.

We formulate the research problem as follows: *Is there a relation between the predictors selected and the attitude of the student to study?* We believe that verifying the relationship between the student's attitude towards study and the chosen independent variables opens the way for the implementation of educational and educational strategies aimed at promoting positive attitudes towards study.

3. Research Questions

We evaluate attitudes to study at two different types of schools. We apprehend the difference between the two schools in the psychological and social peculiarities of the pupils. The differences are evident in the working methods, but also in the social composition of the students of grammar schools and secondary vocational schools. If we undertake a school of analysis, we will find that some of its characteristics can be separated and then create a specific environment that affects the students

themselves. We observe the details in the study results, the sociological characteristics of the students' families, e. g. the level of education attained and the employment status of the parents. We verify relationships between attitudes and selected explanation variables. For research, we have formulated the following questions:

What are the attitudes of students to study? What is the relationship between students' attitudes towards study and selected explanatory variables? (See Problem Statement).

4. Purpose of the Study

The aim is to introduce a model of variables that shape students' attitudes to study. The research brought the answer to the students' attitudes to study at two types of secondary schools and allowed to summarize current knowledge and formulate conclusions about these attitudes and their predictors. The survey has also enriched the knowledge that most of the independently selected variables influence student attitudes toward learning.

The research furthermore compares students' attitudes towards two different secondary school environments. The use of the research results is directed to the sphere of the teacher's activities, to the expansion of his knowledge and skills in the development of positive attitudes towards study. This is also related to teacher equipment with diagnostic tools, which will then enable targeted action in this area. For pedagogical work, there is fundamental importance of teachers to reveal psychosocial factors that are reflected in student education and education.

5. Research Methods

For the empirical survey, the questionnaire method was selected (a set of 4 research tools). Each student completed four questionnaires in the classroom. Pedagogical documentation consisted of latest school reports.

In total, 511 questionnaires were processed. At the time of the survey, the average age level of students was 17 years. The monitored variables and their method of registration are shown in Table 1.

Table 01. Variables, methods, and abbreviations used for statistical processing

Area	Tool	What the tool measures and abbreviation of a variable
Attitude towards study	ATER questionnaire (Attitudes Towards Educational Reality) created on the semantic differential	Attitudes towards educational reality (Educational reality: ER), Educational reality h: Er h: Study evaluation, Educational reality e: Er e Ergonality of Study
Performance motivation	Questionnaire T. Pardel, L. Maršalová, A. Hrabovská	D-M-V consists of 3 scales: scale of performance motivation (PM), performance bracket (PB), performance anxiety (PA)
Self-competence	SLSC questionnaire (Self-Liking a Self-Competence) by Romin W. Tafarodi, Alan B. Milne	Self-Liking (SL), self-evaluation competence: Self-Competence (SC)
Family environment	„Family environment scale“ questionnaire by M. Hargašová, T. Kollárik	Intellectual and Cultural orientation of family (ICO), Family orientation to success (OS)
School performance	School grades	Average of grades in all subjects on the latest report

Attitudes towards educational reality were based on the research (ATER questionnaire) and on the semantic differential (Chráška, 2003, p. 89). The *Attitudes* were operationalized by using so-called *indicators*, which represented individual elements of *educational reality*. The T. Pardel, L. Maršálová, A. Hrabovská questionnaire was chosen to determine the motivation of pupils. It consists of 3 scales: Performance Bracket (PB), Anxiety Brake Power (AB), Performance Anxiety (PA). Self-Liking and Self-Competence (SLSC) by Romin W. Tafarodi, Alan B. Milne. SL or Self-Liking means self-acceptance. SC or Self-Competence represents the assessment of the ability to achieve the desired results and includes opinions about own abilities, qualifications, validity or effectiveness (Blatný, Plháková, 2003, p. 120). To evaluate the pupil's family environment, we chose the questionnaire "Family environment scale" M. Hargašová, T. Kollárik. The family environment scale is the method of reporting on family perception. In the framework of this survey, two sub-questionnaires were used (intellectual/ cultural orientation of family and family orientation on success). The intellectual/ cultural family orientation (ICO) reflects the degree to which the family is involved in intellectual, social and cultural affairs. The second sub-class, "Family Orientation on Success" (OS), measures the family's emphasis on academic and contentious issues, how it encourages the desire to be better in any activity, the extent to which the family emphasizes competitiveness and achieving ever better results, at school. School performance was expressed by the average of the grades on the latest report.

6. Findings

The analysis of the variables is the final model, where students' attitudes to study were represented as a dependent variable. The final model presents the results that confirm the mutual relations between the student's attitudes toward study and the selected independent variables. We verified the established hypotheses in a total of 511 students.

