

Eszterházy Károly Catholic University

Doctoral School of Pedagogy



Head of the Doctoral School of Educational Sciences:

Dr. Béla Pukánszky, dr. habil, DSc,

Programme Director of the Doctoral School of Educational Sciences:

Dr. Jenő Bárdos, professor emeritus, dr. habil, DSc,

Olteanu Lucián Líviusz

The pedagogical aspects of vocational guidance

Doctoral (PhD) Theses

Supervisor: Dr. Ferenc Mező, PhD, associate professor

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1 The justification of the topic and the aim of the dissertation

Choosing a future profession is preceded by a continuous and conscious career building, which leads to the first important, independent, and determined decision in the lives of young people.

While choosing a career path, young people cannot rely on their life experiences they gain during the years, but their conception about their future is shaped primary by the family, the school, and the peers. When they are planning their future, their ideas and desires play the major role. The more consciously and clearly they represent their image about their future, the more informed decision they are capable of making (Walsh és Osipow, 1988). Forging a career path depends strongly on the individual, as certain people's skills of career orientation are more adaptive, and these persons make decision of this kind more easily, at least seemingly. However, career decision-making is difficult for others, so many people turn to a consultant (Holford, 2017).

Career orientation is a process that, first of all, prepares for the careers, and secondly, for orienting in the world of employment, and which develops in accordance with the person's interest, skills, work manner, and values (Mező, 2004). In contrast to the formerly accepted approach, career orientation is not a process that takes place only on a single occasion but presupposes an activity that is continuously present in a person's life and accompanies it (Ritoók, 2006).

The school career orientation is a cumulative complex activity that unites educational counselling, professional orientation and career counselling in everyday pedagogy. In this way all those activities can be compressed into a concept which prepares young people for their future profession and life-path. Making these decisions implies several interesting questions for secondary school students as well as for their immediate environment. Career orientation counselling highlights the key role the school plays in preparing the future generation for life. People may very often face the situation when they are forced to change because of their personal development or the change of external circumstances. It may happen that they have to learn a new profession. Moreover, it might be possible that what they are interested in and is important for them will lose its importance in 10 or 20 years, and something entirely new will be relevant. External causes might interplay, since changes in the economic situation or the state of the labour market may affect the carrier, too (Bandura, 1994). The social and economic development greatly depends on how they adapt to the school system and how prepared the school-leaving generation is for the global labour market. Career decision-making should

become a real and active part of the everyday pedagogical work at schools. In order to be able to perform this task, working teachers as well as teacher trainees have to be educated during their training. The fundamental aim of career orientation counselling is to help the person seeking counselling overcome the difficulties that the person encounters during the process of career decision.

If one studies the practices of Hungarian career orientation in schools, a direction can be seen in educational policy that endorses supporting students on the occasion of making decisions on further education. It can be seen on the theoretical level that such learning-centred approach is needed that, if realized, helps the knowledge related to career building be organically integrated in schooling. This deficiency shows the importance of the public education system (Suhajda, 2017). The majority of decision-making skills are formed during school years. It means that the formal strategies gained in these years in the school which facilitate informal solutions greatly influence the instructional and professional progress (Mező, 2006). Therefore, the main objective of career orientation should be to secure those citizens become more competent and capable of enduring, understanding and handling changes in their lives (Borbély-Pecze, 2010).

The dissertation seeks an answer to the question what type of difficulties secondary school students have to cope with during career decision-making, what the levels of these difficulties are, and which gender and age group they are characteristic of. Accordingly, not only are factors affecting choices concerning career decision-making investigated, but their operational mechanisms and the relations between them are also scrutinized. The English questionnaire used for the research had been adapted to the Hungarian sample, and the use of this questionnaire adapted already earlier has also been validated. Moreover, because of its practical usefulness, the effects of the operation of a pilot training designed to reduce difficulties of career decision-making that has been tried among secondary school students have also been examined.

It is crucial for teachers and counselors to know those age- and gender-specific external and internal variables students may face during the process of career decision-making, especially those variables which may factor in defining, acquiring and utilizing the pieces of information about self-knowledge and knowledge of the career path.

The structure of the dissertation reflects the classical approach. In the first part of the dissertation I survey the most important theories, concepts, and research results which are relevant to my topic.

