

## Attitude toward School and Learning and Academic Achievement of Adolescents

Marcela Verešová<sup>a\*</sup>, & Dana Malá<sup>a</sup>

\* Corresponding author: Marcela Verešová, mveresova@ukf.sk

<sup>a</sup> Constantine the Philosopher University in Nitra - Faculty of Education - Department of Educational and School Psychology, Nitra, Slovakia, mveresova@ukf.sk; +421 37 6408 278

### Abstract

In the paper we highlight the significance of attitudes toward school and learning (ATSL) as a significant predictor of academic achievement. We also looked for an answer to the question whether there are intersexual differences in attitude toward school and learning in adolescents. The sample consisted of 269 adolescents studying at secondary schools (146 girls, 123 boys). Among adolescent boys and girls we noted significant differences in the ATSL in favour of a more positive ATSL for girls ( $t=-2.862$ ,  $p=.005$ ). The analysis of the internal components of ATSL shows significant differences between girls and boys in cognitive component ( $t=-3.044$ ,  $p=.003$ ) and behavioural component ( $t=-4.299$ ,  $p=.000$ ) of ATSL (more positive attitude among girls). We identified a significant relationship between ATSL and GPA ( $r = -.312^{**}$ ,  $p = .000$ ). We have found that the more positive is the ATSL of adolescents, the more positive is academic achievement expressed by GPA at the end of the school year. Analysing the relationship of the components of ATSL we have established the identical findings that there is a significant relationship between affective component and GPA ( $r = -.267^{**}$ ,  $p=.000$ ), between behavioural component and GPA ( $r = -.265^{**}$ ,  $p=.000$ ), and between cognitive component and GPA ( $r = -.276^{**}$ ,  $p=.000$ ). In the field of predictive relationship we note that the attitude toward school and learning is an important predictor of academic achievement ( $R^2=.098$ ,  $\beta = -.312$ ,  $t=-5.373$ ,  $p=.000$ ).

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**Keywords:** Attitude toward school and learning, academic achievement, grade point average, adolescent.

### 1. Introduction

An attitude is "a relatively enduring organization of beliefs, feelings, and behavioural tendencies towards socially significant objects, groups, events or symbols" (Hogg & Vaughan, 2005). Attitudes structure can be described in terms of three components: affective component (involves a person's feelings / emotions about an attitude object), behavioural (or conative) component (the way the attitude

we have influences how we act or behave) and cognitive component (involves a person's belief/knowledge about an attitude object). This model is known as the ABC model or three component model of attitudes (for example Rosenberg & Hovland, in Fishbein & Ajzen, 1975, Výrost, 1989, Hogg & Vaughan, 2005, and others).

The attitude towards school and learning, reflecting the ABC model of attitudes, is understood as beliefs, thoughts and opinions about school and learning in it, emotions and a relationship towards school and learning built upon feelings, and a tendency to behave in accordance with favourable and unfavourable experiences with school and learning. Certainly, this structure is strictly linked with further constructs that could be classified as cognitive and non-cognitive foundations of learning and academic achievement. Attitudes towards school and learning are associated with academic achievement. Students with poor academic performance have a more negative attitude towards learning and believe that school and learning will not help them being successful in the future (Candeias, Rebelo & Oliveira, 2010). Marks (1998) conducted a wide-ranging research, where he studied attitudes of students, teachers, parents and school administration towards the school environment, changes in attitudes over 10 years and the impact of attitudes on the sense of success. The vast majority of respondents agreed that school should provide a stimulating environment, where students feel comfortable and safe, are satisfied with their teachers and derive joy and pleasure from learning. School environment should, therefore, facilitate academic achievement. When examining the quality of school environment students expressed a positive attitude, felt successful as students and agreed that school will prepare them for the future. A study on attitudes over time indicates a moderate decline of attitudes towards school and teachers. This decline is presumably affected by decreased satisfaction young people feel towards institutions in general, media communications about issues in the educational system, different profiles of teachers and their teaching techniques. The main factors influencing attitudes of students towards school include the subjects learnt, policy and requirements of an individual school.

