Suvremena psihologija 17 (2014), 1, 63-79

Izvorni znanstveni članak - UDK 159.922.2

# INDIVIDUAL AND SOCIAL FACTORS RELATED TO STUDENTS' ACADEMIC ACHIEVEMENT AND MOTIVATION FOR LEARNING

Mia Marić
University of Novi Sad, Faculty of Education
Podgorička 4
Sombor, Vojvodina, Serbia
mia_maric@yahoo.com

Marija Sakač
University of Novi Sad, Faculty of Education
Podgorička 4
Sombor, Vojvodina, Serbia
umo@eunet.rs

**Abstract**

The main objectives of this study were to determine the most frequent and the most significant individual and social factors related to students' academic achievement and motivation for learning. The study was conducted among 740 students from the Faculty of Education and the Faculty of Philosophy in Vojvodina. The participants completed questionnaires measuring students' dominant individual and social motivational factors, the level of their motivation for learning, the level of their academic achievement and students' socio-demographic characteristics. The results of this study showed that the students reported that both individual and social factors are related to their academic achievement and motivation for learning. Individual factors – the perceived interest in content and perceived content usefulness for personal development proved to be the most significant predictors of a high level of motivation for learning and academic success, but social motivational factors showed themselves to be the most frequent among students. The results are especially important for university teachers as guidelines for improving students' motivation.

**Key words**: academic achievement, motivation for learning, individual and social factors

## INTRODUCTION

Motivation for learning and improving individual abilities presents one of the central components of self-actualization motive, the highest one in Maslow's hierar-

 

chy of needs (Maslow, 1954). It is the strong dynamic strength of an individual that activates complex cognitive processes – thinking, reasoning, looking for different alternatives and ways of solving problems and practicing activities with the aim of improving abilities and skills (Pintrich, 1999). Brophy associated motivation for learning with focused learning that includes comprehension and improving abilities (Brophy, 2010). Students' academic achievement and their motivation for learning are very important factors for individual and social adoption, development, mental health and psychical well-being (Costa, Jessor & Turbin, 2007; Lai, 2011; Marić, 2011; Marić, 2012a; Marić, 2012b; Michalos, 2007; Schuller & Watson, 2009).

Many theories explain the influence of different internal and external factors on motivation for learning: self-determination theory, attribution theory, self-efficacy theory, expectancy-value theory, achievement goal theory, etc. (Wentzel & Wigfield, 2009). All these theories claim that interactions between individual and social factors determine the level of motivation for learning, but each of them emphasizes specific factors that have a key role in students' motivation.

For example, an attributional approach to motivation in school claims that both dispositional and situational factors determine motivation for learning and academic success, but what is especially important is the attributional process or individual perception of the causality of events (Graham & Williams, 2009). Self-efficacy theory claims that an individuals' perceived capability for learning is a dominant factor which contributes to motivation for learning. The results of studies showed that in the domain of education, self-efficacy contributes to the level of students' engagement, the type of activities, persistence, interest and achievement (Schunk & Pajares, 2009). The model of future-oriented motivation and self-regulation states that personally valued future goals, individual and social, are those which most affect motivation for learning and achievement (Miller & Brickman, 2004). According to expectancy-value theory, individual expectancy and values are dominant factors that contribute to motivation for learning, but they are strongly related to psychological, social and cultural factors (Wigfield, 2000; Wigfield, Tonks & Lutz Klauda, 2009). This theory differentiated between two specific factors that are similar to intrinsic and extrinsic motivation – intrinsic value and utility value or the usefulness of a task. Students who intrinsically value a task are deeply engaged in it and persist in it for a longer time, so their achievement is higher. Utility value is similar to extrinsic motivation.

Self-determination theory (SDT) explains the distinction between intrinsic and extrinsic motivation in the context of academic achievement and students' learning motivation (Ryan & Deci, 2000). Vansteenkiste, Niemiec and Soenens (2010) define it as a macro-theory of human motivation, emotion, and personality. The SDT is composed of five mini-theories: Cognitive evaluation theory, Organismic integration theory, Causality orientations theory, Basic needs theory and Goal content theory. The theory has been developed for 40 years and during that period a number of studies have been conducted among school students (Ryan & Deci, 1985; Ryan,

 

Deci, 2000). The SDT explains the continuum of the self-regulation of motivation ranging from amotivation at one end, through various degrees of external motivation, to fully developed internal motivation at the other.

