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**ACADEMIC PERFORMANCE AND EDUCATIONAL SUCCESS:
RELATION TO PERSONALITY AND STUDENTS'
REPRESENTATIONS**

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Abstract

This study had two main purposes. First, to identify the links between the academic performance and emotional and personal features. Second, to discover students' representations about the educational success and the factors that contribute to it. The study consisted of quantitative and qualitative parts. In the quantitative part, participants completed the personality questionnaires (Big Five Questionnaire, State-Trait Inventory, Emotional Intelligence Questionnaire, Achievement Motivation survey etc.); the correlation coefficients of these measures with academic performance index were analyzed. In the qualitative part of the study, unstructured interviews were conducted with the respondents on the topic of their understanding of the academic performance. The significant correlations were detected only for achievement motivation and self-assessment measures. These results are not consistent with the existing research data but are consistent with the students' representations of educational success and its underlying factors. Students barely mentioned personality and emotional traits as important for learning. And they understand educational success as something more complex than just academic performance, i.e. achievements and grades.

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1. Introduction

Higher education quality issue is without a doubt a socially significant one. Since this quality depends not only on the characteristics of educational institutions and lecturers, but, perhaps even more, on the ability of the students themselves to learn, the factors that can contribute to successful students learning require detailed studies.

Numerous psychological characteristics of students are studied as factors related to the academic performance. There are not only cognitive abilities among them but emotional, motivational and personality variables as well. For example, self-regulation, achievement motivation, self-esteem, neuroticism, extraversion, anxiety, emotional intelligence, etc.

Typically, only one or two characteristics are taken into account in studies of the relations between academic achievement and personal characteristics. In this study we will try to analyze a larger number of characteristics at one. These are the following: self-evaluation of academic performance, self-efficacy in learning, the Big Five factors, achievement motivation and emotional intelligence. For each of these parameters there were many studies, which found their relation to academic performance. The results of many of them have already been summarized in meta-analytic studies.

In a meta-analysis of 53 studies on the relationship between academic self-efficacy and academic performance, a correlation of 0.33 was found (Honicke & Broadbent, 2016). It is moderate but nevertheless confirms the existence of overall connection. The authors argue that self-regulation and procrastination may be considered moderators and emotional intellect and neuroticism are mediators of this correlation.

In a meta-analysis summarizing the research of the Big Five factors in the context of educational achievements, it was found that such factors as Agreeableness, Conscientiousness, and Openness are related to academic performance (Poropat, 2009). The authors of another meta-analysis concluded that it is Conscientiousness that is the strongest predictor of academic performance (Ibrahim et al., 2014).

B. Seipp, who've done meta-analysis of studies connecting anxiety and academic achievement, emphasize that they produce very different results: from high negative to high positive correlations. As a result of the generalization, a correlation of -0.21 was found (Seipp, 1991).

Concerning emotional intelligence (EI), it was shown that students with high and low educational achievements differ in terms of general EI, as well as interpersonal EI (Parker et al., 2005).

2. Problem Statement

So, previous research show moderate correlations between motivational and personality variables and the academic performance, and these relations are reproduced at the level of meta-analysis. This speaks in favour of the fact that not only cognitive abilities, but also the personality can contribute to the students' academic achievements.

A different question, which should be posed in such studies is how to understand educational success. Is it appropriate to equate educational success and academic performance (academic achievement)? In most quantitative studies educational success is operationalized as academic performance measured by Grade Point Average (GPA), examination results, or final course grades.

However, there is another way to conceptualize educational success: with the support of a more psychological orientation to the subjective evaluation of the students themselves, their satisfaction. And this question is barely considered in the studies at all.

3. Research Questions

We tried to approach the question of educational success with an emphasis on its psychological aspect, which has been studied much less. Our goal was to find out what the students think about educational success and academic achievement and about factors, which can influence or determine it. Mainly we were interested in their views on psychological features as correlates of the educational success. Do the students themselves observe the relationship between academic performance and personality variables as it is found in psychological studies? What individual psychological factors make the learning process more or less difficult?

4. Purpose of the Study

There are two purposes in this research.

On the one hand, we try to replicate the results about relations of academic achievement and personality and motivational characteristics. We've tried to include all of personality variables mentioned above, while usually authors choose one specific feature.

On the other hand, we've tried to find out the students' representations about educational success and factors that influence it. Such approach to this topic was almost not used in other studies.

5. Research Methods

We decided that for our purposes the mixed study design would be appropriate. That's why the study contained two parts: the quantitative and the qualitative one.

5.1. Quantitative part of the study

The sample of quantitative study consisted of 76 participants, 88% females, with a mean age of 20.3 (SD=4.1). All participants were humanities students of different majors (including psychology). They received course credits for participation.

The students completed four surveys through on-line links.

