EXAMINING STUDENTS' MOTIVATION THROUGH CAREER TRACKING MODELLING

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Abstract

In recent decades education has an increasingly vital role in the rapidly growing world economy. The aim of educational institutions is to effectively bring labour market expectations into line with the knowledge provided by tutors. There is a growing trend in the number of people who have completed at least one higher education degree in Europe. That is why it is important to investigate the demand of the labour market, to modernise education, to set precise goals and to unify the goals. Student motivation is a non-negligible factor. The objective of the article is to study the peculiarities of the university students' motivation for further studies and the motivation of attending recruitment events at universities. This study deals with several levels of the higher education that are also summarised in our research model. The long-term goal of our study is to develop a career tracking system from the motivation of potential university students through the analysis of graduates' experiences in the labour market. The results of the study summarise the motivational characteristics as the base of the examination of career tracking. Secondly, the results show other perspectives of the career tracking elements.

Key words: motivational factors of university students, career tracking, further studies

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Introduction

There are many options how students can pursue continuing education. The educational institutions' aim is to provide services that encourage students' interests in the particular educational institution beside the quality education. It is important to define the goals precisely, to investigate the modern education, labour market expectations and demands, and to investigate the correlation between the teachers' knowledge and skills and the students' motivation. The phenomenon motivation in the educational process is understood as an incentive, goal, perseverance, intention, desire, need, will. Each term refers to an internal driving force. The science has not intended to present the psychological background of the motivation, so defining this term is a major challenge. (Zimbardo, 2018) n the class

communities not only the personalities of the students differ, but also their characteristics related to learning. (Sánta – Machová, 2021a)

According to Fowler's definition ''the motivation – energy or incitement-, that drives people's action can be understood differently. What motivates people in some cases is something that promotes wellbeing for others and for themselves – in other cases it has the opposite effect.'' (Fowler, 2015, page 12.) One of the most important questions is what motivates people. A comparison should be made between motivation and motivation. An important factor is whether a student attends a competition because he strives for perfection, so the results represent the successful development, or competes to rise above his peers and wants to impress others. (Fowler, 2015)

The importance of motivation is understandable, because all the opportunities, resources, tools can be given for being an excellent student, if there is no inner urge. Ideally the primary task of an educator is to recognise individual motivations that later can be aligned with common goals. The teacher should have an idea of how to improve the students' motivation and their ambitions. (Karácsony, 2019)

1 Theoretical overview

We are born with the instinct of learning that accompanies us throughout our lives. It is evident that we are able to acquire new knowledge throughout our lives. It should be noted that each individual has different instincts of learning. For example, learning for an older man is more difficult than for an adolescent. In the pedagogical literature several methods are listed of how we can make the learning process enjoyable, what are the techniques that arouse students' curiosity about new topics. (Kulcsár, 2016).

The appreciation of the importance of knowledge management systems also emphasizes the importance of knowledge acquisition and knowledge sharing. Formal and informal communication methods play a fundamental role in both knowledge acquisition and knowledge sharing. (Bencsik – Juhász – Mura – Csanádi, 2019)

There are many theories about learning that we call learning theories. Behavioural and cognitive approaches suggest that the learning process is the result of external influences, constructivism focuses on internal factors, while according to the connectivism theory students no longer practice learning in isolation, but through a social network of learners. The four approaches are discussed below (Virág, 2013):

- Behaviourist Learning Theory- Behaviourism examines the association between stimuli and response but ignores the physiological processes involved in behaviour. According to Skinner, the process of learning should also focus on stimuli-response reinforcement. The new material should be presented in small steps and students should respond to all of these steps. The learning tasks should be designed according to the students' learning skills. (Tóth, 2019)

- Cognitive Learning Theory – an approach that focuses on the inner activity of the mind and internal mental structures. Important is how students store and apply information because it might involve a change in knowledge and mental structures. Cognitive theory uses the analogy of the mind like a computer and according to this compares the applied information and programs, and according to the approach it defines the procedural knowledge – routine, practical knowledge – and propositional - statement based knowledge. The learner perceives and receives the information, retrieves it when needed, for example when solving a task. According to the cognitive theory, learning is facilitated by the easy perception of information and the maintenance of attention (Cserné, 2015).

- Constructivist Learning Theory – emphasises the development of knowledge. Students not only acquire knowledge but integrate prior knowledge to create new knowledge, so students construct their own reality. The constructivist theory explains that knowledge does not match the external reality, but is created within an individual, so people construct their own knowledge. Basically, during the learning process new knowledge is acquired based on the individual's ability.

