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Citation style: Jach Łukasz. (2014). Objective and subjective effectiveness of students in the context of their activity level. "The New Educational Review" (2014, no. 1, s. 265-276).



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Objective and Subjective Effectiveness of Students in the Context of Their Activity Level

Abstract

Within recent years the percentage of students in relation to the total population of young adults has been increasing in Poland. In search of the psychological consequences of this situation a study has been conducted on the relation between the level of activity of students and both the objective and subjective indicators of their effectiveness and the level of autotelism/calculation of the initiated activities. The study in question has been performed among a group of 473 students of the University of Silesia, and the results thereof indicate differences between the non-active, averagely active and above-averagely active students in the scope of grade point averages, the amount of granted scholarships, subjectively perceived attractiveness for colleagues as well as for the potential employer, the level of identity integration and the position in group hierarchy. The theoretical concept for analyses is constituted by the concept of emerging adulthood, the evolutionary approach and the concept of career capital.

Keywords: *students' activity, emerging adulthood, career capital, signalling theory, evolutionally psychology*

Introduction

Within recent decades in Poland, an increase in individuals undertaking higher education and in the percentage of students among young adults has been observed. In the academic year 2011/2012 the gross schooling coefficient reached the value of 53.1% (source: *Szkoły wyższe i ich finanse w 2011 roku*, p.28). Do young people study

to gain knowledge in accordance with their interests? If we ground students' activity in the context of the concepts of Jeffrey Arnett (2000), Geoffrey Miller (2010) or Augustyn Bańka (2007), the fact that it may be accompanied by other motivation is revealed. The situation is further complicated by the differences regarding the level of activity, concerning, among other things, the amount of studied fields or the involvement in work or hobby. Moreover, we may also talk about differences in the level of the objective and subjective effectiveness of students' activity.

Students' activity – selected theoretical approaches

Emerging adulthood

According to Arnett (2000), we are currently facing alteration in the dynamics of individual development appearing in the phenomenon of the so-called *emerging adulthood*, which consists of a transition period between teenagehood and earlier adulthood. The specific character of this period is determined by the performance of some activities characteristic of adults with a simultaneous lack of resignation from certain activities typical of teenagers. In this context studying becomes a continuation of learning at the level of high school and constitutes a standard stage of an individual's education. From the traditional point of view young adults should begin living at their own expense, become independent of their parents and finally build long-term emotional relationships. The dynamics of emerging adulthood allows young people to locate these tasks in a longer time perspective. This enables an individual to build a more coherent identity thanks to the fact that in course of involvement both in academic and non-academic activity experimenting appears thus enabling the individual to become more aware of their needs and values. Concentration on the formation of one's "self" refers to the fact that the approach proposed by Arnett may be perceived as focused on the autotelic aspects of involvement in various forms of activity.

Evolutionary approach

Involvement in particular activity is explained in evolutionary categories by the concept proposed by Miller (2010) as a method of presentation of internal features. In accordance with the assumptions of the *signalling theory*, human behaviours and physical attributes are constituted by signals which are expected to generate a definite impression among their recipients. In this context, studying may also constitute a signal of a high level of diligence or intelligence. Moreover, in compliance with the *handicap theory* (Zahavi, 1975) an organism may present its good condition through

exposure of burdens possible to accept without visible impairment of its functioning. Students involved in additional activities and obtaining good grades inform others that they possess such high intellectual competences and physical condition that additional duties shall not lower their effectiveness in the scope of education. In this pragmatic definition of activity the human being is perceived as someone who treats a certain type of activity as a method to obtain a desired social position.

Career capital

The difficulty in forecasting long-term trends typical of the current labour market according to Bańka (2007) contributes to the fact that the conditioning of one's education on the current needs of employers does not constitute an optimum strategy of conduct. A more rational course of activity assumes concentration on personal aims and goals. The total of gathered experience generates the individual *career capital*, which may be developed in practically any manner. The concept of career capital defines students' activity as characterised both by a certain level of autotelism and calculation. Every type of activity may be recorded both in application documents in order to increase the chances of employment and also it may itself constitute a source of gratification for the individual.

Questions and research hypotheses

The presented concepts of motivation accompanying students' activity led to formulate the following questions and research hypotheses:

Q1: Do students with various levels of activity differ in terms of objective and subjective indicators of effectiveness?

H1: According to the concept of career capital and evolutionary approach, more active individuals shall be characterised by a higher level of both objective and subjective indicators of effectiveness. Following the assumptions of the emerging adulthood we can assume that more active students will possess a higher level of identity integration than less active students.