At first, the Attitudes Towards Educational Reality (ATER) questionnaire was developed, based on the semantic differential (Chráška, 2003). The dependent variables (students' attitudes towards study) were measured using established indicators. From the averages of the "Study" indicators; "Learning"; "Home preparation"; "Study Obligations" and "Curriculum" we considered the overall attitudes of students to study (to "Educational Reality"). The term "Absence" was evaluated in isolation from other indicators because of the anchoring of the opposite pole of the scales used. Data processing of all independent variables followed. We used the Student's t-test, chi-square, and Pearson's correlation coefficient to verify the relationships between study attitudes and independent variables.

6.1. Results of the final model of Medical school and Gymnasium students: Attitudes of Students to Study (Educational Reality h) and selected predictors

The final model in Figure 1 shows the results of the confirmed correlations between the attitudes to study (Educational Reality h) of the students of the secondary medical school and grammar school and the independent variables. Significant results for the t-test are also noted there.

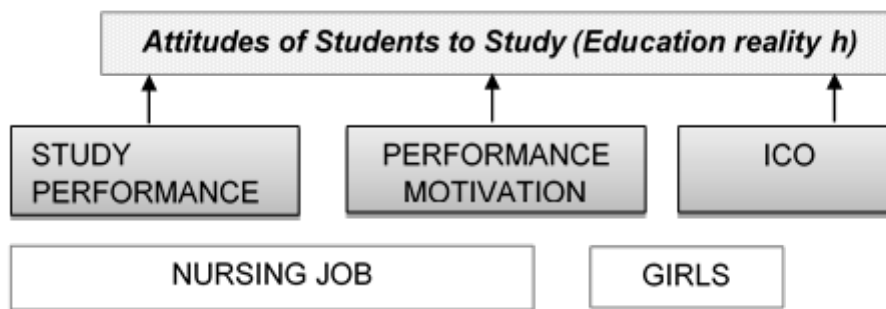


Figure 01. The final model of Medical School and Gymnasium students: Student Attitudes to Study (Educational Reality h) and selected predictors

Testing the hypotheses in the group of Medical school students and grammar schools confirmed the influence of identical variables on attitudes towards study. Students of both schools have more positive attitudes to study if they have better learning outcomes, they have a higher motivation of performance or come from families with a higher intellectual/ cultural orientation of their family.

The grammar school students did not affirm so significantly the influence of gender on attitudes to study as for the students of Medical School. Medical School students who have a more positive attitude towards the chosen field of study (a nursing job) take a more positive attitude towards study.

6.2. Results of the final model of Medical School and Gymnasium students: Attitudes of Students to Study (Educational Reality e) and Selected Predictors
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In the case of the influence of the variables on attitudes towards the demands of the study, we consistently confirmed the influence of the school performance and the anxiety braking performance (AB) both at the grammar school and Medical School. See Figure 2.

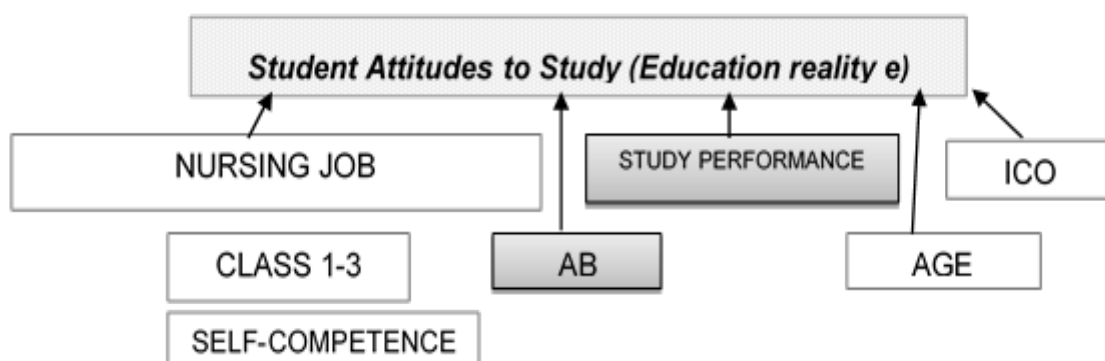


Figure 02. Final model of Medical School and Gymnasium students: Student Attitudes to Study (Educational Reality e) and Selected Predictors.

It has turned out that for the study is more demanding (more difficult) if they come from families with a lower intellectual / cultural orientation, their age is lower (1-3 class), they have weaker study

results and higher anxiety inhibiting performance. More demanding is also study for those students who perceive the nursing job as difficult. Lower Self-Competence grammar school students perceive their study as more challenging.

Among the indicators of educational reality h and e (evaluation, energy) and independent variables of students of both schools, we confirmed the following relationships as shown in the following Tables 2 and 3:

Table 2 presents the results of Medical School students among the individual indicators in factor h and e, the educational reality h and e and independently variables.

