Academic performance of Polish students from the perspective of the Self-Determination Theory

Paweł Atroszko, Bartosz Atroszko

University of Gdańsk

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Pawel Atroszko, Bartosz Atroszko
Faculty of Social Sciences
University of Gdansk
Gdansk, Poland
pawel.atroszko@gmail.com
baratr@wp.pl

Abstract—The aim of this paper is to analyze the application potential of the Self-Determination Theory in understanding academic performance of Polish students. The theory posits that human functioning depends on fulfilling three basic psychological needs: (1) the need for autonomy, (2) the need for competence, and (3) the need of relatedness. Frustration of those needs in school and academic settings may result in non-optimal development of students and lower academic performance. The available data shows that basic psychological needs are not fully satisfied in Polish students which may be linked to poorer learning outcomes. SDT theory has not been used in systematic studies concerning Polish education system. The possibilities for future research are discussed.

Keywords- Self-Determination Theory, education, basic psychological needs, autonomy, competence, relatedness, academic performance

I. INTRODUCTION

Contemporary changes in the economy and the labor market, associated with the development of the knowledge-based economy, create a demand for well-educated and independent workforce [1]. The worker in the 21st century must be autonomous, able to work independently without constant supervision, and showing initiative. The rapid technological and economic development means that there are fewer jobs for low-educated people, and there are more and more jobs requiring high qualifications. In 1950 only 17% of the American population worked in occupations related to information processing and in the 1990s, this figure rose to over 65%. Most Americans working with the information are doing jobs of programmers, teachers, engineers, lawyers, bankers, accountants, etc. [2]. Furthermore, occupational requirements are becoming increasingly complex and demanding. Constant learning, actualizing and developing qualifications has become basic demand rather than an expression of the ambition of high achievement individuals [1]. The rate of ongoing development in technology and economy, but also cultural changes are related to the fact that students acquire knowledge, which often becomes outdated already at the time of graduation [3]. Therefore, the contemporary educational research increasingly emphasizes the role of self-regulation in learning, understood as the ability of students to plan, monitor and regulate their own behavior [4]. This seems especially vital since current studies show that university students dedicate less and less time to studying and puzzlingly there seems to be no association between learning competencies and the amount of time students learn during classes and outside classroom [5]. Numerous hypotheses were proposed to explain it, including low requirements from the education system or quickly developing behavioral addictions such as computer games addiction or internet addiction [6]. Self-Determination Theory provides potentially useful framework to study the reasons for low learning engagement among many of the students, and perhaps more interestingly, it could explain why those who declare that they feel that they like learning and can effectively learn — they have high learning competence - do not spend time on learning. Maybe other factors, such as lack of autonomy or lack of positive relations with people in academic environment can explain this situation. Also dysfunctional over-involvement in studying can be analyzed in the framework of SDT as it fundamentally concerns problems with self-regulation [7]. Compulsive learning may develop into full-blown work addiction syndrome, which currently is identified as one of the major problems not only in work environment but even more importantly as pathology detrimental to the person itself, family and society [8]. These studies should not exclude socioeconomic factors as important variables, as previous and current research showed that they are related to school and academic performance, learning competence [9] as well as learning compulsion understood as negative phenomenon [10]. Research conducted within the framework of SDT may provide important data for designing educational innovations such important for the development of nowadays society [11]. These researches may often require large samples and including measures of many important variables, which poses methodological challenges, as many crucial concepts in educational studies are measured by standard multi-item questionnaires. Single-item solutions may be appropriate for specific concepts such as for example learning engagement or exam stress [12].

Self-Determination Theory has been developed by R. M. Ryan and E. L. Deci [13]. It is motivation theory concerned with the interplay between the extrinsic factors acting on persons, such as reward systems, grades, evaluations, or the opinions of others, and the intrinsic motives and needs inherent in human nature, including interests, curiosity, care or values. SDT is a meta-theory providing framework for motivational studies. The authors of the theory argue that modern psychology cannot ignore such concepts as choice, self-determination, and will [14], therefore, SDT focuses on how
social and cultural factors facilitate or thwart people’s sense of volition and initiative, as well as how they influence well-being and the quality of performance. According to this theory, human functioning depends on fulfilling three basic psychological needs: (1) the need for autonomy, (2) the need for competence, and (3) the need to maintain positive relations with others – need of relatedness [15]. These needs create specific triad, which is the foundation of sustainable human development, pursuing personal goals and aspirations, as well as meeting the expectations of others and social standards. Satisfying these three basic needs is a precondition for developing many complex competencies such as the ability to act on the basis of permanent, autonomous motivation, which is accompanied by a genuine desire and personal commitment, and the ability to be productive and creative in action. Fulfilling these needs is necessary for maintaining mental health and wellbeing.