Cognitive evaluation theory is the SDT's first mini-theory. It was built on the examination of the dynamic interaction between external events (e.g. rewards) and internal task interest or enjoyment (intrinsic motivation). Authors concluded that intrinsic motivation is positively related to internal motivational factors, such as enjoyment and individual task interest, and extrinsic motivation is related to social motivational factors, such as social expectations, pressure, external rewards, punishment etc. (Ryan & Deci, 2000). According to this theory, the factors that undermine intrinsic motivation are controlling external events (such as monetary rewards), which pressures students to think, feel, or behave in particular ways. This is explained by the fact that intrinsically motivated behavior is engaged spontaneously and volitionally (Vansteenkiste et al., 2010). The locus of causality in those cases moves from internal to external, so interest and volition decrease. In his study, Deci (1971) showed that a non-rewarding context is more desirable for increasing intrinsic motivation than a rewarding one, even if tasks were interesting for participants (Vansteenkiste et al., 2010).

According to the self-determination theory (SDT, Ryan & Deci, 1985), intrinsic motivation leads a person to inherently interesting behavior that presents pleasure by itself. On the contrary, extrinsic motivation leads to behavior with specific consequences – external rewards, avoidance of punishment, social prestige etc. The important difference between these two types of motivation is the fact that extrinsic motivation is related to the expected instrumental value of behavior, and intrinsic motivation leads to the activity that brings internal satisfaction by itself. Social contexts and external factors have a strong influence on decreasing intrinsic motivation. Social pressure especially contributes to this phenomenon (Vansteenkiste et al., 2010). Several meta-analytic studies confirmed the undermining effect of rewards on intrinsic motivation (Vansteenkiste et al., 2010).

Harter (1981) showed that older children tend to emphasize the value of external incentives, such as prizes and better grades compared to the internal motivational factors, while younger children are driven by curiosity and the pursuit of independent learning activities and problem-solving.

The study that has been conducted by Castiglia tested the self-determination theory and showed that students reported that their dominant motives for learning came from a social context and were of an extrinsic nature – grades, upcoming exams, fear of failing, costs, promotions, family, maintaining a scholarship, competition etc. This study also confirmed the differences between the motivating factors of higher performing and lower performing students. Higher-performing students were mostly influenced by individual factors (interesting content) in learning, while lower- performing students were mostly influenced by social factors and extrinsic motivation (competition) (Castiglia, 2010). In her study, Nedeljković

 

also tested Ryan and Deci's theory and showed that students with dominant internal motivational factors and intrinsic motivation achieved higher academic success (Nedeljković, 2012). The results of many studies are consistent in showing that both kinds of motivation, internal and external, significantly shape behavior in the educational domain (Benabou & Tirole, 2003; Castiglia, 2010; Lai, 2011; Ryan & Deci, 2000; Sakač, 2008).

The main problem of this research is to explore what kind of motivational factors – internal or external are more frequent and dominant among students and which factors – individual or social, better predict students' academic achievement and level of their motivation for learning. Individual and social factors are not the same as intrinsic and extrinsic motives, they present the factors that contribute to intrinsic and extrinsic motivation, as constructs that are more complex than isolated factors (Ryan & Deci, 2000). Motivational factors such as individual interest, social pressure, rewards etc. present the predictors of students' motivation for learning. Motivation for learning is defined as students' tendency for making efforts with the aim of achieving academic success (Ryan & Deci, 2000).

According to the theoretical background, the self-determination theory (Ryan & Deci, 2000), and the results of previous studies (Benabou & Tirole, 2003; Castiglia, 2010; Lai, 2011; Nedeljković, 2012; Reid, 2007; Sakač, 2008; Velki, 2011), the derived hypothesis is that individual factors and intrinsic motivation have more positive effect on motivation for learning and academic achievement than social factors and extrinsic motivation.

According to the results of recent studies, motivational processes are very significant for students' educational achievement (Brophy, 2010; Benabou & Tirole, 2003; Lai, 2011; Reid, 2007; Sakač, 2008; Velki, 2011; Wentzel & Wigfield, 2009). If it is known which motivational factors are the strongest predictors of students' educational achievement, practitioners such as teachers and other professionals could more effectively create their motivational programs with the aim of enhancing and improving students' motivation for learning. Despite continuous efforts, researchers are still unable to give a definite answer to the question – what factor types, individual or social, have the strongest and steadiest influence on students' academic achievement and the levels of their motivation for learning.

Ryan and Deci (2000) emphasize that intrinsic motivation and individual motivational factors are especially important in the education domain. These authors say that students' intrinsic motivation results in a high-quality level of learning, productivity and creativity. They also emphasize the positive influence of individual factors such as internal interest for learning content, the perception of individual utility or the value of the content itself (proper knowledge, skills etc.). These authors point out that external motivation and social motivational factors do not have such a value for quality and stability of learning motivation. Ryan and Deci associated factors such as social pressure, extrinsic rewards, social privileges and material benefit with lower levels of learning motivation and lower grades of academic

 

achievement (Ryan & Deci, 2000). Other authors in their studies also confirmed the importance of individual motivational factors and intrinsic motivation for learning and achieving proper academic success (Castiglia, 2010; Nedeljković, 2012; Parr, 2011; Velki, 2011).