Table 02. Resulting relations between factor h and factor e indicators, educational reality h and e, attitudes towards study and independent variables of Medical School students

Medical School								
Factor Indicator h X Education reality h								
Attitudes towards study (Education reality h) X Independent Variables of Medical School Students								
	Study	Learning	Home prep.	Stud. obl.	Curriculum	Absence	Nursing	ER h
Age								
Gender			+				+	+
Education of parents			+					
Motivation Performance	+	+	+	+	+	+	+	+
AB								
AP		+			+			
SL				+	+			
SC	+				+			
Class								+
School Performance	+	+	+		+			+
ICO	+	+	+	+	+			+
AB								
Nursing job	+	+	+	+	+	+	+	+
Factor Indicator e X Education reality e								
Attitudes towards study (Education reality e) X Independent Variables of Medical School Students								
	Study	Learning	Home prep.	Study obl.	Curriculum	Absence	Nursing	ER e
Age	+	+			+			+

Gender						+		
Education of parents			+			+		
Motivation Performance								
AB	+	+	+	+	+	+	+	+
AP								
SL								
SC								
Class	+	+			+		+	+
School Performance	+	+			+			+
ICO	+	+			+			+
AB				+				
Nursing job	+	+	+	+	+			+

From the summary table 2, which briefly presents the results of the tested hypotheses, it is clear that attitudes towards study have the greatest influence on performance, school performance, intellectual and cultural orientation of the family, and attitudes towards the nursing job.

Table 2 shows the relationships among the individual energy factor indicators, the educational reality *e* and the independent variables. The perceived complexity of studies is most affected by the anxiety performance, the class attended by the student, the school performance, the intellectual-cultural orientation of the family and the attitude towards the demandingness of the nursing job.

Table 3 summarizes the relationship among the factor indicators of assessment and the energy factor, the educational reality *h* and *e*, and the independent variables in Gymnasium students.

Table 03. Resulting relationships among factor *h* and factor *e* indicators, educational reality *h* and *e*, attitudes towards study and independently variable Gymnasium students.

Gymnasium							
Factor indicators <i>h</i> X Education reality <i>h</i>							
Attitudes towards study (Education reality <i>h</i>) X Independently variable Gymnasium students							
	Study	Learning	Home prep.	Stud. obl.	Curriculum	Absence	ER <i>h</i>
Age			+				
Gender							
Education of parents							

Motivation Performance	+			+	+		+
AB							
AP							
SL							
SC						+	
Class							
School Performance	+	+			+		+
ICO	+	+			+		+
AB							
Factor indicators e X Education reality e							
Attitudes towards study (Education reality e) X Independently variable Gymnasium students							
	Study	Learning	Home prep.	Stud. obl.	Curriculum	Absence	ER e
Age							
Gender			+				
Education of parents						+	
Motivation performance							
AB	+	+	+	+	+		+
AP					+		
SL							
SC	+	+	+		+		+
Class							
School performance	+	+			+		+
ICO		+			+		
AB		+	+				

From Table 3, which summarizes the results of the tested hypotheses in Gymnasium students, it is obvious that the attitudes to study (Educational Reality h) and individual indicators of educational reality h influence *the motivation of performance, school performance and the intellectual/ cultural orientation of the family.*

The perceived difficulty of individual indicators of attitudes towards study has the greatest impact of *anxiety performance (AB)*, *self-assessment of competence (SC)* and *school performance*.

By testing, we did not confirm some assumptions. We can summarize them in a number of conclusions:

- the assumption of influence of *parental education* on student attitudes to study has not been confirmed, the same is true of the relationship between parenting education and the perceived difficulty of studying students,
- we have not shown the parents of students of Gymnasium that parents with lower education have a different intellectual-cultural orientation of the family than parents with higher education,
- the attitudes of students to study also did not apply the influence of the family environment, namely *family orientation on success*,
- We have not confirmed the influence of Self-Liking on the attitudes to study.

7. Conclusion

Our research intention was to look at the students' attitudes towards study and the socio-psychological characteristics of students with regard to their predictive relationship. Because "Attitudes to study" are too general attitudes, we have been operationalized by means of so-called indicators, which represented individual elements of educational reality.

