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Determinant factors of students' attitudes toward learning

Valerica Anghelache *

„Dunărea de Jos” University of Galați, Teacher Training Department, Gării Street, Galați, 800003, Romania

Abstract

In specialized literature the issue of students' mentality is analysed in relation to their attitudes. Some authors believe that the students' attitude towards learning is influenced by the characteristics of the classroom environment (Fabunmi, 2007), or by students' commitment and acceptance of tasks (Riaz, 2011). The paper aims at discussing Romanian students' ways of thinking about learning and the factors that influence them. It is based on experimental research conducted on a group of 200 subjects, all students from various faculties of “Dunărea de Jos” University of Galați, Romania. A questionnaire was prepared with the aim of determining the students' ways of thinking about learning. Among the methods of statistical assessment used, the following could be mentioned: frequency analysis, to illustrate the composition of the group of subjects; the calculation of the median for students' ways of thinking about learning as variables; Pearson's correlation coefficient, to verify the correlation among such variables as students' ways of thinking about learning, personal involvement factors, purpose, etc. Partial results seem to indicate the fact that students' ways of thinking about learning are influenced by such factors as: involvement, purpose, achievement, etc. Students react differently to school tasks: some lay stress on involvement for successful educational outcomes, while others believe that success can be achieved in other ways as well.

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1. Introduction

Specialists in the field of education have shown more and more interest in issues related to the learning process. Most of the studies produced by both psychologists and teachers have attempted to identify the factors that determine the learning process and to highlight possible relations among elements related to the quality of education, the teaching strategies used in the classroom and the quality of pupils' and students' performance. For example, Brazdău and Mihai (2011) attempted to demonstrate to what extent the level of consciousness may be a determining factor for students' academic performance. The results of their research seem to indicate that there is no significant level of correlation between the value of students' Consciousness Quotient (CQ) and that of their Intelligence Quotient (IQ). According to the authors, this suggests that CQ and IQ are entirely different psychological constructs (CQ is a non-cognitive predictor of academic performance). Differences occur in terms of performance. Thus, students with higher IQs are more likely to have better performance. Similarly, subjects with a

* Tel.: + 40 722 163254

E-mail address: vali_ang@yahoo.fr

high CQ can get better results in exams, as compared to subjects who have low levels of CQ. Therefore, when discussing performance, statistical analyses reveal a correlation between CQ and IQ, IQ being, though, considered a more relevant predictor. In order to highlight the relation between academic success and the personality factor, Bishop et al. (2007) conducted a study in which they correlated students' personality, measured by the Myers Briggs Type Indicator, and their academic performance after going through an e-learning course. The results obtained have indicated that personality factors do not clearly relate to academic success. Thus, if self-directed learning and personality style relate to student characteristics, in the case of school performance the analysis of other factors affecting this performance must be also taken into consideration.

A study conducted by Riaz et al. (2011) highlights the fact that perception and performance are dependent on the students' perception of the type of learning in schools. Thus, in the case of e-learning, students accept tasks more easily and are more involved in the learning process. Nonetheless, as the authors point out, it is difficult to establish that this type of learning is actually a factor that influences the learning process for a longer period of time.

Another interesting study was conducted by Fabunmi (2007). It highlighted the role of the classroom factors (size, space, the relationship student-classroom) in determining academic performance. The results prove that, when these factors are considered in interaction, student performance changes significantly.

2. Research design

2.1. Objectives and hypotheses

Starting from the results indicated in specialized studies, our research has aimed primarily at:

- a) highlighting the factors that determine students' ways of thinking about the learning process;
- b) establishing the relation between the factors that determine students' ways of thinking about learning and school performance.

More often than not, important differences have been noticed in students' reference to school tasks and the learning process in general.

In order to make these objectives operational, we have started from the following hypotheses:

1. Students' ways of thinking about learning can be related to personal involvement, purpose and personal achievement factors.
2. Depending on school performance, there are significant differences in involvement, purpose and personal fulfillment.

