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Procedia - Social and Behavioral Sciences 187 (2015) 50 – 55

Procedia
Social and Behavioral Sciences

PSIWORLD 2014

Implications of motivational factors regarding the academic success of full-time and distance learning undergraduate students: A Self-Determination Theory perspective

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Abstract

The Self-Determination Theory has been useful for investigating the optimal performance of students. In this study we investigate the relationship between the type of education (full-time and distance), academic performance and motivation. The study sample consists of 162 participants, students of the Babes-Bolyai University, Faculty of Psychology and Educational Sciences. The participants were asked to provide demographical data and completed two questionnaires (Academic Motivation Scale, Basic Psychological Needs Satisfaction Scale). Our results emphasize that the relationships between intrinsic and extrinsic motivational components and academic performance present differences depending on the attended educational form.

Peer-review under responsibility of the Scientific Committee of PSIWORLD 2014.

Keywords: academic performance, traditional education, distance learning, motivation, autonomous regulation, controlled regulation, amotivation;

1. Introduction

Motivation is defined by Vallerand et al. as the underlying "why" of behavior" (Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992, p. 1008). Academic motivation focuses on "Why do you go to college?"

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Peer-review under responsibility of the Scientific Committee of PSIWORLD 2014.
doi:10.1016/j.sbspro.2015.03.010

(Vallerand, Pelletier, Blais, Briere, Senecal & Vallieres, 1992, p. 1008). In conclusion: academic motivation implies the motivation to decide for and continue with university studies.

The academic performance and motivation of traditional education (full-time students) and distance learning students has been examined in many studies. Regarding performance the studies reported a better academic performance for non-traditional learners (Iverson, Colky, & Cyboran, 2005; Navarro & Shoemaker, 2000; Williams, 2006) but other studies have reported no significant difference in the academic performance (Haynes & Dillon, 1992; McDonnell et al., 2011; Woo & Kimmick, 2000).

The Self-Determination Theory (Deci & Ryan, 1991, 2000) has been useful for investigating the optimal performance of students. Deci and Ryan identify several types of motivation (see Fig. 1.): "Motivation for the behavior can range from amotivation or unwillingness, to passive compliance, to active personal commitment. According to SDT, these different motivations reflect differing degrees to which the value and regulation of the requested behavior have been internalized and integrated. Internalization refers to people's "taking in" a value or regulation, and integration refers to the further transformation of that regulation into their own so that, subsequently, it will emanate from their sense of self." (Ryan & Deci, 2000, p. 71, in Wilkesmann, Fisher, Virgillito, 2012). The Self-Determination Theory defined 3 categories of motivation: autonomous regulation (learning for pleasure), controlled regulation (learning for rewards, avoid feelings of guilt, etc.), and amotivation (lack of autonomous and controlled learning).

Regarding the intrinsic motivation the researchers apply a very narrow definition. If we do an activity only for the activity itself and we also do it for pleasure, we speak about intrinsic motivation. Intrinsic motivation "refers to doing an activity for the inherent satisfaction of the activity itself" (Ryan & Deci, 2000, p. 71 in Wilkesmann, Fisher, Virgillito, 2012).

On the other side, extrinsic motivation can be defined as those external reasons, which help to accomplish our goals: rewards or punishments. "People behave to attain a desired consequence such as tangible rewards or to avoid a threatened punishment." (Deci & Ryan, 2000, p. 236). The more external regulation is internalized the more actions are experienced as autonomous, self –determined (Wilkesmann, Fisher, Virgillito, 2012).

