Annual International Scientific Conference Early Childhood Care and Education, ECCE 2016, 12-14 May 2016, Moscow, Russia

Academic achievement in conjunction with defense mechanisms and the level of intellectual development in high school students

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Abstract

This article investigates the problem of interrelationship between schoolchildren's academic performance and their defense mechanisms. The article describes the author's diagnostic method of defense mechanisms and shows the sphere of its application, which is the diagnostics of high school students' defense mechanisms. The author analyzes the relationship between schoolchildren's academic performance, their defense mechanisms and intellectual development, which may cause learning resistance. Defense mechanisms originate and develop in early childhood; therefore the problem requires further investigation.

Keywords: psychological defense; personality defense; defense mechanisms; diagnostics; school performance

1. Introduction

Currently there are many studies in the field of educational psychology devoted to the research of the influence various psychological factors have on high academic results of students in secondary and higher educational institutions. Our study aims to examine the relationship between academic achievement and defense mechanisms [1] taking into account the level of intellectual development in high school students.

2. Method

The subjects were students of grades 9-11 at the secondary school "Podolsk Cadets Gymnasium" in Klimovsk, Moscow region (120 students, 68 girls and 52 boys). As a measure of academic achievement we took an arithmetic average of quarterly assessments, which were received by the students during two years of schooling.

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The high school students were conditionally divided into two groups: in the first group the indicator of academic achievement is below the group average score, in the second one it is above the group average score.

A short orientation test (SOT) was used to study the high school students' intelligence. To determine the examinees' individual defense mechanisms we used an individual defense mechanisms questionnaire (IDMQ), developed by V. A. Negriy and D. A. Titkov. The calculations were performed in SPSS 21.

3. Results and discussion

The correlation analysis ($p\leq0.05$) of all the data showed that high school students with the intellectual development level below the average score tended to use such defense mechanisms as "devaluation" (-0.234), "rationalization" (-0.289) and "moralization" (-0.204). The analysis showed no significant association between forms of defense mechanisms and the high level of intellectual development in high school students.

The correlation analysis between the actual academic performance of the subjects and the defense mechanisms they use, revealed that students with low grades were more likely to use defense mechanisms ($p\leq0.05$) such as "isolation" (-0.285), "rationalization" (-0.268), "splitting" (-0.260), "devaluation" (-0.211), " moralization " (-0.188) and "denial" (-0.197). These defense mechanisms are to some extent coincide with defense mechanisms used by respondents whose level of intellectual development is below the average score. This fact confirms a significant correlation between the students' intelligence level and academic achievement. High school students with high academic performance are more likely ($p\leq0.05$) to use such psychological defenses as "sublimation" (0.238) and a significant degree of "reversal" (0.187).

Summing up this study about students who fall into the "high" group due to the level of their intellectual development or the level of their academic performance, we may conclude that the correlation values are not at such a high level as in the "low" groups. In other words, the defense mechanisms in this case do not have such a fundamental effect as the intellect. But the influence of intelligence on academic achievement has been proven in other experiments and research, too. We assume that in this case the defense mechanisms, used by students with high academic performance reinforce their learning efficiency rather than cause it.

On the other hand, there is a reverse situation with students whose level of academic achievement is low. There are general patterns in the use of defense mechanisms among schoolchildren with low levels of academic achievement and the level of intelligence below the group average score. It is such psychological defense as "denial", "devaluation", "rationalization" and "moralization". Each of the defenses involves the "placing of the situation in a more favorable light". The "devaluation" defense leads to understating the value of certain achievements for themselves, reducing their desirability and necessity. The same things may occur in relation to praise by seniors, for example. In the "rationalization" and "moralization" the student will try to downplay his or her failures, which, one way or another, involves negative emotions and he or she tries to inflate the successes, making them more significant in his or her own eyes. "Denial", however, will manifest itself in a total disregard for school problems. All these results confirm the level of correlation that we found to exist between the level of intelligence and the level of academic performance in the respondents.

4. Conclusion

In this study we confirmed the association between the level of intelligence and the level of academic achievement of high school students; we also discovered a significant correlation between these two scales in this sample.

The study confirms that the students' defense mechanisms explain their level of academic achievement only for students with a low achievement level [2]. Thus, the theory about defense mechanisms as predictors of learning resistance [3], [4] applies only to students with a low achievement level. This can be explained by the

fact that a student with high achievement rates has low learning resistance. It also confirms that in line with the SOT results and indicators of academic achievement students from "low" groups have the same forms of defense mechanisms, and students from "high" groups do not have common defense mechanisms. The relationship was found to exist between academic achievement and IQ in the general group of the respondents.

Thus, we can conclude that the level of intelligence affects academic performance; this position has been proven by a number of other studies in psychology. The effect of high school students' defense mechanisms has also been proven. However, given the results of the relationship with intelligence we believe that the forms of defense mechanisms used by high school students with low academic performance have a direct impact on academic achievement, while for high school students with high academic performance it has a supporting effect. It is therefore necessary to pay special attention in further studies to students with low academic achievement because their personal characteristics such as defense mechanisms are important factors in the development of learning resistance and further decline of their educational activities.

References

[1] McWilliams, N. *Psychoanalytic diagnosis: Understanding personality structure in the clinical process*. New York: The Guilford Press. 1994.
[2] Negriy V. A. Psychological defence and school students' academic performance // *Procedia - social and behavioural sciences*. 2014. No. 146. P. 275–278.
[3] Negriy V. A. Psychological problems of learning resistance // *Procedia - social and behavioral sciences. — 2013*. No. 86. P. 116–121.
[4] Kovalenko M. L. The concept and phenomenon of resistance to training // *The Emissia. Offline letters*. – 2015. No 10. Art 2420.