2.2. Methodology (participants, procedure, tools)

The SPSS16 software was used for the statistical processing of the results obtained. Mention should be made of the fact that this empirical study did not aim at any form of experimental manipulation. The research was conducted between November 2011 and February 2012 on a group of 200 subjects, all students at various faculties of "Dunărea de Jos" University of Galați. In terms of the performance criterion, the group is made up of 100 students who were granted scholarships and 100 students who were not. The average age of the subjects is 27.7 years old. Throughout our research, we have focused on the following *variables*:

- E *Students' ways of thinking about learning* - defined as attitudes towards the learning process, obvious in individual behaviour and marked by cognitive-affective restructuring.
- E *Students' school performance* (academic success)
- E *Personal involvement* – the attitudinal dimension characterised by dynamism, which requires endeavouring to improve academic performance;
- E *Purpose* – the attitudinal dimension which aims at improving the efficiency of the learning process;
- E *Personal achievement* – the attitudinal dimension that requires cognitive efforts directed to personal development and objective achievement.

The final version of the questionnaire comprises 20 items, structured on three dimensions: personal involvement, purpose and personal achievement. Response options are from 1 to 7, where "1 = total disagreement" and "7 = total agreement".

The *personal involvement factor* groups items 3, 4, 5, 6, 9, 11, 12, 13, 14, 15, 17, 18, and 19. High scores for this factor are obtained by subjects who consider that involvement in the school tasks and in the learning process in general is not necessary, as simply being a student is enough to feel fulfilled. The Cronbach alpha coefficient obtained is $\alpha = 0.87$.

The *purpose factor* groups the items 7, 8, and 20. The subjects who get the highest scores are the ones who identify in the learning process a way to achieve certain goals. The Cronbach alpha coefficient obtained is $\alpha = 0.90$.

Personal accomplishment factor groups items 1, 2, 10, and 16. The subjects with high scores for this factor consider learning a fundamental variable in the achievement of success and superior performance, both in education and life. The Cronbach alpha coefficient obtained is $\alpha = 0.68$.

2.3. Data processing, results

In order to check the validity of the *first hypothesis*, we have tried to establish if there are significant differences between the ways of thinking about learning variable on the one hand, and the involvement, purpose and achievement variable, on the other hand. To this effect, we have calculated the Pearson correlation coefficient. The statistical analysis of the results confirms that there is a statistically significant negative correlation between the ways of thinking about learning variable and the personal involvement variable ($r = -0,220, p < 0.01$). After analyzing the significance of the two variables and the results obtained, we have concluded that the subjects who obtained high scores on the ways of thinking about learning variable consider involvement as being very important and absolutely necessary (they acquire very low scores). In other words, given the significance of the personal involvement factor in our research, there is a correspondence between the scores obtained in regards to the mentality variable and the scores obtained in regards to the involvement factor. As r is an expression of the effect extension, by reference to the criteria of Cohen (1988), it results that the relationship between mentality and involvement is very strong.

Moreover, the statistical analysis of the results confirms that there is a statistically significant positive correlation between the ways of thinking about learning variables and the purpose variables ($r = 0,575, p < 0.01$), and between the ways of thinking about learning variables and the personal achievement variables ($r = 0,559, p < 0.01$) (Table 1). Therefore, we have concluded that the students who obtained high scores in regards to the ways of thinking about learning, also tend to get high scores in purpose and achievement, and vice versa.

Table 1. Pearson correlation coefficients in relation to ways of thinking about learning and personal involvement, purpose and personal achievement variables

Variables	1	2	3	4
1. Ways of thinking about learning	-	-.220**	.575**	.559**
2. Personal involvement		-	-.912**	-.917**
3. Purpose				.954**
4. Personal achievement				

** $p < 0.01$

Analysing the results collected, we have concluded that the students’ positive ways of thinking about learning are reflected in their need to be involved in the successful accomplishment of tasks, in the achievement objectives through personal effort. Thus, we may conclude that the initial hypothesis is confirmed.

As far as the *second hypothesis* is concerned, we have tried to essay the effect of the performance variable on the personal involvement, purpose and personal achievement variables. To this effect, we have applied the ANOVA One-Way method. Based on the results obtained in the statistical analysis, significant differences have been found in accordance to school performance in terms of involvement in the learning process [$F(1, 198) = 1.614, p < 0.001$], purpose [$F(1, 198) = 3.120, p < 0.001$] and personal achievement [$F(1, 198) = 4.171, p < 0.001$].