It should be emphasized that, high academic performance does not mean having competencies necessary to deal with the requirements of present social and economic reality. There seem to be important discrepancies in what is required at schools and universities, and what is necessary to cope in real-life in terms of developing crucial competencies [16]. Perhaps in many cases low academic attainment could be regarded as a symptom of this state of affairs rather than a sign of non-optimal development of a student. SDT provides interesting possibilities to explore this problem, including the question of usefulness of academic achievement as a measure of students functioning, development or competencies.

II. SELF-DETERMINATION THEORY IN EDUCATIONAL RESEARCH

Many researchers have used SDT in conducting educational research. For example, C. Furrer and E. Skinner examined how the sense of relatedness affects children's academic engagement and performance [17]. K. D. Ciani, K. M. Sheldon, J. C. Hilpert and M. A. Easter used SDT as a framework to understand why students enter classes with particular achievement goal profiles, and how those profiles may change over time. [18] J. de Bilde, M. Vansteenkiste and W. Lens examined a process underlying the positive association between holding an extended future time perspective and learning outcomes through the lens of SDT [19].

Self-Determination Theory has been used to create theory of prevention of school bullying. The findings suggest “that school policy aimed at bullying reduction should go beyond external control that involves external rewards and sanctions and should help teachers acquire autonomy-supportive practices focusing on students’ meaningful internalization” [20].

The theory of self-determination was used to explain the differences between students in terms of school achievement levels. R. A. Kusurkar, Th. J. Ten Cate, C. M. P. Vos, P. Westers and G. Croiset tried to explain how motivation affects academic performance [21].

The self-determination theory was used to examine whether autonomous and controlled regulation of performance-approach goals would differentially predict educational outcomes and add to the variance explained by the goal strength [22].

Even though relevant scientific literature shows that SDT has strong implications for classroom practice, as well as educational reform policies [23], thus far, this theory has not been used on a wider scale in the field of educational research in Poland. It seems that the theory of self-determination may prove to be a useful tool for the analysis of the problems of Polish students and Polish education system, from the functioning of children in primary schools to higher education settings. SDT may be a promising framework for research, because there are strong indications that the basic needs of Polish students are not sufficiently satisfied and this state of affairs may significantly undermine educational process, negatively impacting educational attainment and more generally the development of young people. It would be especially interesting to apply SDT framework to investigate thoroughly the problems of Polish education system from primary schools, through secondary schools, till higher education, as consequences of unsatisfied needs may cumulate through student’s education process [24]. Also at the particular stages of development different means of fulfilling the needs can be appropriate or applicable within the education system. Competence and autonomy are crucial in the development and sustaining of intrinsic motivation, which is critical in education [25]. Relatedness is vital in fostering engagement and value within specific settings, including schools [17] [26].

III. THE NEED FOR AUTONOMY AND THE ACADEMIC PERFORMANCE OF POLISH STUDENTS

The need for autonomy of Polish students is not fully satisfied. Polish school is undemocratic, it does not provide students with opportunities for developing self-expression, self-knowledge, awareness of their abilities and potential. Teaching methods are outdated and inadequate for 21st century. During lessons it is primarily the teacher who is the central figure in the classroom, who speaks and who allows to speak for students. He has dominant position, authority and the education process takes place through cultural transmission [27]. Social relations at school do not provide opportunity to develop a sense of autonomy among students, which is crucial for student engagement [28] and self-regulated learning [29] [30]. It is especially important since research shows that teachers autonomy-supportive motivating style is teachable and there are recommendations how teacher certification programs can assist teachers-in-training to develop this style [31]. Furthermore, cross-cultural analysis showed that the (SDT) assumption of a positive role of autonomous motivation is supported by results of several empirical studies from diverse educational settings all over the world and it can be expected to have similar beneficial effect in Polish educational settings [32].

Classes in high schools have different learning profiles, like mathematical and physical or humanistic, however, students have limited possibilities of choosing their subjects of interest. They often have to attend classes on subjects that do not engage them at all, and spend time and effort on meeting the criteria for passing them. Even with relation to the subjects that
are interesting for them, students have limited control over their curriculum, the tasks they engage in, the requirements that are set for them. Similar situation is present at the university level. Even within higher education students often have little autonomy regarding their learning process. There seems to be lack of basic flexibility within the system to allow students to have more control and choice over their educational path. Instead of preparing for self-determined development of problem solving skills, on all levels of education, students are prepared to fit in the system of meeting arbitral preset criteria of evaluation.