Q2: Do the forms of additional activities undertaken by students differ in the level of autotelism/calculation?

H2: In compliance with the evolutionary concept, a higher level of calculation will accompany socially exposed activities such as voluntary work. Assuming that a hobby is constituted by any activity compliant with personal interests in the view of the emerging adulthood concept, it shall be an activity with a low calculation level.

Method

Research tools

To determine the level of students' activity, a Career Portfolio Questionnaire (Jach, 2013) was used. This tool allows for the collection of data concerning the involvement in studying a second major, academic subject, organisation membership, learning foreign languages, hobby, work and voluntary work. In the case of involvement in a certain activity examined, it was compared in a 5-point scale in relation to four questions designed to determine the level of the calculation of activities. The higher the result, the more benefit-orientated the activities are. On the other hand, low scores indicate the autotelism of activities. The level the scales' internal consistency is manifested by α -values between 0.73 and 0.88.

Data on students' effectiveness was collected with the use of a Studying Effectiveness Questionnaire (Jach, 2013). The subjects provided information on both objective and subjective indicators of effectiveness. In terms of the objective indicators, they were requested to determine them while regarding subjective indicators; they quantified them with values corresponding to a Polish grading scale from 1 to 6.

Information on the level of identity integration, understood as the feeling of internal cohesion and continuity, was obtained with the use of the *Identity Integration* scale, which is part of the Multidimensional Self-Esteem Inventory (Ferenc, 2008). It contains ten items and subjects express their relation to them within a 5-point scale. The credibility of this tool examined by Cronbach's α varied between 0.74 within the female group and 0.77 within the male group.

Study participants and procedure

The study was performed upon a representative group of 3rd year full time students of the University of Silesia during standard classes. Participation in the study was voluntary and anonymous. The total number of participants was 473 (155 males and 318 females) and their average age was 22.31. Due to the lack of answers to part of the questions in the case of certain analyses the number of subjects was lower.

The 56 subjects who did not declare involvement in any activity other than studying were placed in the non-active group. The cut-off point distinguishing the group of averagely active (326 subjects) and the group of above-averagely active (91 subjects) was located between three and four activities. This distinction seems most optimal due to the understanding of "average" as including 2/3 of the population, which is accepted in psychological research tradition.

Results

Activity level vs. objective indicators of effectiveness

Students with various activity levels were compared in terms of the level of objective and subjective indicators of effectiveness. Due to the lack of normality of distributions, the median test and the H Kruskal-Wallis rank variation test were used to find the significance of differences.

Table 1 shows the differences between grade point averages for the last semester within the examined groups. The median test proved that the averagely active students obtained average grades lower than expected, while the non-active and above-averagely active students obtained grades slightly above the expected level.

Table 1. Activity level vs. grade point average for the last semester

MEDIAN TEST			
median = 4.1; $\chi^2 = 8.10$; df = 2; p = 0.02			
STUDENTS	non-active	averagely active	above-averagely active
<= median: observed	26	179	38
>median: observed	28	130	53
observed-expected	2.9	-13.61	10.71

The results presented above correspond to the data on the relation between the level of activity and the highest grade point averages obtained in the course of studying presented in Table 2. Whereas no differences were observed between the average ranks of the non-active and averagely active students and the non-active and above-averagely active ones, the above-averagely active students obtained higher grades on average than the averagely active ones. Assuming the grade point average as the objective effectiveness indicator, it is noticed that the highest ranks were characteristic of the above-averagely active students. With regard to those averagely active and non-active, the grade point averages did not differ.

Table 2. Activity level vs. the highest grade point average during studying

Anova Rank		
H (df = 2, N = 439) = 8,18; p = 0.02		
Students	N	average rank*
non-active	51	205.03
averagely active	301	212.59a
above-averagely active	87	254.41a

* here and in the next tables the letters show the significant differences between the calculation levels of the activities (p value < 0.05)

The examined objective effectiveness indicator was also the number of scholarships granted in the course of university studies (Table 3). Such distinctions were granted most frequently to the above-averagely active individuals, who received them more often than the non-active and averagely active students. No difference in this area was observed between the latter two groups.