- Connectivism – There have been many debates on connectivism as a learning theory. Some authors argue that connectivism is rather a teaching trend that deals with the key competencies and is more about organising the learning process. Others call this theory as a learning model for the age of information technology tools and different digital networks. (Cserné, 2015)

Educators should use appropriate tools to identify students' learning styles and offer educational alternatives in the context of addressing their differences. (Sánta – Machová - Šeben, 2020). Learning motivation is divided into two large groups: intrinsic motivation – curiosity, interest, desire to learn, and extrinsic motivation – earn more money, get a better job. According to Johnson intrinsic motivation is composed of four types of needs. Another approach compares the introjected motivation, when an individual acts according to conscience, from duty and the prestige motivation, when the individual is motivated by both internal driving forces and external competitive factors. (Trefort, 2016)

Innovative methods play an important role in the Slovak education system, as market competencies result in the strengthening of the workforce among members of the younger generation. (Korcsmáros – Machová – Fehér – Tóth, 2021)

1.1. Career Tracking System

In today's highly competitive environment, the goal of every organization is to beat the competition and win new customers. Owners of knowledge are the means of generating innovations. Thanks to their personal creativity, knowledge, skills and abilities, new innovative ideas can be born that help organizations achieve a competitive advantage. (Urbancová, 2013)

According to the literature and research people making rank lists have a dual purpose. First, to convince readers with the use of sources through the press, to promote the institution, and to use the data in various marketing activities. The second approach states that the demand side is represented by institutions and students, and the supply-side is composed of the press and research sites. It is important to create equal conditions for competition for market players in order to get accurate results of the competition. Different university rankings play a significant role in justifying or denying the governmental, corporate and family decisions on the supply and demand sides of higher education (Tamándl, 2014)

In order for the job search process to be successful, it is essential that the applicant prepares the appropriate application documents. The documents required to apply for a position may differ from company to company, organization to organization. (Sánta – Machová, 2021b) If working for multinational companies is the goal of the education, it is recommended to reduce the ethnocentrism of students, if it is a micro-enterprise, its value may increase (Rózsa, 2019).

The graduate career tracking system is a study among university graduates aiming to provide information on job finding experiences, their status in the labour market, their career and feedback of their degree course. Its aim is to promote the communication between higher education and the labour market. Institutions can further improve their training programmes and services, so it can represent useful information for future students and for the career path they wish to pursue. Further aim is to provide information for undergraduate applicants about the trainings at institutions of higher education and career opportunities after graduation. Moreover, its objective is to provide information about the professional progress of graduate students, as well as feedback on teaching quality and course effectiveness. (Tamándl, 2014), (Právitzné & Vasvári, 2017)

Career tracking practices in different countries can vary significantly. This not only differs in methodology and target group but we can also expect regional differences. It is evident

that these studies play an important role in graduates' success in finding employment, strengthening the relationship between higher education and the labour-market, building connection between alumni and university and providing information about trainings, changes. (Széll& all., 2016)

Since 2018, in Slovakia the project Uplatnenie - po stopách absolventov, examines the job finding experiences of students who have completed a university degree successfully and also examines the relationship between the labour market and education. It helps to reduce the inequality among educational institutions, helps in catch-up programmes, and is designed to provide managers with information that enable a dynamic development. First it aims to examine the employment of college graduates. Combining data from different administrative sources allows to observe the work of graduates', how they use the gained knowledge, and provides some information about their average gross wage.

The university environment and business support can influence students' entrepreneurial intentions. A more effective career counselling system can help us understand the contextual factors that motivate students to start a business. (Çera – Çera – Rozsa, 2020)

1.2 Competitiveness, labor market status

In a general sense competition is a kind of struggle between the players to take the best, most favorable place to achieve the same goal first. Development programs place great emphasis on understanding the factors influencing competitiveness, matching student motivation with labor market status / needs. The aim of higher education institutions is to ensure that graduates have the appropriate qualifications and are prepared for the expectations of the labor market. In order for higher education institutions to get used to the growing competition, they themselves need to adapt to the markets. They need to be in constant contact with potential applicants, labor market players, supporters, graduates, strategic partners and other workers, as competitiveness is significantly affected by the ratio of input and output indicators. An important aspect for universities is the "strength of their degree", the conditions under which their graduates will be able to enter the labor market and the additional opportunities for developing their skills. In order to meet the needs of the labor market, it is important to analyze the relationship between higher education and the labor market and to integrate economic expectations into the study programs.

2 Methodology

The objective of this study is to examine the students' motivation in relation to career tracking processes. The research questions related to the examined career tracking units are shown in Table 1.