Academic achievement of a student is the ability of the student to study and remember facts and being able to communicate his knowledge orally or in written form even under examination conditions. Secondary education plays a crucial role in laying the foundation for the further education of students. If a good foundation is laid at the secondary school level, students can better cope with the challenges of life and profession with great ease (Kpolovie et al., 2014). Academic success is one of the most widely used constructs in educational research and assessment and it's often wrongly confused with the term academic achievement. Based on the analysis and findings of York, Gibson & Rankin (2015), the academic success is inclusive of academic achievement, attainment of learning objectives, acquisition of desired skills and competencies, satisfaction, persistence, and career success. Their results also indicate that grades and GPA are the most commonly used measure of academic success, but it is incorrect. Grades and GPA represents academic achievement not the academic success.

According to Sejščová (2006) an important factor contributing to good results of students in individual subjects is their attitude towards them. Pavelková & Prochádzková (in Sejščová 2006) indicate that an attitude towards a subject reflects a measure of popularity that, in turn, reflects a tendency to undertake actions required by the subject and the satisfaction gained from these actions.

Kubiatko (2013) argues that if attitudes towards a subject and school are positive, also the achievement of students gets better. The achievement of a student could be defined as individual progress, improvement in terms of acquired knowledge, skills and competences. Many teachers, as is apparent from the study of Holúbková & Glasová (2011) associate academic achievement with a positive attitude of a student towards school that may not be necessarily reflected in excellent achievements, although it will be reflected in producing the best individual performance in relation to a student's dispositions. Academic achievement should be also analysed in a relation to a student's attitude towards learning and school, as it ensures internal motivation for providing better performance.

The study of Fisher, Schult & Hell (2013) indicates that girls during adolescence are more motivated to learn compared with their peer boys, which is also reflected in results of their learning. Candeias, Rebelo & Oliveira (2010) note that girls seem to have more positive attitudes toward school, while boys are less motivated and have more negative attitudes toward school.

Relying on existing findings and results of researches we assume that: 1. Attitude towards school and learning (ATSL; and its individual components consistent with the ABC model) is significantly related to academic achievement expressed as GPA, 2. Attitude towards school and learning (ATSL) is a predictor of academic achievement (AA: GPA), 3. Girls during adolescence have more positive attitudes towards school and learning (ATSL) compared with adolescent boys.

## **2. Methods**

### *2.1. Instrument*

We used a Questionnaire of attitude toward school and learning developed by us, which consisted of 30 items (10 items of affective component, 10 items of behavioural component and 10 items of cognitive component) to which the adolescents answered on a 6 point scale (1 = definitely disagree, 2 = mostly disagree, 3 = partially disagree, 4 = partially agree, 5 = mostly agree, 6 = definitely agree). The reliability of the whole scale (30 items) was Cronbach's alpha = .822, affective component Cronbach's alpha = .682, behavioural component Cronbach's alpha = .636 and cognitive component Cronbach's alpha = .644.

Academic achievement (AA) was measured by GPA (all study subjects at the end of the school year 2014/2015) and in 3 study subjects (the year-end mark on the report card in Mathematics, Slovak language, English language).

### *2.2. Participants*

The sample consisted of 269 adolescents studying at secondary schools in the Slovak Republic (123 boys, 146 girls) aged from 17 through 19 years (mean age 17.69).