On the basis of the unanswered questions revealed by the literature review, the empirical chapters of the dissertation are based on three hypotheses, which are related to the content and current practices of career orientation activity.

The empirical chapters of the dissertation focus on the pieces of information on the difficulties of career decision-making. The analysis of how the means and tools of the research operate is presented here: it is examined if the factor structure of the questionnaire adapted to the purposes of this study and the factor structure of the Hungarian sample is identical with the structure suggested by the author. It is also investigated if the questionnaire that had been adapted earlier is validated when applying the new sample. The study seeks an answer to the question what types of problems students tackle when making a decision about their career. Moreover, it is scrutinized what kind of help the training applied during the process of career decision-making can provide for the students participating in the training.

The research compares the results of the examination of questionnaires filled in by 544 high school and secondary school students who study in institutions of public education. 507 students took part in the questionnaire-based research, while 37 students participated in the pilot training that was designed to promote career decision-making. After presenting the research results, the summary chapter discusses the validity of the hypotheses. Finally, after interpreting the results and the hypotheses, the conclusions are drawn and some suggestions related to the research topic are offered.

The dissertation is designed to offer a complex presentation of the field. In this way, one can get a more detailed understanding of the processes of career decision-making. The tools of career orientation and the applied methodology may contribute to expand the existing, actively used knowledge of the profession, which may support young people's successful career decision-making in the future.

2 Hypotheses, research questions, and aims of the dissertation:

The examination of secondary school students' career decision-making is intended to realize as well as answer the following three aims, questions, and hypotheses:

Aim 1:

- The adaptation of the Career Decision-making Difficulties Questionnaire, CDDQ (see: Gati, Krausz, et al., 1996) to the Hungarian secondary school sample. In order to realize this, a measuring instrument in English was used. Moreover, the Career Factors Inventory, CFI (Chartrand et al., 1990), which had been adapted earlier, and its operation as well as applicability in the Hungarian sample were verified.

Question 1:

The two questionnaires used in the research are the Career Decision-making Difficulties Questionnaire (CDDQ; Gati, Krausz, és Osipow, 1996) and the Career Factors Inventory (CFI; Chartrand et al., 1990). Its analysis on the Hungarian sample will demonstrate the factors outlined in the international version, and if the results of the questionnaire adapted earlier to the Hungarian sample (CFI) are in accordance.

Hypothesis 1:

- It can be assumed that the characteristic categories of the CDDQ and the CFI that appeared in the foreign sample will be demonstrable in the Hungarian sample as well.
- *justification:* the reveal difficulties of career decision-making for Hungarian and foreign students who belong to a given age group are expected to bear resemblance to one another (in spite of the linguistic, cultural, educational, and economic differences, irrespective of their cultural incorporation). This can be explained by the fact that the participants' life situation and the items of the measurement tools are basically identical, and the effects of globalization overshadow the cultural differences the instruments of measurement are capable of indicating.

Aim 2:

The research aims to verify if the result of the questionnaires outlined in the previous section (CDDQ-CFI) are influenced by such sample variables as the examined participants' age, gender, and the interaction of these.

Question 2:

The question arises if the difficulties of secondary school students' career decision-making are influenced by the participants' age, gender, and the interaction of these.

Hypothesis 2:

- The results of the research instruments, the CDDQ and the CFI, related to the difficulties of career decision-making are influenced by the examined participants' age and gender, either separately or in interaction.
- *justification:* it can be expected that the impact of age will be reflected in the results of the questionnaire examining career decision-making difficulties. Older students have to make career decisions in a shorter time than their younger peers. According to traditional gender stereotypes (Lukács, 2012; Török, 2016), girls are more anxious but at the same time more thoughtful decision-makers than boys. This difference may surface in the results of questionnaires focusing on career decision-making difficulties. Gender differences in the answers can also be assumed because girls' career decision-making is influenced by the thought of having children (in other words, the role conflict between family and work). The difference can be further explained by the fact that there are typically male and female professions. As for the interplay of age and gender differences (on the basis of the individual sample variables mentioned so far), it can be expected that different results may be gained with regard to the difficulties of older girls' career decision-making than what can be seen in the case of their male counterparts.

Aim 3:

- How does the assessment of career decision-making difficulties and related variables change as a result of interventions implemented in the school? What underlying factors can be related to these patterns?