In the first survey they were asked to indicate some demographic information (sex, age, the faculty etc.); impressions about learning (the most and the least interesting courses, the most and the least difficult disciplines etc.); information about final course grades for the previous semester; and finally to give a self-evaluation of their educational success compared with the fellow students and students overall. In addition, they were asked to assess their self-efficacy on academic achievement on a scale from 1 to 100 (Bandura, 2006) and complete the questionnaire of achievement motivation.

The other three surveys were the Big Five questionnaire (Costa & McCare, 1989), the State-Trait Anxiety Inventory (Spielberger et al., 1983) and EmIn Questionnaire (Emotional Intelligence) (Lyusin, 2009).

Students completed the surveys without specific time limits. In general participation took about 40-50 min.

Academic performance was calculated as the mean for all final courses grades for the previous semester as reported by students themselves.

5.2. Qualitative part of the study

The sample of qualitative study consisted of 9 students (3 males and 6 females) who filled in the surveys and agreed to participate in the next phase. The participation was voluntary.

We've conducted unstructured interviews. All of them began with a conversation about self-evaluation of the educational success and academic performance made earlier, and questions about the grounds for this evaluations. At the end of the interview we also gave the feedback on the questionnaires and found out whether, from the respondents' point of view, these indicators were relevant to the educational success. After the first interviews we'd summed up several topics and factors mentioned by respondents and asked the other participants about them (if they did not bring up these topics themselves – for example, about the role of the students group). Interviews took about 1 to 1.5 hours, all of them were conducted by one interviewer.

Interviews were recorded with the permission of the participants. Transcripts were analyzed by the qualitative content analysis method with inductive allocation of categories (Busygina, 2015): the transcripts were coded, then the primary codes were summarized in the categories. Primary codes were formulated as the main content of a small fragment of the text, expressed as close as possible to the language of the respondent himself. The generalization went mainly along two lines: an understanding of educational success (what is the educational success?) and representations about its determinants (what helps and what impedes a student to be successful in learning process).

6. Findings

6.1. Results of quantitative study

The Spearman's nonparametric correlation coefficients were calculated between all personality variables and academic performance measure.

The characteristics for which the significant correlations were found are: self-esteem of educational success compared with the fellow students ($r=0.557$, $p<0.0001$) and students in general ($r=0.505$, $p<0.0001$); self-efficacy on the academic performance ($r=0.296$, $p<0.01$), and achievement motivation ($r=0.236$, $p<0.05$). There are no significant correlations for all other variables. Moreover, the values for most of the remaining correlations were close to 0.

Our data are only partially (in relation to various types of self-assessments) consistent with the data of previous studies. Our participants, at least in part, were probably guided by their real grades assessing their educational successes in comparison with other students. It can be assumed that academic performance is an important parameter for students when they perceive the success of their education, even if they do not directly consider it. However, no other personal and emotional characteristics were associated with academic achievement in our sample.

6.2. Results of qualitative study

If we turn to the research of factors of academic success, as well as success in any other intellectual activity - the general intelligence and individual cognitive features would be its significant predictors. The role of intellectual factors in learning has become so "commonplace" that it is discussed and recognized not only in the professional literature (Neisser et al., 1996), but also in everyday discourses about the reasons for the differences in educational successes, where the intelligence is also called "the ability to learn". However, our respondents paid little attention to this factor. Only one respondent spontaneously linked the intelligence with the educational success, but he eventually concluded that talking about the intelligence (the mind) meant self-regulation and motivation. Another respondent started talking about more successful students as "smarter" one twice, but he immediately corrected himself, that it has nothing to do with intelligence. The other respondents briefly mentioned cognitive factors in two aspects. Typical models of these statements are: "Everyone can successfully learn, unless he has a pronounced intellectual decline (mental retardation, organic disorders)" and "The ability to catch on everything fast and remember everything from the first time makes it possible to be successful without effort, but these are special cases". There was no discussion of variations in the normal range at all. To the direct questions about the role of intelligence and abilities, respondents answered that these are not very important. One student noted that in some cases she was hampered by her "slow mind" (compared to "fast" in some other people), therefore she can not immediately navigate in some learning situations.

Our respondents also had almost no mention of personal dispositions. The only "trait" associated with the educational success and mentioned by three different respondents is self-confidence. This feature was important in one particular situation: speaking in the classroom in the presence of classmates. For one student, this fear of public speeches was not even as a trait, but a circumstance well overcome (because of the other students' silence she started to respond and nowadays usually answers first). For the other two respondents the lack of self-confidence presents a big problem, they note their difference from groupmates who do not experience such difficulties and consider themselves therefore less successful than they could be. Both emphasize that the answer to the teacher's questions per se does not frighten them, but in the presence of other students they are afraid to speak up. When we communicated the results on personality questionnaires to the participants ("Big Five", anxiety, emotional intelligence), they agreed that these variables are related to the educational success, but they also did not attach much importance to this.