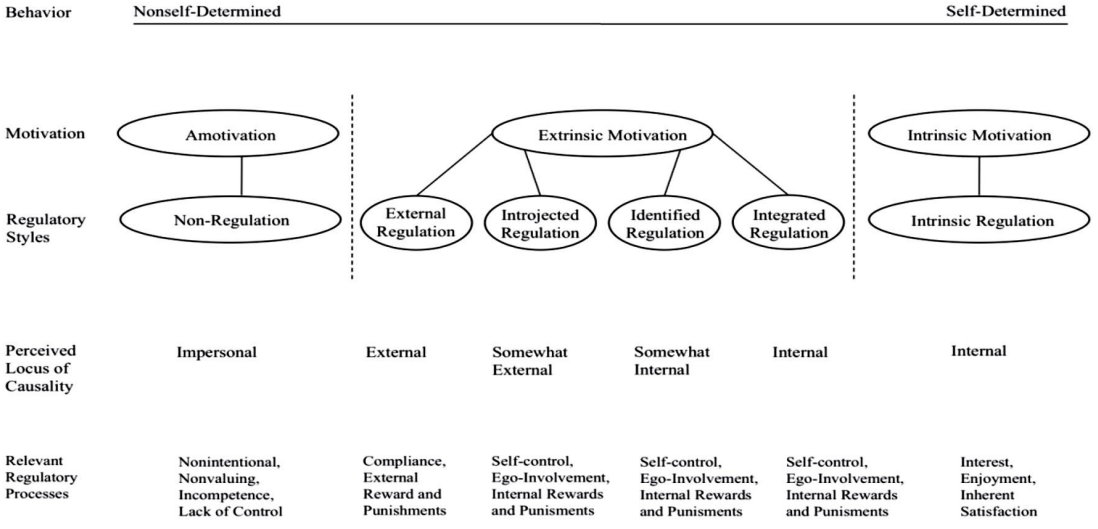

Fig.1. SDT (Ryan & Deci, 2000, p. 72)

Students enter the university studies with different types of motivation, which is one important predictor of academic performance (Dweck, 1986; Vansteenkiste, Lens & Deci, 2006; Hulleman, Schrager, Bodmann & Harackiewicz, 2010; Kusurkar, Ten Cate, Vos CM, Westers P, Croiset, 2013).

Empirical evidence supports that ethnic minority Hungarian students "consider themselves to be more able to achieve better results, to be more focused on learning, self-improvement, and that they value their studies more, than do students from the majority group"(Wagner, 2012, p. 149). We know that there is a cultural influence on motivational profile of students. In this study we investigate the relationship between the type of education (full-time and distance) in a minority culture, academic performance and motivation. The practical objective of this study consists in identifying the motivational profile specific to full-time and to distance learners.

Our goal was to identify difference concerning the level and type of motivation between full-time and distance learning students with high and low academic performance.

2. Method

2.1. Participants

The study sample consists of 162 (N= 162) participants, students of the Babes-Bolyai University, Faculty of Psychology and Educational Sciences. Participants were divided into two groups according to the type of education. The full time education sample consists of 79 (n=79) participants, aged 18 - 38 years (M=20.97, SD=3.15), 15 (19 %) male and 64 (81%) female, 48 (60.8%) first year, 29 (36.7%) second year and 2 (2.5%) third year students. The distance learning group consists of 83 (n=83) adults, aged 19 - 60 years (M=33.71, SD=9.35), 16 (19.3 %) male and 67 (80.7%) female, 31 (37.3%) first year, 46 (55.4%) second year, 3 (3.6%) third year students and 3(3.6%) students with prolonged period of study.

2.2. Instruments

Basic Information Form

Demographical data, general information regarding the form of current education, as well as data about the academic history (e.g. previously earned degrees, intention of quitting) and academic performance (cumulated results of the first semester) of participants was collected through an anonymous Basic Information Form.

Academic Motivation Scale

The scale was developed by Vallerand et al., (1989) and assesses reasons for attending college from an SDT perspective. The instrument focuses on 7 types of constructs: intrinsic motivation towards knowledge, accomplishments, and stimulation, external, introjected and identified regulations, and finally amotivation. The instrument contains 28 items (4 items per subscale) assessed on a 7-point Likert-scale.