Target group	Research method	Main questions
Secondary school students	Structured interview	Why did you come to the 2020 Open Day that appears in the research?
Researched university – undergraduate students/second degree students	Questionnaire	What was your motivation to start your undergraduate studies, to choose this field of study/institution?
Researched university – active status students	Questionnaire	How satisfied are you with the services of the researched university?
Graduate students of the researched university	Focus group interview	How long did it take you to find a job after graduation? What is your current status, job?

Tab. 1: Research questions related to career tracking model units

Source: Own research

The results of the survey show why students applied to the university, what motivates students to acquire knowledge. In this study we summarised the complex relationships found in the 2nd and 3rd research units. In order to obtain reliable information about the research topic, we conducted a quantitative research. We conducted a questionnaire survey to obtain quantitative data. The target group were the researched university's external and full-time students in all the three faculties. We used a simple random sampling method. The original plan was an in-person survey, but because of the current epidemiological situation caused by COVID-19 the data was collected online. We used the selection method when collecting the appropriate number and quality of domestic and international literature. The analysis of the assumptions was undertaken in a traditional way. Statistical methods used for data analysis show in Table 2.

Tab. 2: Applied statistical methods

Applied statistical methods	Characterisation
Correlation	Examines the relationship between the variables
Pearson correlation	Measures the strength of the relationship between two variables
Pearson's chi-squared test	Determines whether there is a significant difference between the variables

Source: Györfyné, K. A.

3 Results

We made several assumptions on different levels of the model when demonstrating the research method. The objective of this study was to explore the complex relationship between the motivation, education and career motivation of full-time students.

3.1 Motivation of an undergraduate student

The first assumption states that there is a relationship between the course start date (year), the beginning of the studies at the university and the area of specialisation. In this assumption our objective was to examine the motivation of starting undergraduate studies, the motivational factors for choosing an area of specialisation and the application year. We assumed that different motivational factors are influenced by different age groups and the characteristics of the education at the particular year of the application (for example the number and composition of electives).

We examined the assumption in two steps. The course start date was set as a benchmark for the research. The second metric variable at first was the beginning of the undergraduate studies, secondly the motivational factors affecting the selection of the area of specialisation. These metric variables were measured through the 4-point Likert scale, where 1 means „strongly disagree/not likely", 4 means „strongly agree/very likely". The following table, correlation matrix depicts which dependent and independent variables correlate significantly with each other. According to Pearson correlation, we can conclude that besides the option „Other" there is a significant relationship between the beginning of the undergraduate studies and the motivational factors for starting the undergraduate studies. In case of the option „Other" there is no significant relationship, so it is not an acceptable correlation.

The results in the table show a significant relationship between the start date of the undergraduate studies and second-degree studies. Moreover, in each case there is a significant relationship between the motivational factors for choosing an area of specialisation.

Table 3. Correlation between the variables – undergraduate studies

Variables		Beginning of the studies	Type of correlation
I had a definite idea of what I wanted to do later	Pearson correlation	-.806**	Strong negative correlation
	Sig. (2-Tailed)	0.000	
	N (number of items)	130	
This profession, field impressed me	Pearson correlation	-.626**	Moderate negative correlation
	Sig. (2-Tailed)	0.000	
	N (number of items)	130	
At first, I did not apply to this university, but I was accepted here	Pearson correlation	-.642**	Moderate negative correlation
	Sig. (2-Tailed)	0.000	
	N (number of items)	130	
This course was available for me depending on my high school results	Pearson correlation	-.826**	Strong negative correlation
	Sig. (2-Tailed)	0,000	
	N (number of items)	130	
This course is easy to complete	Pearson correlation	-.764**	Strong negative correlation
	Sig. (2-Tailed)	0,000	
	N (number of items)	130	
This major has the most job opportunities	Pearson correlation	-.742**	Strong negative correlation
	Sig. (2-Tailed)	0,000	
	N (number of items)	130	
Efficient recruitment process	Pearson correlation	-.667**	Moderate negative correlation
	Sig. (2-Tailed)	0,000	
	N (number of items)	130	
Education in Hungarian language	Pearson correlation	-.518**	Moderate negative correlation
	Sig. (2-Tailed)	0.000	
	N (number of items)	130	

Source: Own research, ** Correlation is significant at the 0.01 level

3.2 Motivation of second-degree students

According to our assumption, there is a relationship between the course start date (year), the motivational factor for starting the second-degree studies and the motivational factor for choosing an institution. The data collected at the third level of our analysis was analysed when examining the assumptions using multivariate statistical methods. First, we compared the start date of the second-degree studies and the motivational factors for starting the second-degree studies. In both cases metric variables are typical, so we used correlation to measure the relationship between the variables. To examine the motivational factors the results were measured through the 4-point Likert scale, where 1 means „strongly disagree/not likely", 4 means „strongly agree/very likely". Results in the table show that the relationship between the start date of the second-degree studies and the motivational factor for choosing an institution is significant, but the correlation is negative. However, it is important to mention that in case of a

correlation the characteristics of the relationship are not a cause-and-effect relationship, because it can be determined which variable is dependent and which one is independent.