6.2.1. Representations about educational success

The generalization of primary codes allowed us to identify four ways of understanding educational success by respondents. Some use only one, others have two or three views. Basically, students are able to compare them and indicate which one is the most meaningful for them personally.

The first way of understanding is based on academic achievement (grades, scores). Respondents either linked educational success with academic achievement, said that educational success is equal to academic achievements, or, on the contrary, emphasize that evaluations is not an efficient way to represent their educational success. In one case, the respondent immediately identified two understandings of success - "factual" (achievement and evaluations) and "well-being", "from oneself" (comprehensibility of the material, overall ease) - and noted that they may not coincide. But even those who first talk about success

only as an academic achievement, - further report that this is a very narrow approach, leaving behind the brackets a lot of important things, not allowing to capture important parameters of success. Among our respondents no one strictly and consistently adhered to an understanding of the educational success as high scores.

The second way of understanding educational success is pretty close to the first one: educational success is estimated by the acquisition of knowledge. Often it means "remembering the information", productivity in terms of "knowledge and skills". Sometimes the factor of novelty of information is emphasized; in other cases the emphasis is on pragmatics, on benefits for future professional activity.

The third understanding of educational success is also associated with acquisitions, but this is not just the acquisition of knowledge, but rather the development, advancement, (self) improvement. One of the respondents stressed that by getting new information in the learning process, he "assimilates it", which changes the perception of the profession and even thinking, and he tracks these changes as an indicator of success, estimates their pace.

The fourth idea of the educational success is pragmatic. The success of education is associated with professional activities. Respondents believe that it is possible to assess the educational success by whether a person has started a professional activity and got successful. This category also summarizes the statements of two respondents who, defining educational success, emphasize that has nothing to do with professional success. They indicate that one can successfully study without planning to get into profession, and unequivocally divide professional and academic success.

6.2.2. Factors of educational success

The second direction of the interview analysis is the students' presentations about the factors determining the success of the education. Initially we were interested in what one may call internal (personal) factors - if respondents identify their own psychological characteristics as important for their success. However, from the first interview it became clear that from the students' point of view, external factors play a big role. In subsequent interviews, this attention to the context in which learning takes place also manifested spontaneously. If the respondents did not talk about external factors themselves, we specified whether there is something that is not directly related to them, not directly dependent on them. Only three respondents (in terms of performance - the most successful) denied the essential role of such impacts. As for internal factors, they mentioned not dispositional features or stable individual, personal characteristics, but an attitude to learning.

6.2.3. Internal factors

Summarizing the primary codes, we found several categories describing the internal (that is, related to the students themselves and their personal features) sources of educational success. The main thing here was the interest in the chosen specialization. Only one respondent didn't mention this factor. For several people, interest was unambiguously described as a central factor. Basically, these are the students who've already had studying experience, and from their point of view it was not successful precisely because of a lack of interest (though sometimes accompanied by high academic achievement, in one case even higher than at present). Some respondents clarified during the conversation that they themselves should maintain

such an interest to make learning successful. Other respondents did not give it the leading significance, but explained that they memorize and absorb something, because it is interesting.

Another internal factor may be described as actions, putting efforts. For some of the respondents, this is not an intended method, but a simple consequence of the interest. For others, it is self-control and self-regulation. Some respondents see the possibility of not making efforts for success - but this is the most frequent case of "superpowers", when everything is caught on fast and remembered from the first time, by ear.

The third category of internal factors covers properties, the psychological traits. Among them the most often named ones are perseverance and purposefulness.

6.2.4. External factors

External factors of success, especially a large category of various life circumstances, were often called by our respondents in the first place. Working students referred to the difficulties of balancing study and work, some considered themselves to be less successful due to the workload, others were not quite sure if they would be able to cope with studying having a job. One respondent noted the strong impact of the work and problems associated with it as a factor of emotional burnout, making it difficult to learn successfully. The unemployed respondents believe that they are more successful, because learning is easier for them due to spare time (there were those who lowered their self-evaluation, correcting for classmates who manage to work and study). The eldest of the respondents (42 y.o.) said that her work experience and solvency help her to feel protected and enjoy learning, while for young classmates, finding a job and trying to keep it cause stress because of the novelty and unfamiliarity with the task.

Among other external factors participants mentioned commuting time (some respondents had long daily trips causing stress, one of the respondents explained that she had chosen a university close to her home), other activities (for example, hobbies), family problems, the possibility to do homework in silence.

Separately, among the external factors, the university itself as an institution is singled out. All respondents who mentioned this factor perceived it as a source of support: they like the campus and the atmosphere, they took it into account, choosing university, and now they are satisfied with the choice, they say it helps them to study.