Results of the reliability test show a Cronbach Alpha of α= .78 for the Intrinsic motivation toward knowledge subscale, an α= .85 for Intrinsic motivation toward accomplishment, an α= .81 for Intrinsic motivation to experience stimulation, an α= .87 for Extrinsic motivation for external regulation, an α= .82 for Extrinsic motivation – introjected, an α= .63 for Extrinsic motivation-identified and α= .80 for Amotivation. All reliability scores reflect good internal consistency, except the Extrinsic motivation- identified subscale, which shows an acceptable level. The overall reliability score of the scale is good α= .88.

Basic Psychological Needs Satisfaction Scale

The Basic Psychological Needs Satisfaction Scale is a 21 item scale which assesses 3 major components of basic psychological needs: Autonomy (measured with 7 items, out of which 3 items are reversed); Competence (measured with 6 items, out of which 3 are reversed); Relatedness (8 items, out of which 3 are reversed). The original scale was adapted by Wei et al., (2005) from the Basic Psychological Needs Satisfaction-work version (Ilardi, Leone, Kasser, & Ryan, 1993). Participants were asked to evaluate on a 7-point scale how well the 3 psychological needs are satisfied in their life (1 = not at all true; 7 = very true).

Cronbach Alpha scores for our sample showed a good reliability for the three subscales (Autonomy α= .72; Competence α= .73; Relatedness α= .75) and a good reliability for the whole scale (α= .85).

2.3. Procedure

The participants were asked to provide demographical data and completed the questionnaires in groups at the beginning of the academic courses.

Statistical Software (SPSS 20.0) was used for data analysis. Descriptive statistics, Pearson correlation and t-tests were used for comparison of the groups. Significance level was set at $p \leq 0.05$.

3. Results

As the results of the table below show (Table 1.), there are significant differences between the motivation of full-time and distance learning students.

Table 1. Differences between Full-time and distance learners on motivation variables

		M (SD)	*t*(df)	Sig. (*p*)	Cohen's *d*
Intrinsic motivation – to know	Full-time learners Distance learners	21.08 (4.05) 22.72 (4.78)	-2.33 (160)	.021	.37
Intrinsic motivation – to experience stimulation	Full-time learners Distance learners	15.87 (4.85) 17.96 (5.83)	-2.47 (160)	.015	.38
Extrinsic motivation – introjected	Full-time learners Distance learners	16.92 (5.05) 14.92 (7.02)	2.06 (160)	.040	.32
Extrinsic motivation – external regulation	Full-time learners Distance learners	19.20 (5.08) 16.59 (6.30)	2.89 (160)	.004	.45
Amotivation	Full-time learners Distance learners	6.98 (4.03) 4.95 (1.99)	4.10 (160)	.000	.63

While distance learners exhibit a higher level of intrinsic motivation (to know and to experience stimulation), full-time learners are more extrinsically motivated (introjected and external regulation). The level of amotivation is significantly higher in students who learn in a full-time form.

In the group of full-time learners, there was a significant association between extrinsic motivation (introjected) and academic performance (r= -.37, p<0.01).

We were interested to find out if there is a difference concerning the level of motivation between students with low and high academic performance. Results show that there is difference between the type of motivation in the group of full-time and distance learners. In the case of the former, extrinsic motivation (introjected) of low achievers shows a higher level (M= 19.08, SD=4.47) than the level of motivation in high achievers (M=13.82, SD=5.47) (t(39) = 3.37, p< .01; d= 1.05). Compared to them, distance learners with low and high results present differences on two forms of intrinsic motivation (motivation to know M=21.85, SD=3.71; M=25.18, SD=3.62; t(23) = -2.24, p< .05, d= .90); motivation toward accomplishment M=16.85, SD=5.39; M=22.18, SD=5.68; t(23) = -2.39, p< .05; d= .92).

Results on the 3 major psychological needs (see Fig. 2.) suggest that compared to full-time high achievers, distance learning high achievers show increased levels on autonomy (M=5.61, SD= .97), competence (M=5.57, SD= .88) and relatedness (M=5.56, SD= .85).

