The Study of the Relationship Between Personality and Academic Performance

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Abstract

Research showed that there are also non-cognitive factors responsible for high academic performance. Personality is now a relevant factor studied in relationship with academic performance. The study aims to identify the relationship between personality and academic performance using 80 participants aged between 22 and 28 who graduated university. We used EPQ to measure Neuroticism, Extraversion, Psychoticism; MBTI for the level of organization during activities and Rosenberg’s Self-Esteem Scale. Academic performance was evaluated by the final project grade and by the overall grade of the last academic year. Accurate identification of individual differences in academic performance has serious implications for education.

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1. Introduction

There is an international consensus that intelligence is an important predictor of academic performance. Still, recent research showed that there are also non-cognitive factors responsible for high academic performance: motivation, emotional intelligence, creativity and positive thinking. Along with these, personality is now an important factor studied in relationship with academic performance (e.g. Lesson, Ciarrochi and Heaven [15]; Heaven, Ciarrochi and Vialle [10]; O’Conner and Paunonen, [17]; Chamorro-Premuzic and Furnham [5]). Both intelligence and personality include individual differences that influence performance: intelligence - "what can do a person" - facilitates understanding and learning, and personality - "what will do a person" - helps or hinders these abilities (Chamorro-Premuzic and Furnham [3], p. 320). So aptitude testing shows what a person can do (maximum performance) and non-cognitive factors provide useful information about what a person will do
(typical performance) (Furnham, Monsen, and Ahmetoglu [8]). Recent research on personality and academic performance underline the influence of Eysenck’s three dimensions, and of Big-Five factors (Heaven, Ciarrochi and Vialle [10]). However there are sources suggesting that academic performance is not related only with the big dimensions of personality, but also with some secondary traits such as self-esteem (Lesson, Ciarrochi and Heaven [15]) or the degree of organization in activities – that equals the conscientiousness factor of the Big Five (Furnham [6]).

2. Aim of the study

Academic performance is considered an intellectual competence indicator. The purpose of this paper is to identify the relationship between personality and intellectual competence beyond psychometric approach of intelligence. We assumed that academic performance has a negative relation with Neuroticism, Extraversion and Psychoticism and a positive one with the level of organization during activities; and that there is a significant difference between the group with higher academic performance and the group with lower academic performance regarding self-esteem.

3. Method

We used EPQ to measure Neuroticism, Extraversion and Psychoticism; MBTI for the level of organization during activities (Judgment-Perception dimension) and Rosenberg’s Self-Esteem Scale. Academic performance was evaluated by the final project grade and by the overall grade of the last academic year. There were 80 participants aged between 22 and 28 who graduated university.

4. Results and conclusions

Recent studies on high-school students (Laidra, Pullmann and Allik [14]; Lesson, Ciarrochi and Heaven [15]; Heaven, Ciarrochi and Vialle [10]; Rindermann and Neubauer [19]) and academic students (Chamorro-Premuzic and Furnham [3], [4]; Furnham, Chamorro-Premuzic and McDougall [7]) discussed the importance of personality in predicting academic performance. The results of our study also support this influence (see Table 1, 2 and 3).

Table 1. Correlations between academic performance and Neuroticism, Extraversion and Psychoticism

<table>
<thead>
<tr>
<th>Personality dimensions</th>
<th>Final project grade</th>
<th>Overall grade of the last academic year</th>
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<tbody>
<tr>
<td>Neuroticism</td>
<td>-0.738*</td>
<td>-0.445*</td>
</tr>
<tr>
<td>Extraversion</td>
<td>0.214**</td>
<td>0.038</td>
</tr>
<tr>
<td>Psychoticism</td>
<td>-0.358*</td>
<td>-0.314*</td>
</tr>
</tbody>
</table>

* p < 0.01; ** p < 0.05

Thus, Neuroticism negatively influences the academic performance both in case of the exams’ short-time stressful conditions during the academic year and also in case of the final project which implies a long time preparation. This result is consistent with similar studies (e.g. Rutter [20]; Chamorro-Premuzic and Furnham [5], [3]; Poropat, [18]). Anxiety and emotional instability have little benefit in any field. Still, a low level of anxiety can stimulate task engagement. This however does not weigh in favor of neuroticism.