In order to check to which groups are the differences more significant, we have applied the t test for independent samples. The results obtained are presented below.

a) There are significant differences between students with school performance (with scholarships) and students without distinct school performance (without scholarship) in regards to the personal involvement in learning [$t(198) = 40.175, p < 0.001$] (table 2).

Table 2. The results of the t test for comparing the averages for the variable personal involvement in relation to the school performance variable

Variables	n	M	SD	t	df	p
Personal involvement				-40.175	198	0.00
Students with high school performance	100	2.8731	0.22390			
Students with low school performance	100	4.2562	0.26150			

Consequently, students with high school performance score averagely less in personal involvement (in inverse ratio) ($M_1 = 2.8731$) as compared to students with modest scores in the category of performance variable ($M_2 = 4.2562$). Therefore, students with good academic results are much more involved in school performance and learning as compared with subjects with low school performance.

b) There are significant differences between students with high school performance (with scholarship) and students with low school performance (without scholarship) with regard to the purpose variable [$t(198) = 55.854, p < 0.001$] (table 3).

Table 3. The results of the t test for comparing the averages for the variable purpose in relation the school performance variable

Variables	n	M	SD	t	df	p
Purpose				55.854	198	0.00
Students with high school performance	100	6.5033	0.46781			
Students with low school performance	100	2.6733	0.50136			

Consequently, students with high school performance score averagely higher in the purpose variable ($M_1 = 6.5033$), as compared to students with low performance ($M_2 = 2.6733$). Therefore, students with high school performance make learning a priority, as compared to students with low school performance.

c) There are significant differences between students with high school performance and students without remarkable school performance in regards to the personal achievement variable [$t(198) = 64.582, p < 0.001$] (table 4).

Table 4. The results of the t test for comparing the averages for the variable personal achievement in relation to the school performance variable

Variables	n	M	SD	t	df	p
Personal achievement				64.582	198	0.00
Students with high school performance	100	5.3150	0.26500			
Students with low school performance	100	2.6025	0.32585			

Consequently, students with high school performance score averagely higher in the personal achievement variable ($M_1 = 5.3150$), as compared to the ones with low performance ($M_2 = 2.6025$). Therefore, they consider that it is only through learning that they can attain success and feel accomplished.

Taking all the above mentioned into consideration, we may conclude that this hypothesis can also be confirmed.

3. Discussions and conclusions

It is compulsory to emphasise that one of the objectives of the research has aimed at pinpointing the ways of thinking about learning in the case of the students of „Dunărea de Jos” University of Galati (Romania). If some

studies have shown that learning is determined by the pupils' level of consciousness, students' personality or the classroom factor, our research has showed that students' ways of thinking about learning are strongly correlated with factors such as: personal involvement, purpose and personal achievement. Our results have indicated that the students who obtain high scores in the *ways of thinking about learning* variable are very involved in this process. In contrast, students who obtain low scores in the *ways of thinking about learning* variable are significantly less involved in this activity. Moreover, the purpose and personal achievement factors are strongly correlated with the *ways of thinking about learning*.

Another objective of the research was to establish the factors that determine the students' ways of thinking about learning and school performance. The results obtained by statistical analysis of the data show that there is a statistically significant interrelationship between attitude, performance and the other three factors. The statistical analysis has showed that students who have positive ways of thinking about learning and get involved in activities achieve higher academic performance than those who make minimal efforts in this regard. Thus, students with good results believe that learning provides satisfaction, and just being a student is not enough to feel fulfilled. They are willing to take on additional tasks and condemn superficiality in school tasks. They set specific goals for learning, aiming at acquiring new knowledge and not just at completing a routine activity, and strive for excellent school performance. In addition to this, students with high school performance consider learning a way towards personal development. This ensures their personal achievement and success in life.

Nonetheless, our research has certain limitations. One is the fact that the group of subjects is insignificant in relation to the number of students in the "Dunarea de Jos" University of Galati. From this perspective, we can extrapolate the results to the entire school population. We assert that this research is just the first step in a broader research we intend to pursue, and we aim at highlighting the multiple correlations between various aspects regarding learning and school performance.

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