PERSONAL FACTORS OF THE CHOICE OF STUDY PATH

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Abstract: The paper deals with predictive factors of the study path choice. In two data collections from 202 students of the 4th class in gymnasium we received data concerning professional interests, skills confidence, value types, personal dimensions and study path choice. There we have used logistic regression to investigate which scales of interests, skills confidence, values types and personal dimension predict choice of study path. According to the results of logistic regression, each study path is predicted by different predictive scales of independent variables. Simultaneously, our results confirmed that the most significant predictors of a study path choice are interests and skills confidence. Less significant predictors of study path choice are values types and personal dimensions.

Key words: interests, skills confidence, values, personal dimension, study path choice

According to Koščo (1987) a person has to come to a decision concerning his or her career several times: in the secondary school period (before finishing elementary school) by choosing the academic or the vocational field, in the later period of school age (before finishing secondary school or gymnasium) by choosing a certain profession or university study and in the early period of adult age (after finishing university studies) by choosing a particular profession. In our research we were engaged with the choice a university study path.

The first choice before finishing elementary school can be the choice of further study of general orientation, which is also less realistic than the second choice (Ginsberg, 1952). The choice at secondary school is more realistic and includes more factors.

It is not easy to define of all relevant questions concerning the choice of study path because according to Vendel (2004) it

is determined by interests, skills, personality traits, working values and temperament. Svoboda, Krejčírová and Vágnerová (2001) worked out these diagnostic areas in career guidance: word testing, intelligence testing, consideration of interests structure, testing of certain skills and personality testing.

The diagnostic tests of intelligence are suitable for all purposes of career guidance that is for elementary school students mainly. For those applying for university studies it is necessary to consider specific abilities and skills. In their 2001 study Svoboda, Krejčírová and Vágnerová mention several tests for specific abilities and skills evaluation but they also state that the functions measured by the tests are too simple and therefore their validity in comparison with most professional criteria is not very high. Zytowski and Luzzo (2002) found that for different reasons more than half of career counselors did not use abilities and skills tests at all. Zytowski and Luzzo (2002) consider self-assessment of abilities and skills to be a more acceptable alternative to

objective measurement of abilities and skills.

Campbell (2002) found the means of measurement of abilities and skills self-assessment. He was sure that the combination of self-reports about interests and skills is more significant for the prediction of career choice than the finding of interests and skills individually. He created the approach of combined measurement of abilities and skills according to Campbell's Interest and Skill Survey (CISS). Chartrand, Borgen, Betz and Donnay (2002) emphasize the importance of self-efficacy in the process of career choice. They measure self-efficacy by means of Skill Confidence Inventory (SCI) as skill confidence. According to the above authors the 6 factors of self-efficacy measured by SCI, the 6 factors of interests measured by Strong Interest Inventory (SII) and 5 personal dimensions (Big Five) are the best predictors of career choice.

Ferjenčík and Tatranová (2001) studied relationships between university study paths and personal dimensions. The research done by the authors showed the importance of values in career choice, too. Ferjenčík and Tatranová (2001) found the differences in preference of such working values as altruism, social prestige, working comfort and creativity among different study paths.

From the given summary it is evident that besides interests, skills and personal dimensions there are other inner personality factors (e.g., values) that determine career choice. Sex has no clear-cut influence on career choice. More studies (Adamovič, Eiselová, 1992; Ferjenčík, Tatranová, 2001; Jurčová, Okruhlicová, 1991) demonstrate sex differences in certain groups of professions only.

In our research we were looking for the factors of the second dimension career choice of university by means of logistic regression. Actually we were investigating how interests, skills confidence, values, personal dimension, and sex predict different study paths.

METHOD

Sample

First the research sample was constituted from 202 participants, consisting of 130 girls and 72 boys. Respondent girls and boys were aged 17 - 20 years old, that is, of mean age 18.1, with standard deviation 0.6. The sample consisted of the final year students from five secondary schools in Prešov. Two of them were state schools, two church schools and one a sports school. Girls and boys were selected by non-random occasional choice. The choice was restricted to the Prešov region.