Table 4. Correlation between the variables – second-degree studies (Own research)

Motivational factors	Beginning of the studies		Type of correlation
I was not satisfied with the previous university, I wanted to change	Pearson correlation	-.387**	Moderate negative correlation
	Sig. (2-Tailed)	0.003	
	N (number of items)	57	
The institution has a good reputation	Pearson correlation	-.820**	Strong negative correlation
	Sig. (2-Tailed)	0,000	
	N (number of items)	57	
At first, I did not apply to this university, but I was accepted here	Pearson correlation	-.317*	Moderate negative correlation
	Sig. (2-Tailed)	0.016	
	N (number of items)	57	
The university is very competent in this field of study	Pearson correlation	-.724**	Strong negative correlation
	Sig. (2-Tailed)	0.000	
	N (number of items)	57	
I graduated here before	Pearson correlation	-.604**	Moderate negative correlation
	Sig. (2-Tailed)	0.000	
	N (number of items)	57	
The recruitment process is efficient	Pearson correlation	-.733**	Strong negative correlation
	Sig. (2-Tailed)	0,000	
	N (number of items)	57	
To be close to my location	Pearson correlation	-.760**	Strong negative correlation
	Sig. (2-Tailed)	0,000	
	N (number of items)	57	
Education in Hungarian language	Pearson correlation	-.490**	Moderate negative correlation
	Sig. (2-Tailed)	0,000	
	N (number of items)	57	
I like the city where the institution is located	Pearson correlation	-.599**	Moderate negative correlation
	Sig. (2-Tailed)	0.000	
	N (number of items)	57	

Source: Own research, ** Correlation is significant at the 0.01 level, * Correlation is significant at the 0.05 level

We found that in all cases there is a relationship between the motivational factor for choosing an institution and the course start date.

3.3 Relationship between acquired knowledge and labor market needs

In our research, we also analyzed the labor market experience of graduates and the practical elements related to motivational factors. We interviewed 68 people through a focus group survey. Of the respondents, 25 found a job within one month, 16 within three months, 14 within six months and 13 within a year after passing the state exam. After graduating, students tried to find a job that suited their needs as soon as possible. Most of the interviewees obtained their first job after the state exam by applying for a job advertisement, applying directly to the employer or through acquaintances. Conclusion is that not only can the right knowledge be acquired during university years, but it is also possible to build significant relationships. From

the companies' point of view, it is important that new job vacancies are advertised on the right platform, with clear expectations, as a fresh graduate will most likely start looking for a job on these sites. We examined the occupation and job of the respondents. According to the specialization of the university included in the research, it provides a comprehensive training, and students can gain insight into several fields, thus making it easier to enter the labor market. Several of the respondents have an occupation that is not related to the major they studied at the university in question. Either they are already interested in another field or they have changed jobs in the hope of a higher salary. The surveyed university provided the former students with sufficient knowledge in line with the needs of the labor market, so they can easily suit their jobs.

We used different levels of the Pearson correlation analysis between the metric variables to prove our assumption. The results show that there is a significant relationship between the start date at the university of the students, the course start date and the motivational factor for choosing a field of study. We examined the assumptions based on logical proof. The results evaluated with different statistic methods are the following:

There is a relationship between the start date at the university of the students and the motivational factor for choosing a field of study. There is a relationship between the start date of the second-degree studies, the factors that influence further studies and motivational factor for choosing an institution.

Conclusion

The main motivational factor to choose the researched university was the curiosity, collecting information and the intention for further studies. Undergraduate students were motivated to continue their studies by the opportunity to build professional relationships, to advance professional development and to improve career prospects. They consciously chose their current courses because they are certain that there is a demand in the labour market for these occupations, and they can master their knowledge in this field of study in Hungarian language. An important factor when choosing an institution was the opportunity for further studies and the efficient recruitment process. For second-degree students the main motivational factors were also the opportunity to build professional relationships, the professional recognition and career opportunities. Participants chose the researched university due to the past educational experiences, definite plans, popular courses and the opportunity to study in Hungarian language. Active status students have good opinion of lecturers, they have good skills and there

is a positive student-teacher relationship. They claim that the classrooms are up to date with technology and that students have online access to all necessary course materials and resources. Students who have completed undergraduate courses almost immediately, specifically in one month's time found a job in the public sector, while graduates found a job in the market sector in three months' time after they successfully passed the state exams.

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