Extraversion is partially related to academic performance, according to other studies (Chamorro-Premuzic and Furnham [3]). Our study confirms this result. Thus, we found a weak relationship between extraversion and academic performance in the form of the finale project grade and no significant correlation with the overall grade...
of the last academic year. It should be noted that despite the previous results (Chamorro-Premuzic and Furnham, [5]; Furnham and Chamorro-Premuzic [4]; Eysenck, 1996, acc. Gilles and Bailleux [9]; Infante, Marin and Troyano [12]), this correlation, even if it has a low value, it is a positive correlation. This positive association can be best explained in terms of interpersonal skills because the graduation project requires a good collaboration with the teacher coordinator for at least 6 months. The correlation with the overall grade of the final academic year reveals that there is no significant relationship between extraversion and the performance during the entire final academic year. The relationship between extraversion and academic performance is controversial. Several studies have concluded that there is no reason to talk about a relationship between extraversion and academic performance (Heaven, Mak, Barry and Ciarrochi [11]; Ackerman and Heggestad [1]). Others suggest that extraversion is not clearly linked with academic performance or whether the correlation between these two variables is positive or negative. Studies have found both positive and negative correlations between this personality factor and academic achievements. The inconsistency of extraversion can be explained by two ideas. Firstly, extraversion can be a predictor of high academic performance because extraverts are more active, ask more questions, which can help them learn more effectively (Chamorro-Premuzic and Furnham [5]). Secondly, extraverts often have an active social life, and this can interfere with activities devoted to studying because the time spent for learning or documentation is reduced. For this reason, extraverts tend to have a higher number of absences in school. Introverts, by failing emphasis on socialization, have more time for themselves, time they can spend on studying (Chamorro-Premuzic and Furnham [3], [5]).

Psychoticism is negatively associated with academic performance. Present findings are consistent with other research results (Aluja-Fabregat and Torrubia-Beltram [2]; Chamorro-Premuzic and Furnham [3]). Negative relationship between psychoticism and academic performance is easily explainable because psychoticism refers to less adaptive behavior. Psychoticism negatively affects responsibility and interest for studying and thus, it is detrimental to academic results.

The Judgment-Perception dimension correlates with academic performance, as seen in Table 2 - results confirmed by other studies (Nyland, Ybarra, Sammut, Rienecker and Kameda [16]; Tieger and Barron-Tieger [21]). Therefore, an orderly and well-organized life affects academic performance. Students who set goals and strive to achieve them in a given time, who do not hesitate between different available options – in other words, students that have the characteristics of a person who prefers Judgment to the detriment of Perception dimension – they are likely to obtain higher academic results. A student who achieved high academic performance is normally an orderly and well organized individual with a rigorous program divided in such a way that deadlines are always met.

<table>
<thead>
<tr>
<th>The level of organization during activities</th>
<th>Final grade</th>
<th>Overall grade of the last academic year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Judgment</td>
<td>0.499*</td>
<td>0.441*</td>
</tr>
<tr>
<td>Perception</td>
<td>-0.524*</td>
<td>-0.477*</td>
</tr>
</tbody>
</table>

* p < 0.01

Our study showed that there are statistically significant differences between people with high academic performance and low academic performance regarding self-esteem (see Table 3). Self-esteem helps students to achieve high academic results, whereas a low self-esteem acts against academic performance (Joshi and Srivastava [13]). Students who have positive self-esteem do not feel inferior in relationship with others; they establish good relationships with others in terms of communication; they know boundaries; they easily makes changes, accept new things; they are aware that they do not know certain things, but they are willing to learn; they are able to minimize failures and to mobilize their energies; they offer others help, without being arrogant or cynical.
The interest for the academic performance predictors has been demonstrated by psychological research for over a century. The main objective of our study has been achieved and it supports the relationship between personality and academic performance. Accurate identification of individual differences in academic performance has serious implications for education. Therefore, understanding of personality dimensions can put students in the line of high academic performance. Knowing the student is a major theme in educational psychology. Without this knowledge of personality through appropriate methods, teaching process becomes difficult and ineffective both for teachers and for pupils (students).

Table 3. The difference in self-esteem of the two samples (low academic performance and high academic performance)

<table>
<thead>
<tr>
<th></th>
<th>Self-esteem</th>
<th>Overall grade of the last academic year</th>
</tr>
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<tbody>
<tr>
<td>N</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Chi-square</td>
<td>16,463</td>
<td>24,261</td>
</tr>
<tr>
<td>Asymp. Sig</td>
<td>0.000</td>
<td>0.000</td>
</tr>
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References