The second large category of external factors is different others around. First of all, the influence is exerted by teachers, and this influence can be positive or negative. The overwhelming majority of spontaneous mentions of the role of teachers were in a positive light: how they treat students, interact in the classroom, their willingness to answer questions and to help understand, and mainly the manner of teaching. Interesting presentation of lecture material inspire, help to learn more successfully. Sometimes there were complaints about incomprehensible explanations, uninteresting presentations. Our respondents are not unanimous in assessing the role of the teacher: some of them believe that it is possible to master any subject at the expense of their own activity, including compensating for the incomprehensibility or lack of explanation by searching and studying literature.

Many respondents noted the importance of their groupmates. The level of classmates' proficiency either makes higher standards or make you feel successful against the backdrop. The team atmosphere,

friendly relations and mutual assistance were also mentioned. A number of respondents disagree, believing that they will be able to adapt in any group, assigning the main role to themselves.

7. Conclusion

The purposes of this study were: 1) to identify the links between the academic performance and emotional and personal characteristics; 2) to discover students' representations about the educational success and the factors that contribute to it.

The study consisted of two parts. In the quantitative part, the subjects completed the personality questionnaires; the correlation coefficients of these measures with academic achievement index were analyzed. In the quantitative part of the study, unstructured interviews were conducted with the respondents on the topic of their understanding of educational success.

The results obtained in the quantitative part of the study are poorly consistent with the results of numerous studies conducted by other authors, mentioned above: the correlations were found only for self-assessments and achievement motivation, all other characteristics ("Big Five" traits, anxiety, emotional intelligence) were not related to academic performance. This result is difficult to interpret, and at the statistical level can be explained by a small number of participants in the sample.

However, these results in a certain sense correspond to generalizations obtained during the qualitative part of this study, where it was shown that the students themselves rarely indicate in spontaneous answers such characteristics as important for the educational success.

Both the overall impression of the interviews and the qualitative content analysis of their transcripts show that the students' representations of educational success basically goes far beyond the limits of simple academic performance: mastering knowledge and skills in the program, entering the profession and self-development. This is typical for students with high and low academic achievement. Such factors of success as intelligence and personal characteristics, take a very modest place in the representations of the students themselves. The leading factors are internal factors, among which there is primarily an interest in the chosen specialization as well as external factors such as other people and life circumstances.

Research of the educational success should overcome its understanding as simply an academic achievement and develop a deeper understanding of what it means for the learners themselves.

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References

- Bandura, A. (2006). *Guide for constructing self-efficacy scales. Self-efficacy beliefs of adolescents*, (Vol. 5, pp. 307–337) F. Pajares & T. Urdan (Eds.). Greenwich, CT: Information Age Publishing.
- Busygina, N.P. (2015). *Qualitative and quantitative research methods in psychology*. Moscow: URAIT.
- Costa, P.T., McCrae, R.R. (1989). The NEO-PI/NEO-FFI manual supplement. Odessa, FL: Psychological Assessment Resources.
- Honicke, T., Broadbent, J. (2016). The influence of academic self-efficacy on academic performance: A systematic review. *Educational Research Review*, 17, 63–84. doi: 10.1016/j.edurev.2015.11.002

- Ibrahim, N.S., Yusof, N.S.H.C., Razak, N.F.A., Norshahidi, N.D. (2014). A meta-analysis of the relationship between Big Five personality traits and students' academic achievement. In *Proceeding of the Social Sciences Research ICSSR* (pp. 148–155).
- Lyusin, D.V. (2009). *The Emotional Intelligence Questionnaire EmIn : the new psychometric data. Social and emotional intelligence: from models to measures.* (pp. 264-278). D.V. Lyusin, D.V. Ushakov (Eds.). Moscow : Izd-vo Institut psichologii RAN,.
- Neisser, U., Boodoo, G., Bouchard, Jr T.J., Boykin, A.W., Ceci, S.J., Halpern, D.F., Loehlin, J.C., Perloff, R., Sternberg, R.J., Urbina, S. (1996). Intelligence: knowns and unknowns. *American Psychologist*, 51(2), 77-101. doi: 10.1037/0003-066X.51.2.77
- Parker, J.D.A., Duffy, J.M., Wood, L.M., Bond, B.J., Hogan, M.J. (2005). Academic Achievement and Emotional Intelligence: Predicting the Successful Transition from High School to University. *Journal of The First-Year Experience*, 17(1), 67–78.
- Poropat, A.E. (2009). A Meta-analysis of the Five-factor Model of Personality and Academic Performance. *Psychology Bulletin*, 135, 322–338. doi: 10.1037/a0014996
- Seipp, B. (1991). Anxiety and academic performance: A meta-analysis of findings. *Anxiety Research*, 4(1), 27–41. doi: 10.1080/08917779108248762
- Spielberger, C. D., Gorsuch, R. L., Lushene, R., Vagg, P. R., & Jacobs, G. A. (1983). *Manual for the State-Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.