

MOTIVATION FOR TRADITIONAL STUDY AND E-LEARNING OF DESIRED AND UNDESIRED SPECIALTIES

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Abstract

Objectives. It is important to establish if motivation for studying a desired specialty is more long-lasting, stimulating e-learning and job-related performance than motivation for studying an undesired specialty. It may be expected that studying the desired specialty would be related to greater motivation for acquiring the necessary knowledge and skills using diverse sources of information, including online learning, in order to correspond to the job requirements.

Material and methods. A survey was conducted in 2017 among 156 Bulgarian students who were asked about their behaviour, feelings and intents related to learning their specialty based on some items from two self-report questionnaires measuring academic motivation and adaptation to university environment.

Results. Less proportion of students who wanted to study their specialty before being enrolled at the university preferred to change the specialty ($p < .001$), were not satisfied with their exam results ($p < .05$), thought of giving up their studies ($p < .01$), felt unpleasant when they learned ($p < .05$), and did not regularly search for additional material on the Internet ($p < .001$) than the students who did not want to study their specialty before being enrolled at the university.

Conclusions. Studying the desired specialty was related to greater motivation for acquiring the necessary knowledge and skills using diverse sources of information, including online learning. E-learning may complement traditional learning related to a chosen vocational field.

Keywords: learning, motivation, occupation, students, specialty.

Introduction

There are long-lasting scientific efforts to understand what motivates human behaviour in order to direct, stimulate or stop some activity. Learning is a desired activity in the society, as well as being a competent specialist in some occupations. It is important to study the link between the attitude toward the studied specialty (favourable in the case of a desired specialty or unfavourable in the case of an undesired specialty) and learning motivation in order to find some stimulators of desired students' behaviour.

Motivation is an incentive that directs human behaviour towards a specific purpose and sustains the efforts (Milkovich and Boudreau, 1988, p.165; Riggio, 1990, p. 157) until a need has been satisfied (Maslow, 2001, p. 65). Learning motivation is a set of reasons for learning that direct the efforts to acquire knowledge and skills (Stoyanova, 2015). It may be expected that studying the desired specialty would be related to greater motivation for acquiring the necessary knowledge and skills using diverse sources of information, including online learning, while one who is enrolled in an undesired specialty may be not enough motivated to study and to search for additional

information online related to this specialty.

Motivation is regarded as a process that is developed (Iliev, 2005; Paunov, Paunova and Paunov, 2013) and may be stimulated (Milkovich and Boudreau, 1988), or as a state that is constant long time until the goals are achieved and the needs are satisfied (Maslow, 2001). E-learning expands and enriches the learning experience (Aldiab et al., 2017, p. 575) that is why e-learning may complement traditional study regarding desired specialty in the process of developing and maintaining motivation for study.

Some motivation theories focus on setting specific goals for performance in a particular area in the most effective way (Riggio, 1990). The vocational requirements related to the occupation may strengthen motivation for self-improvement (Riggio, 1990), including means of e-learning, in order to correspond to the job requirements. Enhanced motivation for self-realisation in the learning activity related to a chosen future profession leads to more efforts, better results and higher satisfaction (Paunov, 1998).

A connection has been established between the feelings during study, exam results, and e-learning, because it has been found that the students, who think they are efficient and cope well with their study, use Internet in more areas and amuse more than the learners who feel they are not efficient and do not cope well with their study (Poude, Zamani and Abedi, 2011, p. 2694). This finding indicates the importance of pleasant feelings and satisfaction with results as motivators for learning activity.

Motivation includes feelings, perceptions, attitudes related to goal achievement, and engagement with the goal (Agbor-Baiyee, 1997). The lack of motivation leads to losing the interest (Freeman, 2001). E-learning is related to the students' increased interest in the studied content (Bozarova and Tasev, 2002). The study of a desired specialty is related to more positive feelings, a favourable attitude towards this specialty, high interest in the specialty, and respectively such a student should be more engaged with his/her learning than a student who studies an undesired specialty. Engagement with the study of desired specialty may be expressed also as the use of online resources for acquiring further knowledge and skills related to the selected area of study. The student in e-learning is active in the learning process (Topîrceanu, 2017, p.42) that should maintain motivation for study. Interactive features of e-learning increase learning motivation (El-Seoud, El-Khouly and Tsj-Eddin, 2016). The study of a desired specialty may enhance motivation for self-improvement by means of search of additional information online related to the selected specialty, because the students are more motivated when applying e-learning and being engaged (Harandi, 2015), whilst the study of an undesired specialty should be characterized by means of weaker motivation for e-learning of additional knowledge and skills related to the specialty.