Velki (2011) found high positive correlation between the degree of students' autonomous motivation, the level of academic achievement and their mental health. Reid pointed out that the ideal motivational factors for learning are the internal desire to succeed and individual determination to achieve a proper aim (Reid, 2007). These motivational factors contribute to a high quality learning process, a better memory and the application of learning content, and students feel satisfaction but not pressure while adopting learning content.

It can be said that internal motivational factors are more desirable for students' academic achievement and the quality of their learning motivation. But the open question is what kinds of motivational factors are dominant among students and have a stronger impact on the level of their motivation for learning and academic achievement, especially considering the fact that contemporary society increasingly encourages material rewards and social prestige (Castiglia, 2010; Lai, 2011; Marić, 2011; Marić, 2012b; Parr, 2011; Sakač, 2008). Regarding this fact, the other hypothesis is that social motivational factors and extrinsic motivation are dominant among students.

## METHODOLOGY

### General background and sample

The research was conducted as a cross-sectional study. It was carried out during a period of eight months, from October 2012 to May 2013 at the Faculty of Education in Sombor and the Faculty of Philosophy in Novi Sad, the Province of Vojvodina, in Serbia.

The sample comprised 740 students from the University of Novi Sad – 410 from the Faculty of Education in Sombor and 330 from the Faculty of Philosophy in Novi Sad. More than 95% were between 19 and 24 years old. Approximately 60% were female, while 40% of them were male.

### Instruments and procedure

The instruments created particularly for the purpose of this study were used. The first part of the instrument was created with the aim of registering the students' socio-demographic characteristics, such as gender, grade and SES.

The second part of the instrument included a list of the most dominant students' individual motivational factors: perceived interest in content, perceived content use-

 

fulness for personal development, internal satisfaction and internal aspirations for achievement, and social motivational factors: material rewards, social prestige and appreciation by relevant social groups, social punishment avoidance and expectations of other people – parents and teachers. Students were asked to answer two questions: "Which factors motivate you to learn?" and "Which factors motivate you to achieve academic success?" They chose answers from the list and ranked the influence of different individual and social factors that motivate them in the learning process and in achieving academic success, using a scale ranging from 1 (extremely low influence) to 5 (extremely high influence). Students had the opportunity to choose more possible answers from the list and determine the level of influence of each individual and social motivational factor. The composite scores on each scale were formed by using the method of optimal scaling – HOMALS (Breiman & Friedman, 1985; Meulman, 1992; Young, De Leeuw & Takane, 1976). Optimal scaling quantifies nominal or ordinal variables, so their new values stay optimal, with minimal loss of information. It forms a small number of quantitative dimensions. The procedure of optimal scaling creates new quantitative variables that can be included in multivariate statistical procedures such as regression analysis (Michalidis & De Leeuw, 1996).

The third part of the instrument was constructed to measure the level of students' academic achievement and it consisted of four questions that registered the students' average academic grade for their previous school years, the number of exams they had passed, the average duration of their study and their subjective satisfaction with the achieved academic success (using a five point scale: 1 – extremely low, 5 – extremely high).

The fourth part of the instrument was a scale that consisted of ten questions, where the students were asked to state the actual level of their motivation for learning and achievement motivation – in different contexts: in normal situations, in difficult conditions, when a task is complicated, under individual and social pressure and when short of time (using a five point scale: 1 – extremely low, 5 – extremely high). This instrument was previously used in a pilot study and showed adequate metric characteristics (Cronbach $\alpha = 0, 81$ in the first pilot-sample and in this study Cronbach $\alpha = 0, 84$; the validity of this instrument was measured by correlating its scores with the students' results on the Academic Motivation Scale – AMS (Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992), the coefficients were in the range of (0.8 – 0.9).

The research procedure was conducted in accordance with required ethical standards. The conducting of the study was approved by the ethics committee of the Faculty of Education in Sombor and the Faculty of Philosophy in Novi Sad. The participants were informed about the aim of the study. They voluntarily participated in the research and researchers guaranteed them that data and results will be used only for scientific purposes. Their identity was unknown to the researchers. The students understood the instructions and there were no problems while collecting the data.

 

## Data analysis

Descriptive statistics were used for the description of the sample and for registering the most dominant types of motives for learning. T-tests and the analysis of variance were used to examine the relation of socio-demographic variables with the dominant types of motivational factors for learning, the level of academic achievement and the level of student motivation for learning.

Multiple regression analysis was used to determine the contribution of the following variables: relevant socio-demographic factors and individual and social motivational factors for learning, in predicting the level of students' academic achievement and the level of their motivation for learning. Before implementation of the regression analysis, the levels of students' motivation for learning and academic achievement underwent the statistical method of scaling data (HOMALS), with the aim of achieving statistical justification for including this kind of data in the multiple regression analysis.