Procedure

The research was done in the period from October 2005 to June 2006. The data collection was organized in two phases. The first phase was carried out in October and November 2005. In that period the respondent students were given four questionnaires as follows:

1) General Interests Questionnaire (GIQ) is the Slovak version (Džuka, 1999) of Der Allgemeine Interessen - Structur - Test (AIST) by Bergmann and Eder (1992). The basis of GIQ is Holland's theoretical model of interests. By means of 60 items it measures six interest types: realistic, investigative, artistic, social, entrepreneurial and conventional ones. Each interests type is measured by ten items.

2) Skills Confidence Inventory (SCI), the questionnaire created by us, measures six

scales of confidence in professional skills. The items of SCI are the same as those of GIQ. SCI was given an amended instructions and answers scale in order to measure confidence in the managed activities included in the items. SCI measures six skills confidence scales: confidence in realistic skills, confidence in social skills, confidence in conventional skills, confidence in entrepreneurial skills, confidence in artistic skills and confidence in investigative skills.

3) The Slovak translation of Portraits Value Questionnaire 40 (PVQ) (Schwartz, 2000) is the one that contains forty items and measures ten of Schwartz's value types: security, conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement and power.

4) The Slovak translation of the Czech version of NEO-FFI Questionnaire measures Big Five factors. Each of them is measured by twelve items. NEO-FFI Questionnaire measures these personal features: neuroticism, extraversion, openness, agreeableness and conscientiousness.

In the second phase of data collection we were concerned with the study paths choice in terms of university choice, the precise choice of specialization and faculty chosen by the student respondents - secondary school leavers and mentioned in their University Application Form. We collected the information from 168 student respondents and we divided given universities according to Vendel's map of the work world into six general categories (Vendel, 1989). The categories represent wider sectors of study paths and we named them as follows: technical path, scientific path, artistic path, social path, entrepreneurial path and conventional path. Our research was anonymous and voluntary.

Statistical analysis

We analyzed collected data by means of binary, logistic regression, Stepwise backward method and Likelihood -ratio techniques. Binary logistic regression is usually used in cases where we want to find the influence of more independent variables on a certain phenomenon occurrence - dependent variable. It means that dependent variable is dichotomic and is given two values: 1 if the phenomenon occurred and 0 if the phenomenon did not occur (Hendl, 2004). In our research we worked with six dependent variables. These are six study paths: technical path, scientific path, artistic path, social path, entrepreneurial path and conventional path. There are these independent variables: 1) six types of interests measured by General Interests Questionnaire: realistic, investigative, artistic, social, entrepreneurial and conventional interests, 2) six scales of confidence measured by Skills Confidence Inventory: confidence in realistic skills, confidence in social skills, confidence in conventional skills, confidence in entrepreneurial skills, confidence in artistic skills and confidence in investigative skills, 3) ten value types measured by Portraits Value Questionnaire: security, conformity, tradition, benevolence, universalism, self-direction, stimulation, hedonism, achievement and power, 4) personal dimension measured by NEO-FFI Questionnaire: neuroticism, extraversion, openness, agreeableness and conscientiousness.

RESULTS AND INTERPRETATIONS

The results table of logistic regression (Table 1) shows only statistically important predictive factors of particular study paths in the whole research sample.