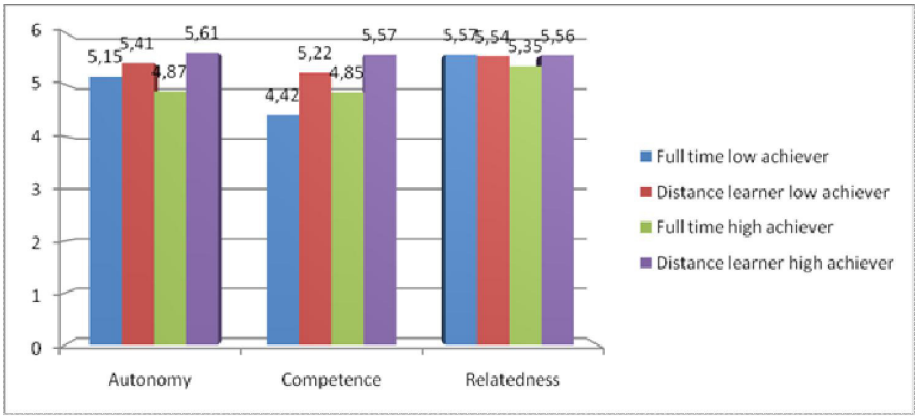

Fig. 2. Differences on basic needs between full-time and distance learners

Interestingly, full-time high achievers have lower levels of autonomy (M=4.87, SD= .65), competence (M=4.85, SD= .94) and relatedness (M=5.35, SD= .74) than low achievers who attend courses as distance learners.

An analysis of variance showed that the effect of type of study (full-time, distance learning) was significant for intrinsic motivation to know (F (1, 161) = 4.68, $p< .05$), intrinsic motivation to experience stimulation (F (1, 161) = 6.24, $p< .05$), extrinsic motivation of external regulation (F (1, 161) = 7.49, $p<.05$), amotivation (F (1, 161) = 15.30, $p< .05$), autonomy (F (1, 161) = 13.94, $p< .05$), and competence (F (1, 161) = 23.02, $p< .05$), but not for identified extrinsic motivation and relatedness.

4. Conclusion

We found evidence that intrinsic and extrinsic motivation show different patterns in the group of full-time and distance learners. Both levels of intrinsic motivation – to know and to experience stimulation – are higher for distance learners. The full-time learners are motivated more extrinsically. Our results suggest that the full-time learners show a greater tendency to lack motivation. High achieving distance learners have higher levels of autonomy, competence and relatedness than full time learners.

Full-time high achiever students have lower levels of autonomy, competence and relatedness, than distance learning high and low achievers.

We found evidence for the influence of intrinsic self-regulation on academic performance. Our results emphasize that the relationships between intrinsic and extrinsic motivational components and academic performance present differences depending on the attended educational form. Full-time low achievers have high level of introjected extrinsic motivation. High achiever distance learners present high levels of intrinsic motivation to know.

The motivational profile of students seems to be more related to the type of educational form, than to the academic success. Our evaluation leads us to the conclusion that compared to low achieving full-time students, a typical full-time high-achieving student is characterized by lower levels of introjected regulation (extrinsic motivation), low levels of autonomy and competence. In order to avoid self-blame and negative effects of the environment, full-time students with low results show higher levels of extrinsic motivation. Meanwhile, full-time students with good results are less motivated by the avoidance of threats to the self.

The high achieving distance learner student has higher levels of intrinsic motivation to know, greater levels of autonomy and competence than low achieving distance learners. The students with good results are more motivated by the need to widen their knowledge and the need to feel accomplished.

Further research should target the assessment of self-esteem, self-actualization and the exploration of the effect of these factors upon the presented associations. Our results suggest practical implications which should be regarded in the teaching process of full-time and distance learning undergraduate students. The methodological approach of the didactic staff should differentiate depending on the educational form.

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