Question 3:

- Is the training helping the decision on further education capable of favorably moderating the difficulties participants experienced (measured by the CDDQ and CFI questionnaires) during their career decision-making choices?

Hypothesis 3:

- It can be assumed that in the examined group the results of the CDDQ and CFI questionnaires measuring career decision-making difficulties change favorably as a result of the training that helps make decision concerning further education, while no such change will be seen in the control group.
- *justification*: the effect experienced by Potocnik (1990) in the case of the training carried out among Swiss students is expected to be detectable in the Hungarian adaptation as well.

3 Research methods:

Methods: In the case of the questionnaire-based investigation, in order to access the target group I have contacted the heads of the institutions to give permission to and help the process of filling in the questionnaires. Parents consented to their children's participation in the examination, and the adult-age students took part in the research as volunteers. Questionnaires were sent to the schools online or in print. The data surveying was hindered by the fact that the online inquiries were very rarely answered. This can be primarily explained by the high number of questionnaires of various topics addressed to the schools. Before distributing the questionnaires, I have asked for the head teacher's permission to filling in the questionnaires, and also, I have provided an opportunity to share the questionnaire online so that anybody could join the research from any part of the country. Participants were assured that both the school and the respondents would remain anonymous.

Before commencing the examination in the educational institution, the students, the teachers, and the parents were informed about the conditions and features of the investigation as well as about the aims of the questionnaires. After starting to fill in the questionnaire package, students could desist from their decision to participate. Filling in the forms happened in the classrooms, and one part of it was internet-based, while the other, minor part was pen-and-paper based. Anybody who wanted to know the results was allowed to do so. The results of the questionnaires were solely used for research purposes all in one.

The sample serving as the basis of the questionnaire analysis includes 507 high school and secondary school students, who are between 15 and 19 years old (M age = 16.29, SD age = 1.3). The gender rate in the sample is: 56.8% female ($n=292$), 42.4% male ($n=215$).

In the case of the training, the tested sample includes 37 high school students, who are between 17 and 19 years old (M age = 17.7, SD age = 0.52). With regard to gender, the sample involved 45.9% female ($n=17$) and 54.1% male ($n=20$) participants. In order to access the target group, the head teachers and form teachers of eligible schools were contacted and asked to enable and help carry out the training. The parents consented to their children's participation in the investigation, and students of adult age took part in the examination on a voluntary basis.

- *Characteristics of the sample belonging to the experimental group*

The experimental sample involves 26 high school students who are between 17 and 19 years old (M age = 17.7, SD age = 1.12). The gender rate in the sample is: 46.15% female ($n=12$), 53.84% male ($n=14$). Their grade point average of the previous semester was 4.1 ($SD=0,52$).

- *Characteristics of the sample belonging to the control group*

The control sample involves 11 high school students who are between 17 and 19 years old (M age = 17.55, SD age = 0.52). The gender rate of the sample is: 54.53% male ($n=6$), 45.45% female ($n=5$). Their grade point average of the previous semester was 4 ($SD=0.36$).

During the impact assessment the training was realized in 12 hours with the intensity of 2 hours per week. The date of the first class of the training designed to support career decision-making: November 5, 2018. The date of the final class of the training: December 17, 2018. Therefore, the training was realized in 2 months. The data survey occasions of the impact assessment using self-control as well as control groups: preliminary examination: November 5, 2018; follow-up examination: December 17, 2018.

Instrument: The operation of the instruments used during the research – Career Decision-making Difficulties Questionnaire (CDDQ) and the Career Factors Inventory (CFI) – has been examined by IBM SPSS Statistics for Windows v.23 and SPSS AMOS v.22 statistical programme packages. During the examination of the questionnaires, a number of tools have been used:

- Exploratory Factor Analysis
- Confirmatory factor analysis
- Convergent validity analysis

On the basis of these results conclusions have been drawn. Then, the results gained during the investigation are explored and examined. The connections are presented in charts and tables. Before interpreting the questionnaires, normality analysis has been carried out with two methods proposed by the literature: Kolmogorov-Smirnov and Shapiro-Wilk tests. On the basis of the results explored, Median and Mann-Whitney U tests have been used for comparing the samples of two independent populations.