Table 1. Results of logistic regression analysis

	OR (95% CI)	R	p
Choice of technical path (χ^2 (3, 166) = 36.239; p < .000)			
Confidence in realistic skills	13.82 (4.45-42.94)	.47	.000
Confidence in conventional skills	0.16 (0.06-0.48)	-.33	.001
Universalism	0.31 (0.13-0.75)	-.24	.009
Choice of scientific path (χ^2 (3, 167) = 18.510; p < .000)			
Investigative interests	3.57 (1.41-9.06)	.27	.007
Confidence in entrepreneurial skills	0.31 (0.12-0.80)	-.24	.015
Benevolence	0.41 (0.17-0.75)	-.18	.041
Choice of artistic path (χ^2 (3, 167) = 23.203; p < .000)			
Artistic interests	3.07 (1.51-6.21)	.28	.002
Conformity	0.43 (0.21-0.86)	-.19	.018
Power	0.45 (0.24-0.86)	-.20	.015
Choice of social path (χ^2 (4, 163) = 61.155; p < .000)			
Social interests	5.45 (2.91-10.22)	.40	.000
Realistic interests	0.44 (0.22-0.86)	-.15	.016
Stimulation	0.58 (0.39-0.87)	-.18	.009
Neuroticism	2.02 (1.11-3.66)	.14	.021
Choice of entrepreneurial path (χ^2 (7, 156) = 50.716; p < .000)			
Gender	8.23 (2.08-32.66)	.24	.003
Social interests	0.36 (0.18-0.74)	-.22	.005
Confidence in conventional skills	2.46 (1.11-5.51)	.15	.028
Security	2.14 (1.24-3.70)	.21	.007
Power	1.77 (1.09-2.86)	.16	.021
Neuroticism	0.49 (1.24-0.99)	-.12	.047
Extraversion	3.55 (1.37-9.19)	.20	.009
Choice of conventional path (χ^2 (2, 167) = 16.321; p < .000)			
Conventional interests	3.27 (1.74-6.21)	.29	.000
Self-direction	0.61 (0.37-0.99)	-.12	.044

Note: OR - odds ratio, CI - confidence intervals, p - value, R - correlation

According to our results the factors of the technical path are confidence in realistic skills, confidence in conventional skills and universalism. The higher a person's skill confidence in realistic skills, the higher will be the probability that the person will choose a technical study path, the higher a person's skill confidence in conventional skills the lower the probability that the person will choose a technical study path, and the more a person prefers universalism the lower the probability that the person will choose a technical study path. Confidence in realistic skills represents a confidence dimension that relates to a technical study path positively influencing a technical study path. It is interesting that confidence in conventional skills has a negative impact on a technical study path choice. People with a high skill confidence in that dimension usually have the ability to perform systematic structural activities as well as work with exact rules and obligations. Technically oriented occupations with university qualifications often represent occupations in which more creativity is required (e.g., architects). We can interpret the influence of universalism by means of values that fit these value types, and these are as follows: equality, social justice, peaceful world, unity with nature (Schwartz, 2000), so they are values irrelevant to the occupation of an architect or automobile engineer.

In the scientific orientation choice we found these predictive factors: investigative interests, benevolence and confidence in entrepreneurial skills. The higher the investigative interests, the higher the probability of a scientific orientation choice and the lower the confidence in entrepreneurial skills and the value of benevolence the higher the probability of a scientific orientation choice. In cases of the scientific orientation choice the predictors are interests in a scientific occupation in a positive way and confidence in operation, control and persuasive skills in a negative way. The negative influence of benevolence on the scientific orientation choice refers to the understanding of scientific orientation occupations as natural scientific orientation occupations or professions more often practiced individually (e.g., in laboratories) than collectively.

Logistic regression in an artistic study path choice revealed three predictive factors: artistic interests, conformity and power. The higher the artistic interests the higher the probability of artistic orientation choice. The probability of artistic orientation choice declines with the increasing preference for conformity and power values. The basic characteristics of artistic occupations is creative genius and a creative approach to the world, while freedom and independence represent the value type of self-direction, which is opposite to conformity (Schwartz, 1992). People with such values as obedience and traditions and customs do not find their values realized in the artistic professions.

A social study path choice is, according to our results, influenced by positive social interests and neuroticism. The choice is also influenced negatively by realistic interests and stimulation. The probability of a social study path choice rises with an increasing level of social interests and a decrease of realistic interests. The result we did not expect was finding an impact of stimulation and neuroticism on a social study path choice. The probability of a social study path choice decreases with a higher level of such values as excitement and courage and risking change, which represent stimulation. The influence of neuroticism on a social study path choice was startling. The more emotionally unstable a person is the higher is the probability

of a social study path choice. It is probably connected with sensitivity, representing the dimension of neuroticism.