The predictor variables included in the multiple regression analysis were individual and social motivational factors, which the students indicated and which proved to be the most frequent (also exposed to HOMALS method of scaling data): perceived interest, perceived content usefulness for personal development, internal satisfaction and internal aspirations for achievement, material rewards, social prestige and appreciation by relevant social groups, social punishment avoidance and expectations of other people – parents and teachers, while the dependent or criteria variables were the level of students' motivation for learning and the level of their academic achievement. After using the HOMALS method, these factors present quantitative dimensions, because each of them operates within the continuum of values (for example, influence of material rewards or internal satisfaction on the one side of variable continuum is very low, but very high on the other). Therefore, including individual and social factors in regression analysis has statistical justification.

# RESULTS

The research problems were formulated as questions: 1) which motivational factors – individual or social are more frequent among students and 2) which factors – individual or social better predict students' academic achievement and the level of their motivation for learning?

To respond to the first research question, frequencies of students' dominant motivational factors were calculated by determining the percentage of students who reported high levels on scales which influence a specific individual or social motivational factor. Answers to the questions about motivation to learn and to achieve academic success presented in the table of frequency refer to students who reported a specific individual or social factor with a high level of influence on their motivation for learning and their academic success.

 

*Table 1.* Frequencies of students' motivational factors for learning and achieving academic success

| Individual motivational factors | Frequency (%) – percent of the answers | Social motivational factors | Frequency (%) – percent of the answers |
|---|---|---|---|
| Perceived interest in content | 7% | Material rewards | 27% |
| Perceived content usefulness for personal development | 5% | Social prestige and appreciation by relevant social group | 21% |
| Internal satisfaction | 4% | Social punishment avoidance | 2% |
| Internal aspirations for achievement | 16% | Expectations of other people - parents and teachers | 12% |
| Something else | 4% | Something else | 2% |
| In total | 36% | In total | 64% |

The results presented in Table 1 show that the social motivational factors were more frequent among the participants. The most frequent individual factors were: perceived interest, perceived content usefulness for personal development, internal

*Table 2.* Descriptive data for variables

| Variable | *N* | Minimum | Maximum | Mean | Std. deviation |
|---|---|---|---|---|---|
| Perceived interest in content | 740 | 1.00 | 5.00 | 2.91 | 0.783 |
| Perceived content usefulness for personal development | 740 | 1.00 | 5.00 | 2.85 | 0.164 |
| Internal satisfaction | 740 | 1.00 | 5.00 | 2.67 | 0.751 |
| Internal aspirations for achievement | 740 | 1.00 | 5.00 | 3.52 | 0.351 |
| Material rewards | 740 | 1.00 | 5.00 | 4.13 | 1.238 |
| Social prestige and appreciation by relevant social group | 740 | 1.00 | 5.00 | 4.06 | 0.997 |
| Social punishment avoidance | 740 | 1.00 | 5.00 | 1.98 | 0.315 |
| Expectations of other people - parents and teachers | 740 | 1.00 | 5.00 | 3.11 | 0.016 |
| Level of students' motivation for learning | 740 | 5.00 | 25.00 | 16.54 | 3.428 |
| Level of students' motivation for academic achievement | 740 | 5.00 | 25.00 | 17.69 | 5.322 |
| Grade | 740 | 1.00 | 5.00 | 3.83 | 0.917 |

satisfaction and internal aspirations for achievement. The social factors which were dominant were: material rewards, social prestige and appreciation by relevant social groups, social punishment avoidance and expectations of other people – parents and teachers. The majority of the students reported that material rewards and social prestige were their central motivational factors for learning and achieving academic success. Internal aspirations for achievement were the most frequent internal factor of learning and achieving academic success among the participants.

The descriptive data for variables presented in Table 2 showed that material rewards and social prestige and appreciation by relevant social groups were the factors with the highest mean value, so it can be concluded that these two external factors were the most dominant among participants. Individual factors with the highest mean value were internal aspirations for achievement and perceived interest in content.

The results of the t-test showed that the female students reported higher levels of academic achievement ($t = 3.628$; $p < 0.001$), higher levels of motivation for learning ($t = 4.581$; $p < 0.001$), and individual motivational factors were more dominant among girls ($t = 3.262$; $p < 0.005$). The results of the analysis of variance showed that older students reported higher levels of motivation for learning ($F = 5.319$; $p < 0.005$).

The correlation matrix presented in Table 3 showed that Pearson correlation coefficients between individual motivational factors, such as perceived interest in content, perceived content usefulness for personal development, internal satisfaction and internal aspirations for achievement, and the level of students' motivation for learning and academic achievement, are significant, positive and high, so it can be concluded that these individual factors were strongly and positively related to the students' motivation for learning and academic achievement. The correlation coefficients between social motivational factors and the students' motivation for learning and academic achievement were not as high, so it can be concluded that these factors were not strongly related to their motivation for learning and academic achievement, as were internal motivational factors. Even more, social punishment avoidance and expectations of other people were negatively related to the students' level of motivation for learning and academic achievement, so these two factors had a decreasing influence on students' motivation.