### 3. Findings

**Table 1.** Academic Achievement and Attitude toward School and Learning of Adolescents: Descriptive Statistics

Variable	Minimum	Maximum	Mean	Std. Deviation
AA: GPA	1	3.42	1.91	.57
AA: English language	1	4	2.06	.93
AA: Slovak language	1	4	2.35	.88
AA: Mathematics	1	4	2.49	1.03
ATSL	67	158	113.32	17.63
ATSL: affective component (A)	16	53	33.19	7.64
ATSL: behavioural component (B)	16	58	38.80	5.96
ATSL: cognitive component (C)	16	53	41.32	6.83

**Table 2.** Correlation Analysis of Academic Achievement and Attitude toward School and Learning

		ATLS	ATSL: A	ATSL: B	ATSL: C
AA: GPA	Pearson Correlation	-.312**	-.267**	-.265**	-.276**
	Sig.	.000	.000	.000	.000
AA: English language	Pearson Correlation	-.201**	-.297**	-.160**	-.158**
	Sig.	.001	.000	.009	.010
AA: Slovak language	Pearson Correlation	-.307**	-.237**	-.306**	-.261**
	Sig.	.000	.000	.000	.000
AA: Mathematics	Pearson Correlation	-.342**	-.246**	-.344**	-.308**
	Sig.	.000	.000	.000	.000

The results of our research in terms of analysis of relations between academic achievement of adolescents and their attitudes towards school and learning (Table 2) allow us to conclude that:

- Academic achievement of adolescents expressed by GPA strongly correlates with the attitude towards school and learning ( $r=-.312$ ,  $p=.000$  – the correlation coefficient is negative, because lower scores in GPA reflect better academic achievement and higher scores in ATSL reflect a more positive attitude towards school and learning) and with all three components of an attitude (ABC), which confirms our hypothesis 1,
- Academic achievement in mathematics expressed by the end-year mark on the report card strongly correlates with the attitude towards school and learning, including all its components (the ABC model of attitudes),
- Academic achievement in Slovak language expressed by the end-year mark on the report card strongly correlates with the attitude towards school and learning, including all its components (the ABC model of attitudes),
- Academic achievement in English language expressed by the end-year mark on the report card strongly correlates with the attitude towards school and learning, including all its components (the ABC model of attitudes).

**Table 3.** Model Summary: Dependent Variable - AA: GPA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Predictor: ATSL	.312 <sup>a</sup>	.098	.094	.539
Dependent Variable: AA: GPA				

**Table 4.** ANOVA: Dependent Variable - AA: GPA

Variable		Sum of Squares	Df	Mean Square	F	Sig.
Predictor: ATSL	Regression	8.402	1	8.402	28.869	.000 <sup>a</sup>
	Residual	77.709	267	.291		
	Total	86.112	268			

**Table 5.** Coefficients: Predictor: ATSL

Variable	Unstandardized Coefficients		Mean Square		Sig.
	B	Std. Error	Beta	t	
Predictor: ATSL (Constant)	3.050	.214		14.230	.000
attitude toward learning	-.010	.002	-.312	-5.373	.000

Our aim in this research was to identify, whether the attitude towards school and learning is a significant predictor of academic achievement of adolescents (expressed by GPA). Regression analysis of the independent variable – attitude towards school and learning for prediction of the dependent variable – academic achievement showed that the attitude towards school and learning predicts academic achievement (tables 3-5). The value of the coefficient of determination is  $R^2 = .098$ . The regression beta coefficient is  $-.312$ . We have found out that 9.8% of the variance of scores of academic achievement – the dependent variable – were explained by the predictor – the attitude towards school and learning of the group of adolescents ( $t=-5.373$ ,  $p=.000$ ). Based on the results presented above we thus confirm our hypothesis 2.

**Table 6.** Intersexual Differences in Academic Achievement and Attitude toward School and Learning of Adolescents

	Gender	N	Mean	Std. Deviation	T-test	Sig.
AA: GPA	Male	123	1.93	.56	.401	.689
	Female	146	1.89	.57		
AA: English language	Male	123	2.09	.95	.424	.672
	Female	146	2.04	.92		
AA: Slovak language	Male	123	2.49	.87	2.334	.020
	Female	146	2.23	.87		
AA: Mathematics	Male	123	2.58	1.11	1.252	.212
	Female	146	2.42	.95		
ATSL	Male	123	110.01	17.79	-2.862	.005
	Female	146	116.10	17.05		
ATSL: A	Male	123	32.89	7.83	-.588	.557
	Female	146	33.46	7.50		
ATSL: B	Male	123	37.16	5.97	-4.299	.000
	Female	146	40.19	5.60		
ATSL: C	Male	123	39.96	6.93	-3.044	.003
	Female	146	42.47	6.55		