The students sometimes are enrolled in a specialty that they do not like because of different reasons (for example parental influence, the estimated future benefits as high income, etc.). The school vocational orientation and professional orientation within the family are related to the motivation to learn:

"The modern parent is no longer an educator, but also a partner and an associate of the child who does not impose himself/herself but stimulates the child's capacity of understanding and sympathy in order to become aware of the consequences of his/her own actions. Considering the anti-cultural and anti-real values bombardment, the task is a difficult one for both categories of parents and of educators and teachers" (Rada, 2013, p. 344).

However, the present research does not accent on the reasons why a specialty is desired, but another is not preferred, that may be related to parental and school vocational orientation. The current research is focused on the students' formed preferences towards the university specialties (after the influence of personal interests, own abilities, and parental, peer and school career orientation) striving to establish if such preferences of traditional study of specialties are stable and related to e-learning.

It is important to establish if motivation for study may be stable, long-lasting, and

developing in such a way that traditional study of a desired specialty might stimulate e-learning as additional possibility for acquiring the necessary knowledge and skills in order to correspond to the job requirements, engendering pleasant feelings and successful results in learning. The objective of this study was to investigate if studying the desired specialty expressed enhanced and stable learning motivation, including motivation for e-learning. The hypothesis supposed that studying the desired specialty would be related to greater motivation for acquiring the necessary knowledge and skills using diverse sources of information, including online learning, in order to correspond to the job requirements.

Material and methods

A survey was conducted in 2017 among 156 students at seven Bulgarian universities in Blagoevgrad, Burgas, Plovdiv, Sofia, and Veliko Tarnovo. Some authors (Burmeister and Aitken, 2012; Zimmerman, 2012) recommend at least 100 participants in a study. The eligibility criterion was to select students in different specialties and educational degrees at several Bulgarian universities. They participated voluntarily and answered anonymously.

The participating full-time students were 112 (71.8%), and the part-time students were 44 (28.2%). They were from 19 to 50 years old. The students in bachelor's degree were 118, i.e. 75.6% (the freshmen were 12, the sophomores were 38, the third-year students were 30, the fourth-year students were 38), and the students in master's degree were 38, i.e. 24.4%. They studied Educational management, English philology, Finance, Law, Medicine, Pedagogy, Psychology, Public administration, Social activities, Sociology, Speech therapy, and Tourism. The female students were 136 (87.2%), and the male students were 20 (12.8%). The married students were 38 (24.4%), the single students were 76 (48.7%), the cohabitating students were 40 (25.6%), the divorced students were 2 (1.3%). The working students were 74 (47.4%), and the students who only studied without working were 82 (52.6%).

The participants were asked several questions. One question asked about their behaviour that should be a reliable source of information about their motivation (Milkovich and Boudreau, 1988) - "I regularly search for additional material related to my study on the Internet". (This question was inspired by Radoslavova and Velichkov, 2005). Some questions asked about feelings (because motivation includes feelings, according to Agbor-Baiyee, 1997) - "How do you feel when you learn?", "Are you satisfied with your exam results?" (These questions were inspired by Dzhonev, 1990, and they were chosen, because, according to Paunov, 1998, enhanced motivation for learning related to a chosen future profession leads to better results and higher satisfaction). Some questions asked about intents in order to understand more about durability of motivation (as a state that is constant long time, according to Maslow, 2001) - "Is this the specialty that you wanted to study before being enrolled at the university?", "If you have such an opportunity, would you change the specialty you are studying?", "Have you ever thought of giving up your studies?" (These questions were inspired by Dzhonev, 1990).

Data were processed statistically by means of SPSS 20 applying descriptive statistics and chi-square analysis. The effect size Phi for chi-square analysis (Zaiontz, 2019) was calculated.