The results of multiple regression analysis, where the predictors were the relevant socio-demographic variables and individual and social motivational factors, and the criterion was the level of participants' academic achievement, showed that the predictors explained approximately 61% of the variance of the results ($R^2 = 0.610$; $p < 0.001$). This result means that the relation between predictors and the criterion was quite high ($R = 0.781$; $p < 0.001$), so it can be concluded that the proper motivational factors were highly related to the students' academic achievement.

The results in Table 4 show that the individual motivational factors were the best predictors of a high level of academic success. The especially important pre-

 

*Table 3.* Correlation matrix

| Pearson Correlation | Perceived content usefulness for personal develop. | Internal satisfaction | Internal aspirations for achievement | Material rewards | Social prestige and appreciation by relevant social group | Social punishment avoidance | Expectations of other people - parents and teachers | Motiv. for learning | Motiv. for acad. achievement | Gender | Grade |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Perceived interest in content | 0.338 | 0.421 | 0.211 | 0.018 | 0.022 | 0.013 | 0.036 | 0.835* | 0.766* | 0.023 | 0.051 |
| Perceived content usefulness for personal development | 1 | 0.353 | 0.178 | 0.097 | 0.061 | 0.042 | 0.019 | 0.802* | 0.725* | 0.012 | 0.068 |
| Internal satisfaction | | 1 | 0.257 | 0.044 | 0.073 | 0.015 | 0.006 | 0.655* | 0.683* | 0.017 | 0.124 |
| Internal aspirations for achievement | | | 1 | 0.355 | 0.282 | 0.076 | 0.195 | 0.739* | 0.621* | 0.265 | 0.228 |
| Material rewards | | | | 1 | 0.466 | 0.215 | 0.378 | 0.419** | 0.348** | 0.121 | 0.263 |
| Social prestige and appreciation by relevant social group | | | | | 1 | 0.092 | 0.373 | 0.403** | 0.501** | 0.358 | 0.029 |
| Social punishment avoidance | | | | | | 1 | 0.542 | -0.516** | -0.653** | 0.126 | 0.281 |
| Expectations of other people - parents and teachers | | | | | | | 1 | 0.443** | -0.598** | 0.239 | 0.183 |
| Motivation for learning | | | | | | | | 1 | 0.627** | 0.428* | 0.374* |
| Motivation for acad. achievement | | | | | | | | | 1 | 0.329* | 0.104** |
| Gender | | | | | | | | | | 1 | 0.002 |

*Statistical significance p<0.01; **Statistical significance p<0.05

*Table 4.* Partial correlations between significant predictors and level of academic achievement

| Level of academic achievement | β (coefficient of contribution) | *t* | *p* (significance level) |
|---|---|---|---|
| Perceived interest in content | 0.692 | 5.828 | 0.001 |
| Perceived content usefulness for personal development | 0.638 | 5.293 | 0.000 |
| Internal satisfaction | 0.451 | 4.204 | 0.000 |
| Internal aspirations for achievement | 0.488 | 3.542 | 0.000 |
| Material rewards | 0.251 | 2.204 | 0.007 |
| Social prestige and appreciation by relevant social group | 0.337 | 3.169 | 0.004 |
| Social punishment avoidance | -0.534 | -4.213 | 0.002 |
| Expectations of other people - parents and teachers | -0.432 | -3.977 | 0.005 |
| Gender | 0.251 | 1.922 | 0.005 |

dictors of academic achievement were students' perceived interest in content and their perception of the usefulness of content for their personal development. Internal satisfaction also positively predicts academic success. An interesting result is the fact that social punishment avoidance and expectations of other people, parents and teachers, had a negative influence on the students' academic success, and this confirmed the negative aspects of social pressure related to academic achievement. Material rewards, social prestige and appreciation by relevant social groups positively predict academic success, but the values of those contributions are not high.

The results of the multiple regression analysis, where the predictors were the relevant socio-demographic variables and individual and social motivational factors, and the criterion was the level of the participants' motivation for learning, showed that the predictors explained approximately 67% of the variance of the results ($R^2 = 0.677$; $p < 0.001$). These results showed that the relation between the predictors and the criterion was high as expected ($R = 0.823$; $p < 0.001$), so it can be concluded that the motivational factors were highly related to the level of the students' motivation for learning.