The training designed to help career decision-making was based on the decision-support training developed by Potocnik (1990). To explore and interpret the results, the Median and Wilcoxon signed rank test has been used in order to examine the (sample) difference between the available samples. For the impact analysis the r^2 effect size formula that has been build on the Wilcoxon parametric test has been applied (Fritz, Morris, és Richler, 2011).

4 Results of the research

In *hypothesis 1* it was supposed that the characteristic categories of the CDDQ and the CFI gained from foreign samples would be demonstrable in the Hungarian sample as well.

During the investigation of the first hypothesis the short version of the CDDQ (CDDQ, Gati, Krausz, et al., 1996) was adapted to the Hungarian secondary school sample. The results in international literature (Amir et al., 2008; Arnold, 2003; Creed and Wong, 2006; Fabio and Kenny, 2011; Gati and Tal, 2008; Vahedi, et al., 2012) show a slightly different picture compared to the image conveyed by the results gained from the Hungarian sample in the dimension of the scale structure. This is in accordance with those research results (Albion & Fogarty, 2005; Creed & Wong, 2006; Mau, 2001; Zhou & Santos, 2007) which highlight that the structure of the factors in the CDDQ questionnaire is influenced by cultural differences.

The second part of the first hypothesis was related to the Career Factors Inventory (CFI, Chartrand, et al., 1990) that measures career decision-making insecurity. It was scrutinized if it can be managed to validate the four factors of career decision-making insecurity described by Chartrand et al. (1990) in the newer Hungarian sample. In line with the CDDQ, the review paper by Chartrand and Nutter (1996) demonstrates that the measuring instrument allows for a wide-scale utilization, as it is suitable for supporting individual counselling and it can be useful for comparing the results of the preliminary and follow-up investigations, or it can feature as a supplementary instrument for examining secondary school samples.

Hypothesis 1 has been partly substantiated, because the factor structure of the CDDQ only partly corresponds to the sample suggested by Gati (1996) (for the validation of which factory analysis was not used); however, a number of structural parallels have been identified with similar examinations carried out and presented in international literature. The adaptation of the CFI to a Hungarian sample showed identical results with the original one after its application in the new sample.

In *Hypothesis 2* it was supposed that the results of the analytical instruments, the CDDQ and the CFI, which are related to the difficulties of career decision-making, are influenced by the examined participants' age and gender—separately or in interaction.

The primary aim of the examination pertaining to the second hypothesis has been the assessment of the career decision-making phenomena characteristic of secondary school students. This assessment has been based on the data gained from the newly adapted and examined questionnaires. They have been measured in view of the nine variables from the

aspect of age, gender, and their interaction. As a result of the analysis, a slightly different and more refined picture was gained about the students' needs of career decision-making than the usual, everyday experience.

The results of secondary school students show that both questionnaires suggest moderate level career decision-making difficulties. Among these results, the following factors have a considerable impact: general indecisiveness, general uncertainty, harmful misconceptions and the need for more information about careers. A closer look at the above mentioned four factors reveals that the common denominator of them is the lack of information. On the basis of this, it can be advised that the primary objective is to lessen students' need for exact, correct, and relevant pieces of information. In line with the generally established practice, career decision-making support is intended to mostly commence when students enter their 11th or 12th grade. In contrast, the research results show an entirely different picture about the career decision-making difficulties students experience. It has been revealed that considerable career decision-making difficulties can be discovered as early as in the age group of 15-year-olds, which is experienced by young people mainly in the form of lacking motivation. However, 16-year-olds struggle with serious career decision-making difficulties on the wide scale of examined variables that have been based on the research results of questionnaires. The need for concrete forms of career decision-making support appears in the age groups of 17- and 18-year-olds. The age group of 17-year-olds is faced with the pressure of the need for the choice in career decision-making. As a result of this, their career decision-making anxiety increases. This pressure culminates in the form of a general indecisiveness in the case of the age group of 18-year-olds. From the aspect of gender differences, it is interesting to see that the need for self-knowledge and indecisiveness are mostly characteristic of the female members of the sample, while the lack of motivation and the need for proper sources of information are typical in the case of male participants.