The Polish education lacks self-government and democracy [33]. Many of the changes introduced within the education reforms after the collapse of the communist regime in 1989 in Poland were only apparent actions. There are student councils within Polish schools, however, their influence on students socialization and co-governance of schools is only apparent [33]. Tasks that are assigned to students provide only the illusion of autonomy. They are most often associated with self-service in school canteens, "decorative" participation in different types of school and state celebrations, as well as self-organization of the free time at school and entertainment-related functions. Some of the changes after 1989 can be even interpreted as stepping back in the development of self-management and democratic social relations at school. For example, in 1997, one of the ministers of education, Jerzy Wiatr, removed the function of students' ombudsman from the level of the school and set it on the level of regional Board of Education. Up till then, a teacher who was most trusted by students was chosen by them to fulfill this function. Currently, it is very difficult to know who among the inspectors at the Board of Education has been appointed as the students' ombudsman, since these institutions do not inform about this even on their websites [34].

IV. THE NEED FOR COMPETENCE AND ACADEMIC PERFORMANCE OF POLISH STUDENTS

Polish students have relatively more opportunities to satisfy the need for competence - in comparison to the autonomy need - in the context of education. After all, the main task of the school is to develop students’ competencies, that is knowledge, skills and positive attitudes to subjects. But then again, do Polish students actually have the opportunity to feel satisfaction with the achievement of proficiency in a specific area of expertise? Literature of the subject identifies two types of learning objectives: 1) performance goals - are associated with the performance of externally imposed and externally assessed tasks, 2) mastery goals - are associated with achieving satisfactory proficiency and efficiency for the person in a specific field [35]. It is the person who sets his or her own internal evaluation standards. These two types of objectives represent distinct meanings of a school success, they specify different types of reasons for engaging in learning and influence different ways of thinking about oneself, one’s own tasks and results. It seems that within the Polish education system performance goals dominate over the mastery goals. This means that students execute the tasks ordered by the teacher’s and are evaluated by him. The development of students’ skills is treated instrumentally. It is also strictly related to the frustration of the need for autonomy and it might have serious consequences for the development of competence in students [36]. This has negative implications in terms of the development of students’ full potential and positive attitudes towards learning [26]. What is more, children who do above average in school report more negative affect and withdrawal behaviors if they also report lack of competence or autonomy [37].

Polish students have difficulties in developing problem-solving skills, because the way of teaching in the school is very schematic [38]. Tasks solved in school are simplified, embedded in a particular school subject and serve verifying knowledge of the specific rules and ways to solve a particular task. Solving a task requires only two simple skills: remembering similar problem and associating it with a practiced way to solve it. It has two fundamental drawbacks: the preset and limited number of tasks and solutions which most often have nothing to do with real-life situations, and the fact that it does not really teach creative way of solving problems. The problems of everyday life and professional tasks are more complex than the schematic tasks solved in Polish schools. They require the selection of information, coping with uncertainty and the multiplicity of possible solutions. Therefore, solving real problems requires the ability to produce different solutions or to search unusual ways to solve the problem [38]. These competencies are not adequately developed at any level of education in Poland, including higher education which should at least to some degree prepare students for their professional life. Some may argue that this is a debatable topic strictly related to the function and purpose of education, which can be viewed from many different perspectives [39]. Nevertheless, it seems reasonable assumption that education system should at least to some degree prepare young people to cope in life in the social and economic reality of the 21st century, providing them with appropriate skills and knowledge.

V. THE NEED FOR RELATEDNESS AND ACADEMIC PERFORMANCE OF POLISH STUDENTS

Finally, Polish students seem to lack adequate support from parents and teachers. In the opinion of many students, school is an unfamiliar, unfriendly and sometimes even hostile place. In school they feel bored and stressed. The need to maintain positive relations with others is not finally satisfied [34].

In 1980’, even when Poland was still a communist country, educator J. Radziewicz wrote that the lack of true self-governance in schools and the education system means that the school is a hostile place for students. Students’ attitude to school is reluctant, or at least indifferent. It is an institution while children and young people are in need of relationships with human beings. Students “emigrate internally” into alcohol and drugs, as well as into being truant. They flee from school like from prison. The change of the system from communist to democratic did not, however, - according to B. Śliwerski - change this negative state of affairs [34].

According to the report ”Młodzi 2011”, based on empirical research, the most important value for the young people in Poland is affiliation, and there for they crave for happy family life and friendship. Interestingly in the 21st century in Poland,
these values are more often recognized by the 19-year-olds as "important" and "very important" than they were in 1976 [40].

Parents try to support their children, however, they do it in a very restrictive and oppressive way. Parental support is mainly based on the use of sanctions and the threat of punishment [41]. Empirical studies show that the more Polish parents talk with their children about school, the lower the child's school achievement is both in mathematics and in reading the meaning of the text [41]. This surprising relationship can be easily explained. Many parents become concerned about their child's school achievements only when it come to be clear that their child is doing poorly in school. Most often parents come to the conclusion that their child has learning problems because it is too lazy or not disciplined enough. Therefore, what seems to be parental support, is rather dealing with the problem by forcing child to learn, using threats and punishment.