Results

The results related to establishment of motivation for study of the chosen specialty as stable, long-lasting or changeable are presented in Table 1 and in Table 3.

Less students who wanted to study their specialty before being enrolled at the university preferred to change the specialty that they were studying than the students who did not want to study their specialty before being enrolled at the university and who preferred to change the specialty that they were studying, and respectively more students who wanted to study their

specialty before being enrolled at the university would not change the specialty that they were studying than the students who did not want to study their specialty before being enrolled at the university and who would not change the specialty that they were studying (see Table 1, χ^2 ($df=1$, $N = 156$) = 45.363, Likelihood Ratio = 29.081, $p < .001$, Phi = 0.539, i.e. a large effect size, according to Zaiontz, 2019).

Table 1. Comparisons between the frequencies of students who wanted to study their specialty and of those who studied undesired specialty regarding a possible change of their specialty

Is this the specialty that you wanted to study before being enrolled at the university?		If you have such an opportunity, would you change the specialty you are studying?	
		Yes	No
Yes	Empirical count	8	132
	Expected count	16.2	123.8
	% within desired specialty	5.7%	94.3%
No	Empirical count	10	6
	Expected count	1.8	14.2
	% within undesired specialty	62.5%	37.5%

Less proportion of students who wanted to study their specialty before being enrolled at the university were not satisfied with their exam results than the proportion of students who did not want to study their specialty before being enrolled at the university and who were not satisfied with their exam results, and respectively more students who wanted to study their specialty before being enrolled at the university were satisfied with their exam results than the students who did not want to study their specialty before being enrolled at the university and who were satisfied with their exam results (see Table 2, χ^2 ($df=1$, $N = 156$) = 8.057, Likelihood Ratio = 6.251, $p = .005$, Phi = 0.227, i.e. a small effect size, according to Zaiontz, 2019).

The results related to establishment of motivation for study of the chosen specialty as engendering pleasant feelings and successful results in learning are presented in Table 2 and in Table 4.

Table 2. Comparisons between the frequencies of students who wanted to study their specialty and of those who studied undesired specialty regarding satisfaction with their exam results

Is this the specialty that you wanted to study before being enrolled at the university?		Are you satisfied with your exam results?	
		Yes	No
Yes	Empirical count	124	16
	Expected count	120.3	19.7
	% within desired specialty	88.6%	11.4%
No	Empirical count	10	6
	Expected count	13.7	2.3
	% within undesired specialty	62.5%	37.5%

Less proportion of students who wanted to study their specialty before being enrolled at the university thought of giving up their studies than the proportion of students who did not want to study their specialty before being enrolled at the university and who thought of giving up their studies, and respectively more students who wanted to study their specialty before being enrolled at the university did not think of giving up their studies than the students who did not want to study

their specialty before being enrolled at the university and who did not think of giving up their studies (see Table 3, $\chi^2 (df=1, N = 156) = 14.263, p < .001$, Likelihood Ratio = 10.969, $p = .001$, Phi = 0.302, i.e. a medium effect size, according to Zaiontz, 2019).

Table 3. Comparisons between the frequencies of students who wanted to study their specialty and of those who studied undesired specialty regarding their intents to give up their studies

Is this the specialty that you wanted to study before being enrolled at the university?		Have you ever thought of giving up your studies?	
		Yes	No
Yes	Empirical count	18	122
	Expected count	23.3	116.7
	% within desired specialty	12.9%	87.1%
No	Empirical count	8	8
	Expected count	2.7	13.3
	% within undesired specialty	50.0%	50.0%

Less proportion of students who wanted to study their specialty before being enrolled at the university felt unpleasant when they learned than the proportion of students who did not want to study their specialty before being enrolled at the university and who felt unpleasant when they learned, and respectively more students who wanted to study their specialty before being enrolled at the university felt pleasant when they learned than the students who did not want to study their specialty before being enrolled at the university and who felt pleasant when they learned (see Table 4, $\chi^2 (df=1, N = 156) = 8.057, p = .005$, Likelihood Ratio = 6.049, $p = .014$, Phi = 0.227, i.e. a small effect size, according to Zaiontz, 2019).