In the light of these results, Hypothesis 2 has been justified. Using the above data as a starting point, it may be worth giving careful reconsideration to the career orientation activity, and expanding the so far generally accepted routine, because it can be clearly seen that the difficulties of students show an increasing tendency from 16 years of age. The career orientation processes in the schools mean extra tasks and hardships for most of the teachers, since a significant part of the knowledge and competences necessary for the career orientation activity are only theoretical assets in their toolbar of skills. The critical point of this process is to train and to efficiently coordinate an adequate team of professional teachers and experts. This work

might necessitate the application of a systematic protocol. In this form, it may contribute to realize the transparency of a perspective supporting the course of life.

In the case of Hypothesis 3, it has been assumed that as a result of a training that is designed to support decision on further education, the results of the CDDQ and CFI questionnaires (measuring career decision-making difficulties) have improved in the experimental group, while no such change could be seen in the control group.

In the third investigation, the hypothesis has been formulated in relation to the effects of interventions: as a result of the training designed to support decision-making, the difficulties students feel about career decision-making significantly decrease, and the training optimized the behaviour of the participants in each and every phase of the decision-making process.

On the basis of the research results, as a result of the 12-hour intervention, after the group activities, the difficulties of career decision-making perceived by the students significantly decreased compared to the values of the control group. Out of the nine variables examined, favourable impact has been found in the case of seven variables. Moreover, in the case of five factors (lack of motivation, deficient knowledge, contradictory pieces of information, career decision-making anxiety, general insecurity) a slight impact has been pointed out, and as for two factors (general indecisiveness, and lack of self-knowledge), moderate improvement in lessening anxiety levels has been demonstrated.

Consequently, Hypothesis 3 has been substantiated, too. On the basis of the above mentioned, it can be plausibly argued that career decision-making counselling and training designed to support decision-making should be offered to schools and other institutions. Relying on these solutions, other application forms can also be conceived. Instead of the whole process, with proper preliminary arrangements the use of individual parts can prove practical, too, since a well-structured decision-making process can be broken down into items and stages (Jungermann, et al., 1998; Peterson, et al., 1996; Sampson, et al., 1999). In this way, it might be useful for those adults as well, who are considering taking up new studies, preparing to enter into a new profession, or changing their jobs.

5 Thesis outline of the results

- The factor structure of the CDDQ only partially correspond to the sample proposed by Gati (1996) (for the verification of the latter no factor analysis was used); however, many structural parallels have been found with similar investigations presented in international literature.
- The adaptation of the CFI to the Hungarian sample has shown identical results with the original after it had been applied in the new sample.
- The application of the above mentioned CDDQ and CFI questionnaires may greatly contribute to identifying and defining age- and gender-specific career decision-making difficulties, and to plan individual interventions.
- When studying the results of secondary school students, it can be seen that both questionnaires conveyed information about moderate level career decision-making difficulties.
- General indecisiveness, general insecurity, harmful misconceptions, and the need for career information have a prominent impact.
- Considering the aspect of gender differences, it is worth pointing out that the need for self-knowledge and indecisiveness are characteristic of mostly the female members of the sample, while the lack of motivation and the need for adequate information sources are rather peculiar to male participants.
- Research data as a starting point might be worth being used to modify the career decision-making activity in accordance with the perspective supporting one's course of life.
- As a result of the training designed to support career decisions, on the basis of the results, after the group activity, career decision-making difficulties perceived by the students considerably lessened compared to the values of the control group.
- Out of the nine variables examined by the questionnaires, favourable impact has been found in the case of seven variables: as for five factors (lack of motivation, deficient knowledge, contradictory pieces of information, career decision-making anxiety, general insecurity), a slight impact has been detected, and in the case of two factors (general indecisiveness and need for self-knowledge), moderate improvement has been experienced with respect to decreasing anxiety levels.

6 Summary

The examinations supported the necessity of developing and expanding career orientation. On the basis of the research results, can be claimed, that a new instrument supporting career orientation has been added to the Hungarian career orientation inventory, and that an earlier adapted questionnaire's application to a new sample yielded identical results with the original investigation.

The results of the questionnaires showed that the career orientation strategy used by institutions of public education needs to be reconsidered and improved as well as it is necessary to develop further research efforts in this direction in order to form a more suitable conception. Moreover, an additional research project can be the extension of the training supporting career decision, because, as a result of the pilot training, the career decision-making difficulties perceived by the students after the group activity significantly decreased compared to the values of the control group.

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