The results in Table 5 show that the individual motivational factors were the best predictors of a high level of motivation for learning among the students. The especially important predictors of the level of students' motivation for learning were students' individual perceived interest and their perception of content usefulness for their personal development. Social punishment avoidance had a negative influence on the level of the students' motivation for learning, too. Internal satisfaction and internal aspirations for achievement positively predicts the level of motivation for learning, and those relations are closer than the relations of social factors – material

 

*Table 5*. Partial correlations between significant predictors and level of motivation for learning

| Level of motivation for learning | β (coefficient of contribution) | *t* | *p* (significance level) |
|---|---|---|---|
| Perceived interest in content | 0.799 | 6.749 | 0.000 |
| Perceived content usefulness for personal development | 0.711 | 6.158 | 0.000 |
| Internal satisfaction | 0.596 | 5.397 | 0.001 |
| Internal aspirations for achievement | 0.694 | 5.683 | 0.001 |
| Material rewards | 0.372 | 2.268 | 0.005 |
| Social prestige and appreciation by relevant social groups | 0.356 | 3.044 | 0.005 |
| Social punishment avoidance | -0.434 | -3.928 | 0.005 |
| Expectations of other people - parents and teachers | 0.395 | 3.461 | 0.005 |
| Gender | 0.378 | 2.167 | 0.005 |
| Grade | 0.235 | 2.842 | 0.005 |

rewards, social prestige and appreciation by relevant social groups to the level of motivation for learning.

## DISCUSSION AND CONCLUSIONS

The results of this study are consistent with the self-determination theory (Ryan & Deci, 1985; Ryan & Deci, 2000), with the results of the studies that examined intrinsic and extrinsic motivation and with the results of the studies that showed which individual and social factors are related to students' level of academic achievement and level of motivation for learning (Benabou & Tirole, 2003; Castiglia 2010; Nedeljković, 2012; Parr, 2011; Sakač, 2008; Velki, 2011).

The result of the study especially important for all teachers and other professionals is that individual motivational factors more positively contributed to academic achievement and level of students' motivation for learning than social factors, which is consistent with the self-determination theory (Ryan & Deci, 2000) and previous studies (Benabou & Tirole, 2003; Castiglia 2010; Krapp, 2002; Nedeljković, 2012; Parr, 2011; Renninger, 2009), but social motivational factors in this study proved to be the most frequent among students from the Faculty of Education and the Faculty of Philosophy.

The first part of the results is consistent with the self-determination theory and with the results of other studies that showed that individual motivational factors and intrinsic motivation are especially important in the education area (Castiglia 2010; Lai, 2011; Parr, 2011; Ryan & Deci, 2000; Sakač, 2008; Velki, 2011). This research

 

confirmed that students' intrinsic motivation as a consequence has a high-quality level of learning and productivity. The internal factors – individual perceived interest in content and perceived content usefulness for personal development were shown as the most important predictors of a high level of motivation for learning and academic success, and this is consistent with previous findings (Brophy, 2010; Castiglia, 2010; Nedeljković, 2012; Parr, 2011; Velki, 2011). Also, internal aspirations for achievement and internal satisfaction proved to be very important factors positively related to academic success and the level of motivation for learning among students. This is consistent with Read's attitude (Reid, 2007) and with the results of studies which confirmed that the ideal motivation factors for learning are the internal desire to succeed and individual determination to achieve the proper aim (Castiglia, 2010; Lai, 2011; Nedeljković, 2012).

The results of this study indicate that it is necessary to encourage students' individual interest in contents, because it contributes to their motivation for learning and their academic success. This is consistent with the previous results that showed that when working in the domains of individual interest, students manifest higher levels of attention, concentration, persistence and test performance (Durik Matarazzo, 2009; Krapp, 2002; Parr, 2011; Renninger, 2009).

A very important result of this study is that social motivational factors have shown themselves to be more frequent among students, but consistent with the self-determination theory (Ryan, Deci, 2000) and the results of previous studies (Benabou & Tirole, 2003; Castiglia, 2010; Nedeljković, 2012; Parr, 2011; Velki, 2011), external motivational factors do not have high values for the level of learning motivation and academic success. The external factors such as social punishment avoidance, social expectations by parents and teachers, material rewards and social privileges were related to lower levels of learning motivation and lower grades of academic achievement than internal factors. According to the SDT and previous findings, external motivation is not permanent in nature and opposes the internal aspirations of individuals. It is not an effective motivating factor for learning and academic success in these conditions (Lai, 2011; Nedeljković, 2012; Parr, 2011; Renninger, 2009; Ryan & Deci, 2000; Velki, 2011).

Social pressure – social punishment avoidance and expectations by parents and teachers proved to be significant risk-factors for motivation for learning and achieving academic success. Social environment – teachers and parents, should be very sensitive to the needs of their students, because their behaviour sometimes can have the opposite effect (Lai, 2011; Parr, 2011; Schiefele, 2009).

The students in this research reported that social motivational factors are more frequent among them, especially material rewards and social prestige. This is a consequence of the modern social environment that promotes rapid progress with little effort, material incentives, rather than interior ideals and individual values (Castiglia, 2010). This result is very important for university teachers and other adults who actively participate in the education of children and youth. They have to be

 

aware of the current situation and to improve, using various methods, the influence of internal motivational factors, which are the basis of motivation and academic progress (Lai, 2011; Parr, 2011; Renninger, 2009; Schiefele, 2009).