Table 4. Comparisons between the frequencies of students who wanted to study their specialty and of those who studied undesired specialty regarding their feelings when they learn

Is this the specialty that you wanted to study before being enrolled at the university?		How do you feel when you learn?	
		Unpleasant	Pleasant
Yes	Empirical count	16	124
	Expected count	19.7	120.3
	% within desired specialty	11.4%	88.6%
No	Empirical count	6	10
	Expected count	2.3	13.7
	% within undesired specialty	37.5%	62.5%

Less proportion of students who wanted to study their specialty before being enrolled at the university did not regularly search for additional material on the Internet than the proportion of students who did not want to study their specialty before being enrolled at the university and who did not regularly search for additional material on the Internet, and respectively more students who wanted to study their specialty before being enrolled at the university regularly searched for additional material on the Internet than the students who did not want to study their specialty before being enrolled at the university and who regularly searched for additional material on the Internet (see Table 5, $\chi^2 (df=1, N = 156) = 19.276$, Likelihood Ratio = 15.376, $p < .001$, Phi = 0.352, i.e. a medium effect size, according to Zaiontz, 2019).

The results related to establishment if motivation for study of the chosen specialty is related to motivation for e-learning are presented in Table 5.

Table 5. Comparisons between the frequencies of students who wanted to study their specialty and of those who studied undesired specialty regarding if they search for additional study material online

Is this the specialty that you wanted to study before being enrolled at the university?		I regularly search for additional material related to my study on the Internet	
		Disagree	Agree
Yes	Empirical count	22	118
	Expected count	28.7	111.3
	% within desired specialty	15.7%	84.3%
No	Empirical count	10	6
	Expected count	3.3	12.7
	% within undesired specialty	62.5%	37.5%

Besides, it was found that the proportion of part-time students (95.5%) who searched for additional information online was higher than the proportion of full-time students (73.2%) who searched for additional information online ($\chi^2 (df=1, N = 156) = 9.583, p = .002, \text{Phi} = 0.248$, i.e. a small effect size, according to Zaiontz, 2019). The proportion of students in Master’s degree (21.1%) who preferred to change their specialty was higher than the proportion of students in bachelor degree (8.5%) who preferred to change their specialty ($\chi^2 (df=1, N = 156) = 4.455, p = .035, \text{Likelihood Ratio} = 3.977, p = .035, \text{Phi} = 0.169$, i.e. a small effect size, according to Zaiontz, 2019). Any other significant differences between the studied groups of students (gender comparisons; family status comparisons; year of study comparisons; the working students compared with the students who only studied) were not found ($p > .05$).

Discussions

It has been found that studying the desired specialty was related to greater motivation for acquiring the necessary knowledge and skills using diverse sources of information, including online learning that supported the research hypothesis. The results from the present study converge with the previous scientific finding that higher motivation to begin self-directed online learning is related to perceived relevance of learning goals related to occupational and personal life (Kim and Frick, 2011). The study of a desired specialty tends to enhance motivation for self-improvement by means of search of additional information online related to the selected specialty, whilst the study of an undesired specialty was characterized by means of weaker motivation for e-learning of additional knowledge and skills related to the specialty. A student in a desired specialty seems to be more engaged with his/her learning than a student who studies an undesired specialty, as the use of online resources for acquiring further knowledge and skills suggests. Some previous findings also indicate that the students are more motivated when being engaged (Harandi, 2015) as it is the case with the desired specialty. Besides, the students are motivated when applying e-learning (Harandi, 2015), and the results from the current research also reveal that the students who studied the desired specialty preferred to study online, too, that expressed their higher learning motivation. The findings from the present study reveal that e-learning complements traditional learning for acquiring knowledge and skills related to a chosen vocational field. Lack of interest in the studied specialty and the negative attitude to it diminish learning motivation, including motivation for e-learning, too.