Our input considerations were based, among other things, on the assumption that the person's disposition of students is very important for the attitude to study. As the results of our work have clearly shown, the performance motif is a significant factor influencing attitudes towards study. The results are in line with the theoretical construct of power motivation. Higher levels of anxiety that inhibit performance significantly contribute to perceiving the difficulty of learning. Furthermore, the differences between inferior and higher anxiety-promoting performance are reflected in attitudes towards learning and learning. Despite the expectations, this was not confirmed by the self-liking variable (the Self-Liking scale), in which there were no significant differences in the group of high school students. For Gymnasium students the level of self-assessment of competence was reflected in attitudes to study and curriculum, while for the students the assessment of their own competencies was reflected in the perception of the demandingness of the study. Significant connections have been confirmed in the relationship between attitudes towards study and the characteristics of the family from which the student comes. We expected the degree of parenting achieved to influence attitudes towards study. Subjective statements by students did not confirm this expectation. We have only confirmed the relationship between father education and attitudes towards home preparation, which shows that parents with higher education are more active in home care. The father's education did not have a significant impact on attitudes, nor did the mother's education. It can be inferred that another mechanism of parenting is applied to attitudes towards studying their children. Gymnasium students have found that parents with lower education do not have a different intellectual/ cultural orientation of the family compared to parents with higher education. We have not found mutual relationships at the "Family orientation to success" variable. We have confirmed the influence of the intellectual-cultural level of the family on the quality of attitude towards

study. We understand this relationship as a manifestation of the influence of family education. In attitudinal outcomes, the culture of the family environment is then more strongly promoted than parent education. There is no presumption that parents with higher education often provide a higher cultural level. Different approaches to learning, curriculum, and schooling for girls and boys are often spoken by teachers. Results of t-test research confirm that girls have a more positive attitude towards home preparation. We have shown girls in the medical school that they have more positive attitudes towards studying. For the other indicators monitored, there was no significant difference between boys and girls.

It has been shown that for students of the 4th year of Medical school the study is less demanding compared to the students in the lower grades. This result seems to indicate the adaptation of students to performance situations in school conditions. However, this does not apply unambiguously. We did not find statistically significant differences between the two groups of students in grammar schools. The process of balancing students with performance situations is not something that could not be watched, observed and explored. This can be done on a broader basis by a teacher. We observe the same finding in the case of correlation with the student's age. It is more demanding to study for lower-age students, which has been confirmed by the correlation with Medical school students. Learning, curriculum, and learning is more challenging for younger students. Gymnasium students demonstrate differences in the difficulty of studying in home preparation. For younger students homework is more difficult.

Very important and statistically significant was the relationship between the positive attitude towards the nursing job, in our case the chosen field of study, and the positive attitude towards the study. Students with a positive attitude to the chosen field of study have created favorable conditions that apply in relation to learning, curriculum, obligations, and preparation for learning. Motivation for learning is deepened by the context of the curriculum with future student activity, with its professional perspectives.

The correlation results which were obtained draw attention to the relationship between school performance and attitudes towards study. The student's school results appear to be a significant factor influencing the resulting attitudes towards study. In both sets of students, this predictor significantly better identifies individuals with more positive attitudes to study. The conditionality of the students' attitudes to study is determined primarily by the motivational component of school performance.

It has been shown that attitudes towards studying both groups of students are not very positive in terms of evaluation. However, we consider this to be an indicator of a disappointing state. In line with the stereotypical assumption that Gymnasium students perceive as those who should have significant qualitatively different results in the sphere of school reality, we assume that Gymnasium school students will take a more positive attitude towards study. Nevertheless, our results have shown that attitudes towards study are more positive for students of Medical school, and study is then more demanding for them.

We believe that this result is due to the motivation of students for the chosen field of study. Students of Medical school are also more likely to be motivated to acquire knowledge and skills which are useful for their future profession.

In the research, we could not focus on the breadth of the attitudes to study and their predictors. We did not examine variables, such as the student's value orientation or the personality of the teacher. It is true that our research investigation has not been revealed in all its parts. In addition to some of the new

findings which emerged, it confirmed some not so old findings as well. On the basis of our findings, we would like to state that secondary school students have their attitudes to study influenced by personality dispositions, current school performance, attitude to the studied field and factors of family environment.

The main output of empirical research is represented by a model of variables that form students' attitudes towards study. It brought the answer to the students' attitudes to study

at two types of secondary schools and allowed to summarize current knowledge and formulate conclusions about these attitudes and their predictors. The survey has also enriched the knowledge of which independently selected variables affect students' attitudes towards study.

Our aim is to highlight the issues of attitudes towards study and the formative influence of some phenomena. Student's attitudes to study are therefore a dynamic phenomenon which changes and responds to changes in the personality structure as well as to the external influences of the environment.

Comparisons of two different types of secondary schools in terms of attitudes emerged. Further work should go to the sphere of the teacher's activities, to the expansion of their knowledge and skills in the development of positive attitudes to study. An important step is the development of the teacher's diagnostic competence. This is related to the equipment of teachers by diagnostic tools, which will then enable more targeted action in this area. For pedagogical work, the teacher's skill is to reveal psychosocial factors that are reflected in student education. |

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