This study showed that girls had higher levels of academic achievement, higher levels of motivation for learning and individual motivational factors were more frequent among girls. Also, the older students reported higher levels of motivation for learning and this can be explained by higher levels of conscientiousness that characterizes girls and older students (Marić, 2011; Marić, 2012a). Conscientiousness presents a significant individual factor that leads to academic success, because persons with high conscientiousness are not prone to procrastination or neglecting duties and they are very committed to tasks (Marić, 2011; Nedeljković, 2011).

In conclusion, this study showed that internal motivational factors are more desirable for students' academic success and the level of their learning motivation. But especially important for practitioners is the fact that external motivational factors were more dominant among students. It can be explained by the influence of the values in contemporary society with prevailing material rewards and social privileges (Marić, 2011; Marić, 2012b; Sakač, 2008). As the practical implications of this study is the importance of improving the influence of intrinsic motivation and internal motivational factors among students should be pointed out, because they present significant contributing factors to academic success and motivation for learning, but they are not developed to the proper extent among students.

## REFERENCES

Benabou, R., Tirole, J. (2003). Intrinsic and extrinsic motivation. *Review of Economic Studies*, 70, 489-520.

Breiman, L., Friedman, J.H. (1985). Estimating optimal transformations for multiple regression and correlation. *Journal of the American Statistical Association,* 80, 580-598.

Brophy, J. (2010). *Motivating students to learn – third edition*. New York: Routledge.

Castiglia, B. (2010). *Factors driving student motivation*. Retrieved from: http://www.abeweb.org/proceedings/proceedings06/astiglia.pdf (21 July 2013).

Costa, F.M., Jessor, R., Turbin, M.S. (2007). College student involvement in cigarette smoking: the role of psychosocial and behavioral protection and risk. *Nicotine and Tobacco Research, 9*, 213-224.

Deci, E.L. (1971). The effects of externally mediated rewards on intrinsic motivation. *Journal of Personality and Social Psychology, 18,* 105-115.

Durik, A., Matarazzo, K. (2009). Revved up or turned off? How domain knowledge changes the relationship between perceived task complexity and task interest. *Learning and Individual Differences*, *19*, 155-159.

Graham, S., Williams, C. (2009). An attributional approach to motivation in school. In K.R. Wentzel, A., Wigfield (Eds.), *Handbook of Motivation in School*, 11-35. New York: Routledge.

 

Harter, S. (1981). A new self-report scale of intrinsic versus extrinsic orientation in the classroom: motivational and informational components. *Developmental Psychology*, 17, 300-312.

Krapp, A. (2002). Structural and dynamic aspects of interest development: Theoretical considerations from an ontogenetic perspective. *Learning and Instruction*, 12, 383-409.

Lai, E.R. (2011). *Motivation: a literature review – research report*. Retrieved from: http://www.pearsonassessments.com/hai/images/tmrs/motivation_review_final.pdf (23 July 2013).

Marić, M. (2011). Socio-demographic factors and substance use in adolescence. *Stanovništvo*, *49*, 91-113. DOI:10.2298/STNV1102091M.

Marić, M. (2012a). Connection between school grades, gender, age of students and negative affective replies of students. *Pedagogy*, *67*, 87-94.

Marić, M. (2012b). Continuous education, life satisfaction and psychological well-being. *Andragogical Studies*, *1*, 81-97.

Maslow, A.H. (1954). *Motivation and personality*. New York: Harper and Brothers.

Meulman, J.J. (1992). The integration of multidimensional scaling and multivariate analysis with optimal transformations of the variables. *Psychometrika, 57*, 539-565.

Michalidis, G., De Leeuw, J. (1996). *The Gifi system for non-linear multivariate analysis. UCLA Statistics Series, Preprint 204*. Retrieved from: http://preprint.stat.ucla.edu (24 September 2013).

Michalos, A.C. (2007). *Education, happiness and wellbeing*, paper written for the International Conference on ,,Is happiness measurable and what do those measures mean for public policy?" at Rome, 2–3 April 2007, University of Rome ,,Tor Vergata".

Miller, R.B., Brickman, S.J. (2004). A model of future-oriented motivation and self-regulation. *Educational Psychology Review*, *16*, 9-33.

Nedeljković, J. (2012). *Integrative model of psychological predictors of academic non-efficacy*. Dissertation. Niš: Faculty of Philosophy.

Parr, K. (2011). *The influence of interest and working memory on learning*. Dissertation. Florida: University of Florida.

Pintrich, P. (1999). The role of motivation in promoting and sustaining self-regulated learning. *International Journal of Educational Research*, *31*, 459-470.