Some authors affirm that e-learning can enhance learning motivation (Lin, Chen and Nien, 2014, p. 424) because of its interactive environment (El-Seoud, El-Khouly and Tsj-Eddin, 2016; Lin, Chen and Nien, 2014, p.424), its multi-sense stimuli (Lin, Chen and Nien, 2014, p.424) and

students' engagement (Harandi, 2015). The findings from the current research contribute to clarifying the reasons why e-learning is related to higher learning motivation – the role of initial motivation to study the desired specialty seems important for self-directed e-learning in the chosen occupational field, as well as diversification of means of study maintains learning motivation using multi-sense and interactive stimuli in e-learning that may be appropriate for different learning styles preferred by students.

Learning motivation may be durable, because less students who wanted to study their specialty before being enrolled at the university preferred to change the specialty that they were studying and thought of giving up their studies than the students who did not want to study their specialty before being enrolled at the university. Motivation for learning the desired specialty may be a constant state that is stimulated by means of online learning and the job requirements. It has been previously established in the scientific literature that learning motivation during online learning changes in dependence on motivation at the beginning of the online course, as well as on perceived quality of online instruction (Kim and Frick, 2011). The results from the present study reveal that motivation for e-learning was higher for the students who studied their desired specialty compared with the students who studied an undesired specialty, and this finding suggests that motivation at the beginning of online learning was higher for those who had chosen the desired specialty that should maintain their durable motivation not only for online learning as established by Kim and Frick (2011), but for traditional learning also as established by the current research. Study of desired specialty related to a chosen future profession leads to more efforts for searching additional information online, better exam results and higher satisfaction with own exam results. Greater learning motivation successfully directs the behaviour for achievement of better results, because less proportion of students who wanted to study their specialty before being enrolled at the university were not satisfied with their exam results and felt unpleasant when they learned than the proportion of students who did not want to study their specialty before being enrolled at the university. Some previous findings have pointed out the importance of pleasant feelings during study for exam results (Poude, Zamani and Abedi, 2011) and this research emphasizes on the link between the pleasant feelings related to satisfaction with the chosen desired specialty and satisfaction with own performance during exams.

This study has some limitations concerning the small and uneven number of the studied students from different specialties, courses, educational degrees, and forms of education. However, participation was voluntarily, and more students were approached and asked to answer the survey, but only those who voluntarily agreed were studied. Another limitation concerns the possibility of non-sincere answers that might be diminished by means of anonymous participation and check for inconsistency of answering the different questions. The results should not be generalized for the students in the specialties and cities that were not represented in this study.

Conclusions

Studying a desired specialty with a favourable attitude towards it seems to enhance learning motivation for traditional education and modern e-learning. It has been revealed the importance of learning motivation (expressed in the form of positive feelings, favourable attitude towards the implemented activity, and constant intents) for successful performance, striving for self-improvement and better preparedness for future occupation. Learning motivation for traditional education may enhance also motivation for e-learning in the area of selected occupational field.