Research shows that effectiveness of teaching is correlated with the level of students-school integration [42]. Students-school integration includes three dimensions: 1) emotional (positive attitude to school), 2) social integration (good relationships with class-mate), 3) motivational integration (proper self-image) [42]. According to the Polish research, the average level of motivational integration proved to be the strongest correlate of achievement [42]. The inter-relationships between different dimensions of students-school integration and their relationship with competence, autonomy and academic performance should be further studied, especially in longitudinal perspective to test how students-school integration develops from the levels of primary schools to universities and higher schools. The relationship between fulfillment of the need for relatedness in university students and their academic performance is understudied topic in Polish higher education. The role of university culture, student associations, research clubs, student-lecturer relationships should be explored in the future research. Sense of loneliness among students can be potentially interesting variable in this context.

VI. THE CONSEQUENCES OF FAILURE TO SATISFY THE BASIC PSYCHOLOGICAL NEEDS

Since it seems that the basic psychological needs of Polish students to a great extent are not being met, it can be assumed that it has a negative impact on the functioning of students, including worse academic performance. As the essential needs of the students are not satisfied within the daily routine of school, students spend a lot of time and energy to fulfill them in different ways, for example through rebellion and resistance to the school and to the teachers (need for autonomy), development of skills different from those developed in the school (computer games, skating) and participation in youth subcultures (need for ties) [43]. The unmet needs of autonomy, competency and relatedness can lead people to their compensation in a way that can have negative consequences [15]. For example, studies show that intrinsic motivation is negatively related to lifetime and current alcohol consumption. External regulation, on the other hand, was positively associated with current drinking [44].

Students need autonomy also to develop key competencies. In the document "Key Competences for Lifelong Learning - European Reference Framework" the European Union specified eight competencies that have been identified as crucial. Key competencies are "those which all individuals need for personal fulfilment and development, active citizenship, social inclusion and employment" [45]. It seems obvious that it is extremely difficult to develop such competencies as social and civic competences, sense of initiative and entrepreneurship, cultural awareness and expression without providing students with a sense of autonomy. According to “Social Diagnosis 2013” Poland does not meet a single criterion of civil society [46]. European Social Survey (ESS) showed that the general level of trust of Poles to other people is among the lowest in Europe. Only 14% of Poles believe in the good intentions of others [46]. If we are to assume that education system should at least to some degree prepare young people to deal with the requirements of social and economic reality of the 21st century then these data provide some premises suggesting that it fails in very serious ways. What is more, one third of children and adolescents in Poland lives in poor material conditions [40] and these were linked to worse school performance and unhealthy learning attitudes and behaviors [10], [9]. The entire Central and Eastern Europe belongs to the group of countries with high rates of suicide. In the case of Poland, disproportionately large suicide rates are among young people [40]. Since 1991, the number of suicide attempts among young people (15-29 years) in Poland has more than doubled [40]. Suicide has usually its source in depression, which is related with feelings of hopelessness and helplessness. Young people unprepared to cope with life in present reality, deprived of most important competencies for dealing with everyday problems are especially vulnerable and might find the reality hostile to them [40]. Depression is one of the most detrimental and growingly prevalent illnesses of the 21st century and all possible preventive measures should be undertaken to stop its progress [47]. Inadequate education system should perhaps be identified as one of its risk factors. All factors fostering successful learning, acquiring appropriate problem-solving skills and knowledge, should be studied within the education system, including social and economic factors.

VII. CURRENT AND FUTURE RESEARCH

There is lack of systematic research on the satisfaction of basic psychological needs of Polish students. It is symptomatic and perhaps it proves instrumental treatment of children and young people in the education system. Students are not seen as human beings who have their natural needs and aspirations. There are signs that young people growing up in Poland have a sense of deprivation of their basic needs during the majority of the time spent in school. There are indications that for many young people in Poland the time spent in school is seen as wasted. It seems that it is necessary to conduct research among Polish students about the extent to which Polish school allows them to satisfy basic psychological needs. SDT provides potentially useful framework for such studies. Theoretical models explaining the relationship between basic needs, the socio-economic environment in which students live, and academic performance should be developed and tested in large scale studies. Longitudinal data should be used to explore potential causative links between variables. More importantly, however,
the usefulness of academic achievement as a measure of students functioning, development or competencies should be investigated in the framework of SDT, since in many cases low academic attainment could be regarded as a symptom of important discrepancies in what is required at schools and universities, and what is necessary to cope in real-life terms in the development of crucial competencies necessary to deal with the requirements of present social and economic reality.

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