

LEARNING HABITS AND SUCCESS OF HIGH SCHOOL STUDENTS IN BIOLOGY

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ABSTRACT

The aim of this research was to determine learning habits among highschool students and to determine the differences in learning habits among the students of different sex and curriculum. This research was also trying to determine whether the correlation, between learning habits and students' success exists. It was carried out during school year 2016/2017 and comprised 73 students of second grade of Ruđer Bošković technical school and natural sciences program grammar school in Osijek divided into four groups (female students with gymnasium curriculum, male students with gymnasium curriculum, female students with ecological technician curriculum and male students with ecological technician). The research consisted of a written exam and determining learning habits individually by a survey. It was determined that students with gymnasium curriculum had better results in the written exam than ecological technician students. It was determined that there was correlation of everyday learning habits with success in the exam with gymnasium students. Correlation of comparing learning material and subjects and success was determined with female student's ecological technician, and correlation of determining the meaning of unknown word from the text and success was determined with female students with gymnasium curriculum.

Keywords: *deductive learning, inductive learning, learning habits, student's success*

INTRODUCTION

Many studies (Fazal and associates, 2012, Demir and associates. 2012, Nouhi and associates. 2012, Awang and Sinnadurai, 2011, Crede and Kuncel, 2008, Nagaraju, 2004) deal with the influence of non-cognitive factors such as habits and opinions during studying on students' accomplishments. Nagaraju (2004) emphasizes the importance of the students' habit and attitude on academic accomplishment. A habit is a behavioral pattern which the student uses while studying, while an attitude is a positive approach towards the act of studying, the acceptance and approval of the higher goal of education (Crede and Kuncel, 2008). Accordingly, it can be said that students' habits and attitudes are defined by the ability of time management, method choice, attitudes towards education and teachers and the acceptance of education.

The aim of the conducted research is to question the studying habits with highschool students and to establish if there are any differences in studying habits between students of different sexes and program (gymnasium program and ecological technicians program) and establish if there is a correlation between those habits and accomplishments.

METHODS

73 sophomore students of gymnasium program and ecological technicians were a part of this research. The sample of students was divided into 4 groups. The first group was made of 32 gymnasium students, the second group of 18 gymnasium students, the third group of 15 ecological technicians and the fourth group of 8 ecological technicians.

The research had 2 stages. The first stage was the conduction of written tests to establish the difference among the groups of different students in their knowledge of vegetable realm. i.e. living environment, processes, adaptation and interaction.

The normality of numeric variables distribution was tested using Shapiro-Wilk test. Kruskal-Wallis test was used since numeric data doesn't have a normal distribution of success evaluation, i.e. achieved success comparison in solving the written test between the groups of students.

The correlation of studying habits established with the survey and the students' accomplishment established with the written test was confirmed with Spearman correlation coefficient $\alpha = 0,05$. Statistical tests were conducted using the statistical package Statistics (12 Quest Software Inc., Aliso Viejo, CA, SAD).

RESULTS

Female gymnasium students scored the best result in written exams (the average number of points achieved was 8,36). Male gymnasium students were slightly weaker than female students of the same program (8,31). The lowest score was achieved by ecological technicians (4,86). Gymnasium students were statistically significantly better than ecological students ($U = 15,5$; $N_1 = 16$; $N_2 = 7$; $p = 0,007$).

Female ecological students achieved higher average score (6,75) than their male colleagues. This result can be interpreted given the studying habits questioned via the survey constructed for the purpose of this research. The correlation of studying habits and accomplishment is shown with the gymnasium students which shows that students' accomplishment drops with the increase of never and sometimes answers on the „I study every day“ question.

The reason why gymnasium students are better than ecological students regardless of this habit can be seen in the fact that there are no ecological students who study every day either often, almost always or always. By analyzing the answers to this question it can be seen that female students almost always or always study every day while male students don't which can show significant regularity in studying with female students rather than male students.

By analysing the question „I compare new materials with similar materials of other subjects“ it can be seen that gymnasium students evenly find that they sometimes and often compare new materials with similar materials while female students mostly find that they often compare new materials with similar material of other subjects. Unlike them, ecological students greatly find that they never compare new materials with similar material of other subjects. The reason for their lower score on the test can be found in the fact that the written exam was mostly understanding and applying elementary knowledge which finds linking similar and different contents very important.

Habits questioned with this question are correlated with the accomplishment of female ecological students. The increase of frequency of the answer never to this question leads to accomplishment drop established by the written exam. Reading literacy contributes to understanding the materials. It manifests in the correlation of „I am trying to determine the meaning of unfamiliar words in the text“ with gymnasium students accomplishments. The latter mostly find they try to determine the meaning of unfamiliar words in the text. The frequency of this answer contributes to the increase of their success.

By comparing the answers of all groups to the question „ I can assess my own work and progress“ it is noticed that none of the students find they can never assess their own work and progress. Male gymnasium students mostly often assess their work and progress while ecological students mostly always assess their work and progress. Equally, female gymnasium students can almost always and always assess their work and progress while female ecological students can sometimes and often assess their progress. Since the question itself doesn't specify how they assess their progress there is a possibility that students didn't understand the question. In practice, teachers and students use self-assessment and self-evaluation as indicators of greatness which lead to improvement of teaching process quality (Bezinović, 2003). Nevertheless, Croatian school system doesn't use methods of self-assessment due to the lack of objectivity according to the teachers (Ivanek, 1996). Still, encouraging self-assessment is of great importance for students for both taking the responsibility for their own progress and setting their own goals for the purpose of independence.

CONCLUSION

The conducted research shows that gymnasium students score better results in written tests than ecological technicians. The difference in answers of the poll among the groups has not been established. The correlation of habits of everyday studying with the success achieved in the tests is established with gymnasium students. The correlation of comparing materials between the subjects and accomplishments is established with ecological students while the correlation of habits of determining the meaning of unfamiliar words and accomplishments is established with gymnasium students.

This research shows the teachers a specific information of how students see the teaching process and the process of studying. Also, the survey can show problems and disadvantages in the teaching process which the teacher might not be aware of or hasn't noticed and which is also useful to every teacher reflecting on the teaching process and working on its improvement.

LITERATURE

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