Reid, G. (2007). *Motivating learners in the classroom: ideas and strategies*. London: Paul Chapman Publishing.

Renninger, K.A. (2009). Interest and identity development in instruction: an inductive model. *Educational Psychologist, 44*, 1-14.

Ryan, R., Deci, E. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.

Ryan, R., Deci, E. (2000). Intrinsic and extrinsic motivations: classic definitions and new directions. *Contemporary Educational Psychology*, *25*, 54-67.

Sakač, M. (2008). Some psychological factors of school achievement. *Norma*, *13*, 29-36.

Schiefele, I. (2009). Situational and individual interest. In K.R. Wentzel, A., Wigfield (Eds.), *Handbook of Motivation in School*, 197-209. New York: Routledge.

 

Schuller, T., Watson, D. (2009). *Learning through life – Inquiry into the future for the lifelong learning.* England and Wales: National Institute of Adult Continuing Education.

Schunk, D.H., Pajares, F. (2009). Self-efficacy theory. In K.R. Wentzel, A., Wigfield (Eds.), *Handbook of Motivation in School*, 35-55. New York: Routledge.

Vallerand, R.J., Pelletier, L.G., Blais, M.R., Briere, N.M., Senecal, C., Vallieres, E.F. (1992). The Academic Motivation Scale: A measure of intrinsic, extrinsic, and amotivation in education. *Educational and Psychological Measurement*, *52*, 1003-1017.

Vansteenkiste, M., Niemiec, C.P., Soenens, B. (2010). The development of the five mini-theories of self-determination theory: an historical overview, emerging trends and future directions. *Advances in Motivation and Achievement, 16,* 105-165.

Velki, T. (2011). The correlation considering the degree of autonomous motivation, academic achievement and mental health. *Croatian Journal of Education*, *13*, 56-87.

Wentzel, K.R., Wigfield, A. (2009). *Handbook of Motivation in School*. New York: Routledge.

Wigfield, A. (2000). Expectancy-value theory of achievement motivation. *Contemporary Education Psychology*, *25*, 68-81.

Wigfield, A., Tonks, S., Lutz Klauda, S. (2009). Expectancy-value theory. In K.R. Wentzel, A., Wigfield (Eds.), *Handbook of Motivation in School*, 55-77. New York: Routledge.

Young, F.W., De Leeuw, J., Takane, Y. (1976). Regression with qualitative and quantitative variables: An alternating least squares method with optimal scaling features. *Psychometrika*, *41*, 505-528.

# INDIVIDUALNI I DRUŠTVENI FAKTORI VEZANI UZ ŠKOLSKI USPJEH UČENIKA I MOTIVACIJU ZA UČENJE

**Sažetak**

Cilj ovog istraživanja bio je utvrditi najčešće i najznačajnije individualne i društvene faktore vezane uz školski uspjeh učenika i motivaciju za učenjm. Istraživanje je provedeno na 740 studenata Učiteljskog fakulteta i Filozofskog fakulteta u Vojvodini. Sudionici su ispunili upitnik koji mjeri njihove dominantne pojedinačne i društvene motivacijske faktore, razinu njihove motivacije za učenje, razinu školskog postignuća te njihova sociodemografska obilježja. Rezultati istraživanja pokazali su povezanost individualnih i društvenih faktora sa školskim uspjehom i motivacijom za učenje. Individualni faktori – zanimanje za sadržaj i korisnost sadržaja za osobni razvoj pokazali su se najznačajnijim prediktorima visoke razine motivacije za učenje i školskog uspjeha, dok su društveni motivacijski faktori bili najčešći među studentima. Rezultati su osobito važni za predavače kao smjernice za poticanje motivacije studenata.

K**ljučne riječi**: školski uspjeh, motivacija za učenje, individualni i društveni faktori

Primljeno:29. 11. 2013.

 

## APPENDIX

**The fourth part of the questionnaire – sample items**

A) Please estimate the actual level of your motivation for learning in different contexts, using a five point scale (1 – extremely low, 5 – extremely high):

| | |
|---|---|
| 1. In normal situations | 1 2 3 4 5 |
| 2. In difficult conditions | 1 2 3 4 5 |
| 3. When a task is complicated | 1 2 3 4 5 |
| 4. Under individual and social pressure | 1 2 3 4 5 |
| 5. When short of time | 1 2 3 4 5 |

B) Please estimate the actual level of your motivation for achieving proper academic success in different contexts, using a five point scale (1 – extremely low, 5 – extremely high):

| | |
|---|---|
| 1. In normal situations | 1 2 3 4 5 |
| 2. In difficult conditions | 1 2 3 4 5 |
| 3. When a task is complicated | 1 2 3 4 5 |
| 4. Under individual and social pressure | 1 2 3 4 5 |
| 5. When short of time | 1 2 3 4 5 |

 