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References

1. Agbor-Baiyee, W., 1997. A cyclical model of student career motivation. *College Student Journal*, 31(4), pp. 467-471.
2. Aldiab, A., Chowdhury, H., Kootsookos, A. and Alam, F., 2017. Prospect of eLearning in higher education sectors of Saudi Arabia: A review. *Energy Procedia*, [e-journal] 110, pp. 574-580. <https://doi.org/10.1016/j.egypro.2017.03.187>.
3. Bozarova, P. and Tasev, M., 2002. Kompyutarni modeli v estestvenite nauki [Computer models in natural sciences]. In: L. Tsvetanova-Churukova, ed. 2002. *Kachestvoto na universitetskoto obrazovanie – opit, evropeyski izmereniya i novi predizvikelstva* [Quality of university education – experience, European dimensions and new challenges]. Blagoevgrad: SWU "Neofit Rilski" and Fondatsiya "Otvoreno obshtestvo", Sofia. pp. 57-67.
4. Burmeister, E. and Aitken, L., 2012. Sample size: How many is enough?. *Australian Critical Care*, [e-journal] 25(4), pp. 271–274. <https://doi.org/10.1016/j.aucc.2012.07.002>.
5. Dzhoney, S., 1990. Adaptatsiata I neinoto izmervane [Adaptation and its measurement]. *Psihologiya*, 2, pp. 16-22.
6. El-Seoud, S.A., El-Khouly, M.M. and Tsj-Eddin, I.A. T.F., 2016. Motivation in e-learning: How do we keep learners motivated in an e-learning environment?. *International Journal of Learning and Teaching*, [e-journal] 2(1), pp. 63-66. doi: 10.18178/ijlt.2.1.63-66.
7. Freeman, J., 2001. Giftedness, Responsibility and Schools. *Gifted Education International*, [e-journal] 15(2), pp. 141–150. doi: 10.1177/026142940101500204.
8. Harandi, S.R., 2015. Effects of e-learning on students' motivation. *Procedia – Social and Behavioral Sciences*, 181, pp. 423-430. doi: 10.1016/j.sbspro.2015.04.905.
9. Iliev, Y., 2005. *Upravljenie na choveshkite resursi. Umenieto da motivirame* [Human resource management. The skill to motivate]. Veliko Tarnovo, Bulgaria: Abagar.
10. Kim, K.-J. and Frick, T.W., 2011. Changes in student motivation during online learning. *Journal of Educational Computing Research*, [e-journal] 44(1), pp. 1-23. doi: 10.2190/EC.44.1.a.
11. Lin, H.M., Chen, W.-J. and Nien, S.-F., 2014. The study of achievement and motivation by e-learning – a case study. *International Journal of Information and Education Technology*, [e-journal] 4(5), pp. 421-425. doi: 10.7763/IJiet.2014.V4.442.
12. Maslow, A., 2001. Motivatsiya i lichnost [Motivation and personality]. Sofia, Bulgaria: Kibea.
13. Milkovich, G.T. and Boudreau, J.W., 1988. *Personnel – Human Resource Management*. 5th ed. Illinois, Homewood: Business Publications, Inc.
14. Paunov, M., 1998. *Organizatsionno povedenie* [Organizational behaviour]. Sofia: Siela.
15. Paunov, M., Paunova, M. and Paunov, A., 2013. *Organizatsionno povedenie* [Organisational behaviour]. Sofia, Bulgaria: Siela.
16. Poude, L.D., Zamani, B.E. and Abedi, A., 2011. Relation between Iranian students' attitudes subscales with the kind of internet usage in universities. *Procedia - Social and Behavioral Sciences*, [e-journal] 15, pp. 2694–2698. <https://doi.org/10.1016/j.sbspro.2011.04.172>.
17. Rada, C., 2013. *Valori identitare ale familiei românești contemporane în contextual globalizării. O abordare antropologică* [Identitary values of the contemporary Romanian family in the framework of the globalization. An anthropological approach], București: Editura Muzeului Național al Literaturii Române. p. 344. Available at: http://www.cultura.postdoc.acad.ro/cursanti/sinteze/rada_cornelia.pdf [Accessed 19 October, 2019].

18. Radoslavova, M. and Velichkov, A., 2005. *Metodi za psihodiagnostika* [Methods for psychodiagnosics]. Sofia, Bulgaria: Pandora prim.
19. Riggio, R.E., 1990. *Introduction to Industrial/Organizational Psychology*. 4th ed. Illinois, Glenview: Scott Foresman & Co.
20. Stoyanova, S., 2015. Stimulirane na tvorchestvo i uchebna motivatsiya [Stimulation of creativity and learning motivation]. In: G. Gercheva- Nestorova, ed. 2015. *Prilozhna psihologiya i sotsialna praktika* [Applied Psychology and social practice]. Varna: VSU "Chernorizets Hrabar". pp. 41-56.
21. Topîrceanu, A., 2017. Gamified learning: A role-playing approach to increase student in-class motivation. *Procedia Computer Science*, [e-journal] 112, pp. 41–50. <https://doi.org/10.1016/j.procs.2017.08.017>.
22. Zaiontz, C., 2019. *Real statistics using Excel. Effect size for Chi-square test*. Available at: <<http://www.real-statistics.com/chi-square-and-f-distributions/effect-size-chi-square/>> [Accessed 30 March 2019].
23. Zimmerman, D.W., 2012. Correcting Two-sample z and t tests for correlation: An alternative to One-Sample tests on difference scores. *Psicológica*, 33, pp. 391-418. Available at: <<https://www.uv.es/revispsi/articulos2.12/12ZIMMERMAN.pdf>> [Accessed 08 June 2019].