Table 3. Activity level vs. number of granted scholarships

Students	Anova Rank	
	N	average rank
non-active	55	216.28 ^a
averagely active	326	228.83 ^b
above-averagely active	91	276.21 ^{ab}

In the context of the results, the hypothesis concerning the level of objective effectiveness indicators in the groups of various activity levels may seem partially confirmed. The above-averagely active students actually obtain higher grades and scholarships more often than the members of the remaining groups, while the averagely active students do not differ in terms of the mentioned variables from the non-active individuals. In the case of such objective indicators of effectiveness as the number of close friends at university, the number of received awards and the number of granted sport scholarships, the selected groups did not differ from one another.

Activity level vs. subjective effectiveness indicators

Taking into consideration the image consequences resulting from the undertaken activity, in the selected groups the estimated level of attractiveness for friends and the subjective position among acquaintances were examined. The above-averagely active students constituted a group with the highest sense of attractiveness for university friends (Table 4). Their subjectively perceived position among acquaintances also indicated a higher level than the level typical of the non-active students (Table 5).

The subjects were also requested to evaluate their level of attractiveness for a prospective employer. The analysis result showed that the non-active individuals considered their attractiveness for prospective employers as lower than the members of the remaining groups (Table 6).

Table 4. Activity level vs. subjectively perceived attractiveness for university friends

Anova Rank		
H (df = 2, N = 471) = 10.97; p<0.01		
Students	N	average rank
non-active	56	194.88a
averagely active	326	234.33
above-averagely active	89	268.01a

Table 5. Activity level vs. subjectively perceived position among acquaintances

Anova Rank		
H (df = 2, N = 468) = 12.20; p<0.01		
Students	N	average rank
non-active	56	192.87a
averagely active	324	232.32
above-averagely active	88	269.01a

Table 6. Activity level vs. subjectively perceived attractiveness for a prospective employer

Anova Rank		
H (df = 2, N = 471) = 15.59; p<0.01		
Students	N	average rank
non-active	56	183.04ab
averagely active	325	235.56a
above-averagely active	90	270.53b

In Table 7, information concerning the sense of identity integration for the groups of students is presented. The results of the performed ANOVA post-hoc Tukey test analysis allow us to classify as significant only the differences between the above-averagely active students and the members of the remaining two groups.

Table 7. Students' activity level vs. sense of identity integration

Anova	
F (2,468) = 7.13; p<0.001; $\eta^2 = 0.03$	
Students	mean
non-active	30.77a
averagely active	31.16b
above-averagely active	34.17ab

The results partially confirm the hypothesis, but the lack of differences in the estimated attractiveness for friends between the averagely and above-averagely active individuals contradicts it. Similarly, the attractiveness for friends, the estimated position in the group and identity integration show no differences between the non-active and averagely active students.

Involvement in additional activities and the level of its autotelism/calculation

The results obtained in the scales for testing of autotelism/calculation were analysed with the use of the test by H Kruskal-Wallis (Table 8). Among the activities which proved to be the most strongly instrumentally motivated we can enumerate voluntary activities and second major. Whereas learning foreign languages and involvement in non-student organisations proved to be activities with the highest level of autotelic motivation.

Table 8. Calculation level of particular forms of students' activity

Anova Rank		
H (df = 7, N = 821) = 128.35; p < 0.01		
Activity	N	Average rank
Voluntary work	76	598.51abcdef
Second major	71	498.88ghi
Academic activity	52	440.84aj
Hobby	226	446.97b
University activity	86	410.73c
Work	155	360.07dik
Non-student organisations	39	288.20eh
Foreign language	116	260.44fgjk

In compliance with the formulated hypothesis, voluntary work constituted an activity largely undertaken due to pragmatic motives. Contrary to our predictions, university activity and hobbies are socially exposed activities for which it is difficult to clearly single out the main type of motivation. Similarly, involvement in non-student organisations was characterised by one of the lowest levels of calculation in contradiction with our hypothesis.

Discussion

Students' activity in relation to the objective and subjective factors of their effectiveness

The grade point averages for the last term of the averagely active students were slightly lower, and those of the non-active and above-averagely active individuals were slightly higher than expected. That indicates that the non-active individuals obtained higher results in their studying than those devoting their time to a low number of additional activities due to the fact that they had more time to study. The higher grade point averages of the above-averagely active students may confirm their better organisational skills or higher self-discipline. The ability to combine them with multiple activities may also result from their greater intellectual resources. These explanations are compliant with the signalling theory, which states that involvement in additional activities is a method to present one's positively evaluated features.