Our results have proved that the model of an entrepreneurial study path choice is created by the highest number of predictive factors, concretely: gender, social interests, confidence in conventional skills, security, power, neuroticism and extraversion. An entrepreneurial study path choice is influenced by interests and skills as well as confidence. In this case there is no influence of expected entrepreneurial interests and confidence in entrepreneurial skills, but social interests in a negative way and confidence in conventional skills in a positive way. This resulted in the fact that the more confident a person is in conventional skills (has the ability to follow a systematic approach to data processing as well as to work with exact rules and obligations) the more probable it is that he/she will choose an entrepreneurial study path. The proven influence of social interests refers to the fact that the more a person is interested in helping other people the lower is his/her chance of choosing an entrepreneurial study path. From this point of view entrepreneurial occupations do not look relative but opposite to social occupations. In contrast to other study paths it was only in the case of an entrepreneurial study path choice that gender was an important predictive factor. The probability of an entrepreneurial study path choice was higher in the group of girls than in that of boys. We have also proved the hypothesis that an entrepreneurial study path choice is strongly influenced by a power value type. The more important are the values of high status, respect and wealth, the higher is the probability of an entrepreneurial study path choice. We also found the very important role of security values in an entrepreneurial study path choice. We can interpret it as an effort towards the financial confidence and welfare of an individual and that of the family as well. We can also demonstrate that an entrepreneurial study path choice is influenced by such personal dimensions as extraversion and neuroticism. The person who is extrovert, with realistic interests, socially oriented, open minded, hardworking and adaptable has a higher probability of an entrepreneurial study path choice than an introvert who is passive, oriented to the inner world, unsociable and hesitating. At the same time, the probability of an entrepreneurial study path choice decreases with higher emotional unstableness. Employment in managerial positions requires such qualities as peace, concentration, flexibility, determination and so on.

A conventional study path choice, according to our results, is influenced only by two factors: conventional interests and self-direction. The higher the interest in exact, arranged and systematic work with data and structural activities, the higher the probability of a conventional study path choice. The negative influence of self-direction on conventional study path choice was also proved. The probability of a conventional study path choice decreases with creativity, freedom and independence, which represent a self-direction value type and are in contradiction to the sense of structural activities performed in occupations in a conventional study path.

DISCUSSION

From the aspect of representation and contribution (the indicator is level of OR in the table), as Chartrand, Borgen, Betz and Donnay (2002) assumed, interests and skills confidence are the most frequent predictors of study path choice. In predictive models of the choice of most study

paths the values are very important predictors, too. Our result also confirms findings of Ferjenčík and Tatranová (2001). Personal dimensions predict only social and entrepreneurial paths. Only in a predictive model of entrepreneurial path was gender an important predictor.

Our study has shown that the prediction of different study paths is influenced by different dimensions of interests, skills confidence, value types and personal dimensions. It has also confirmed that the main role in a study path choice is played by interests and confidence in professional skills. Consequently, psychological adjustment in career counseling should be oriented towards interests and skills confidence as factors of choice. Value types and personal dimensions are less important predictors, but they substantiate the global profile of a student and particularise appropriateness or inappropriateness of the study path choice.

The result of our study can be referred to the population of gymnasium students in the Prešov region. We nevertheless believe that our study can enrich theory and practice and at the same time inspire further research into career choice. It would be interesting to continue the research and to concentrate attention on finding the predictive factors of a particular career choice and the predictive factors of satisfaction to be got in it.

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OSOBNOSTNÉ FAKTORY VOĽBY ŠTUDIJNÉHO SMERU

J. K a p o v á

Súhrn: Článok sa zaoberá prediktívnymi faktormi smerov vysokoškolského štúdia. Od vzorky 202 študentov 4. ročníkov gymnázií boli v dvoch zberoch dát získané údaje o profesijných záujmoch, dôvere v profesijné schopnosti, hodnotových typoch, osobnostných vlastnostiach a voľby vysokoškolského štúdia. Pomocou logistickej regresie bolo zisťované, ktoré dimenzie záujmov, dôvery v schopnosti, hodnotové typy a osobnostné vlastnosti sa podieľajú na voľbách jednotlivých študijných smerov. Podľa výsledkov logistickej regresie sa na odlišných študijných smeroch podieľajú odlišné dimenzie uvedených nezávislých premenných. Zároveň sa potvrdilo, že najvýznamnejšími prediktormi voľby študijného smeru sú záujmy a dôvera vo vlastné profesijné schopnosti a zručnosti. Menej významnými prediktormi voľby smeru vysokoškolského štúdia sú hodnotové typy a osobnostné vlastnosti.