The results of our research on intersexual differences among adolescent students (Table 6) allow us to conclude that:

- Adolescent girls manifest a significantly more positive attitude towards school and learning compared with boys ( $t=-2.862$ ,  $p=.005$ ), which confirms our hypothesis 3,

- There are no significant intersexual differences among adolescents in terms of emotional feelings and emotional relationship with school and learning ( $t=-.588$ ,  $p=.557$ ),
- Girls have a significantly more positive opinions, beliefs, thoughts and ideas about learning and school compared with adolescent boys ( $t=-3.044$ ,  $p=.003$ ),
- Girls express a significantly stronger tendency to act in accordance with school requirements, obligations and demands compared with adolescent boys ( $t=-4.299$ ,  $p=.000$ ),
- Academic achievement expressed by GPA at the end of the school year of adolescent girls is significantly better than academic achievement of adolescent boys,
- Academic achievement expressed as the end-year mark on the report card in Slovak language (native language) is significantly better among adolescent girls compared with adolescent boys ( $t=2.334$ ,  $p=.020$ ),
- Between boys and girls in terms of the end-year mark on the report card in Mathematics and English language there is no significant difference.

#### **4. Discussion and Conclusion**

In the research we highlight the significance of attitudes toward school and learning as a significant predictor of academic achievement. We based our research on existing knowledge of the theories and research, which established the existence of the relationship between attitudes and behaviours and declared usefulness of knowledge about the human attitude in prediction of human behaviour (for example Fishbein, & Ajzen, 1975, Výrost, 1989, Kpolovie et al., 2014, and others). Critically, in the relation to this knowledge, we have realized that an attitude alone is not the only predictor of the human behaviour, but our main research objective is to verify that the attitude toward learning expressed by the ABC model (affective, behavioural and cognitive component of attitude) predicts adolescents academic achievement in terms of grade point average (GPA).

We have found out that the attitude towards school and learning significantly predicts academic achievement. This finding fits the concept of positive orientation toward school which was conceptualized by Jessor et al. (1995), while the positive orientation toward school is one of nine protective factors in adolescent problem behaviour. The positive orientation toward school scale was based on two dimensions: how much students report liking school, and the extent to which students value academic achievement. Students with the higher positive orientation toward school are respectful to school rules, and their personal goals are in line with the school goals (Jessor et al., 1995). A significant relation between the concept of attitude towards school and learning and academic achievement was established also by Ak & Sayil, (2006), Newton & Mwisukha (2009) and Geddes, Murrell & Bauguss (2010).

Academic achievement of adolescents in individual key subjects – Mathematics, English language (as a foreign language) and Slovak language (as a native language) remains in a strong relation to the attitude of adolescents towards school and learning. We have established that the more positive are the emotional feelings and relations with school and learning of adolescents, more consistent are their tendencies to act in accordance with school requirements, obligations and demands and the more positive beliefs, opinions, thoughts and ideas about school and learning they have, the better is not only

their general academic achievement, but also they obtain better results in subjects such as Mathematics, Slovak language and English language.

We have confirmed the assumption that adolescent girls have more positive attitudes towards school and learning compared with boys of the same age. Although Fisher, Schult & Hell (2013) linked the motivation for learning and learning outcomes with differences between genders, indicating higher motivation and better results among girls, we have identified no significant difference in favour of girls in terms of GPA. Similarly we have detected no differences in learning results between adolescent girls and boys in Mathematics and English language. The only significant intersexual difference we have observed in terms of academic achievement was Slovak language and this difference was in favour of adolescent girls.

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