Although the non-active students do not differ in terms of grade point averages and the number of scholarships from those averagely active, they perceive themselves as the least valuable prospective employees. Thus, lack of activity may lead to the sense of falling behind their peers involved in a certain number of additional activities. Moreover, even a small number of additional activities contributes to an increase in the belief in one's own position in the labour market. The subjective attractiveness for a prospective employer does not need to be convergent with the objective one referring to the current conditions in the labour market. The high level of the discussed variable finds its justification in the evolutionary *error management theory* (e.g. Haselton, Nettle, 2006). In compliance with the assumptions of the latter, the unrealistically high evaluation of one's competences not only increases self-esteem, but also contributes to a decrease in the risk of failure to exploit the opportunity to improve one's position within a group or to obtain valuable resources.

The above-averagely active students tended to consider themselves as more attractive for and holding higher positions in the group hierarchy than the non-active students. This means that the above-averagely level of activity may constitute a source of signals confirming the conviction of one's own high value (cf., Cheng et al., 2010). Having commonly popular individuals around you entails benefits, such as self-esteem, increasing the use of such an individual's reputation or easier access to desired goods.

Differences in terms of identity integration have been clarified by Arnett's emerging adulthood concept (2000). The above-averagely active students had a higher

level of this variable than the members of the remaining groups, which allows for the supposition that activity provides contents to the individual's life, thus enabling them to provide a fuller answer to the question "who am I?" Perhaps this results from the fact that among the considerable number of activities performed it is more common to find ones that are classified by the individual as those resulting from their needs and beliefs.

Autotelism and calculation of students' activity

The most calculated activity proved to be voluntary work, frequently done due to pragmatic motives, oriented on gaining benefits related to the image of a socially involved person (cf., Bereczkei et al., 2010). An interesting aspect is the discrepancy between the formal characteristics of voluntary work (assuming disinterestedness) and the actual motivation of volunteers. The situation can be clarified by Miller's concept (2010), which states that voluntary work constitutes a recognisable indicator of agreeableness. Because such features as empathy and an ability to function within a group are commonly desired and viewed positively, voluntary work may constitute a method of self-presentation and modification of the observers' impressions. Moreover, among the objectives realised through socially useful, unpaid-for activity, Hajnalka Feynes and Gabriella Pusztai (2012) enumerate, e.g., career development, gaining experience or simply a method of spending free time.

A relatively high level of calculation is also characteristic of studying another major. Studying two majors would be connected with the hope of possessing two professions and the advantage in the labour market over those who focused on one area of studying only, which constitutes a form of diversification of career capital. Among activities characterised by a relatively high level of calculation we can also classify one's hobby. Thus, activities which theoretically have the strongest connection with an individual's private preferences may be treated as a specific "business card" enabling others to take a certain position towards the given individual more easily, especially in the context of the fact that information on interests constitutes an element of the majority of standard CVs. The autotelism of foreign language learning may confirm the increase in students' awareness of the participation in a global society. The easiness of crossing state borders and the accessibility of foreign media contribute to the fact that the ability to speak a foreign language becomes increasingly natural. Among other activities characterised by a high level of autotelism we can also rank the activities undertaken within non-student organisations. In the context of the emerging adulthood theory, membership of non-student organisations may be treated as an activity contributing to the development of the identity of young adults. On the other hand, the low level of

pragmatism typical of those exposed to public view, organisational involvement seems to contradict the assumptions of the signalling theory.

The remaining forms of student activity may be perceived as motivated bi-directionally. This interpretation is concurrent with the observations of Bańka (2007), according to which each activity may prove a conclusive element in terms of reaching desired objectives related to the labour market.

Summary

Nowadays “activity” tends to be treated as a standard element of student life, and the lack thereof is perceived in terms of deficiency. Therefore, young people may feel motivated to initiate additional activity, e.g., in order to improve their own image. The results show that only an above-average level of activity is actually connected with a higher level of selected effectiveness indicators, while averagely active individuals frequently do not prove to be more effective than their non-active counterparts. Thus, encouragement to undertake activity does not necessarily entail an increase in the effectiveness of an individual in various areas of functioning.

The presented analysis of the level of autotelism/calculation of activities sheds some light upon the issue of young people’s motivation connected with a selected activity. Commonly perceived as altruist, voluntary work proved to be the most pragmatic activity among the subjects. Contrary to stereotypical opinions, pursuit of a hobby has not proved to be an activity resulting from personal needs, as it partially constitutes a method of improvement of the image of an individual. The most autotelic activity is foreign language learning, which provides evidence of a positive attitude of young adults towards participation in globalised contemporary reality.

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