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RESEARCH ON PHYSICAL EDUCATION TRAINEE TEACHERS' TEACHING ENGAGEMENT

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ABSTRACT

Commitment to teaching career is a widely researched field, however, the focus of the research is mostly set on the educators who have been in the practicing already. Research shows that the primary motivating factors are the professional and academic challenges, which are by the income, workload and prestige, but the gender of the student is not a negligible either [59]. In the present study, we sought to answer the depth of the commitment of students of different grades to a teaching career. In our research, we found that hospitalizations, beginning in the 3rd year of training, and the microteaching tasks to teach groupmates provide a sense of security and a sense of teaching experience for students. In the 4th year, the theoretical and practical curriculum grows and becomes intensified in real situations. Students have to perform part- or full-time teaching tasks in the practicing school what they also find quite difficult. In the 4th year of the studies, the students' opinion is remarkably divided by the gender, both in the way of thinking and in the views, with regard to the motivation and the perception of their career. This is also the critical year for the male students, who feel insecure in being able to create a proper existence for themselves and their families, as a teacher.

KEYWORDS

Teacher career, sense of vocation, extrinsic motivation, intrinsic motivation, perception of teaching career,

INTRODUCTION

One of the most researched field of pedagogy tends to the digestion of underlying factors contributing to the career choice and aspiration. In our study we introduce the results of a research on career motivation digesting the motivation of trainee teachers, inner and outer factors helping their entry to the profession (classroom observation and teaching experience, assumptions and practice in connection with the teacher role, etc.). Our study was created as a part of a more complex research which portrays the different study stages of trainee teachers. The identification of motivational factors influencing career choice, distributed to different school years, gender and place of living, is in the focus of our research. Besides this, we focus on the differences in career perceptions among trainee teachers, as well. Becoming a teacher starts long before the entry to teacher training because future-teachers gain experience that influences them as a child, as a student and as a trainee. This professional development is a lifelong process [16]. In connection with the professional career of teachers – referred to the

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2009 OECD TALIS (Teaching and Learning International Survey) - it is defined as the sum of the experiences and knowledge gained during the bachelor studies, courses, further education and teaching practice [54]. The European Council, highlighting the responsibility of teacher trainers, declares: their role in the educational process is inevitable, to their work they need solid practical teaching experience, appropriate teaching competences and high educational standards (European Commission, 2010). The ATEE (Association for Teacher Education in Europe) also emphasizes the responsibility of trainers because their level of expertise not only affects the quality of teacher training and trainees' preparedness, but also the aspiration to the profession and profession quality, thus affects the whole education [59]. According to the 2002 research results of the Hungarian Institute for Educational Research and Development, applying for higher education does not necessarily mean that the candidates has the intention to become a teacher already at the beginning of their studies [38]. By analysing data, distributed to different educational levels, we can declare that the "I have always wanted to be a teacher" aspect characterises mostly the primary school teacher candidates. According to some Hungarian research [43] and [35], the most influential factors among students, regarding higher education application, is their intention to satisfy scientific interest, positive feelings towards the age group taught and the commitment to teaching as a profession. Following factors are the accessibility of the institution and desire to continue student life.

Based on data gained from the system of graduate tracking, we get a brief overview about motivational factors influencing career choice, about teachers staying at this profession and about experience regarding the profession [8]. Leading factors among young teachers were the love of children and teaching (the subject) and their sense of vocation [8]. 68 percent of inservice teachers said when applying, the biggest motivational factor was their interest in certain subjects [8]. On this basis, we suppose that the commitment towards the subject (field of science) [34] has a great effect on the student's study career. What determines the choice of career to a great extent is social status and financial esteem. As a consequence, the previously mentioned sense of vocation has been faded [7] because financial factors override it. Varga identifies this as a "negative self-selection effect" [62] at every point of the teacher selection process (when applying, when getting the first job and in the fifth-sixth year following the graduation). Regarding these results, we expect the significant presence of those students who were "drawn into" [35] the training, or those who convert and want to use the knowledge at other fields.

Several Hungarian researchers [34], [35], [18], [28], [29], [64] confirmed the presence of delayed adulthood which also lengthens youthhood, along with school life. Young people tend to stay longer in the educational system partly because of the knowledge and skills acquired at the university, partly because of the risks of labour market and the insecurity after leaving the parental house. They use youth moratorium, accepted by the social and economical environment, in a conscious way that absolves them from starting a job or family [25].

During the study we applied an instrument that was used in numerous European countries (e.g. Netherlands, Germany) [64] and covers motivational factors extensively, called Factors Influencing Teaching Choice Scale – FIT-Choice Scale [65]. The following figure illustrates the different elements of the model serving as the base of the instrument. The model takes former experiences (e.g. social status of the profession, parental influence) into account that form the students' expectations long before the teaching practise. Thereafter, it takes the following factors into consideration: (1) task-related attitudes (expectations and rewards), (2) self-related attitudes (self-perception, efficiency), (3) intrinsic values (e.g. job security, time for family, social utility value by shaping future of children), (4) teaching profession as a safety, fallback career choice in the labour market. According to the authors, from these influential factors we can get the individual results that show the candidates' satisfaction, as well as their motivation in connection with the choice of teaching as a career.

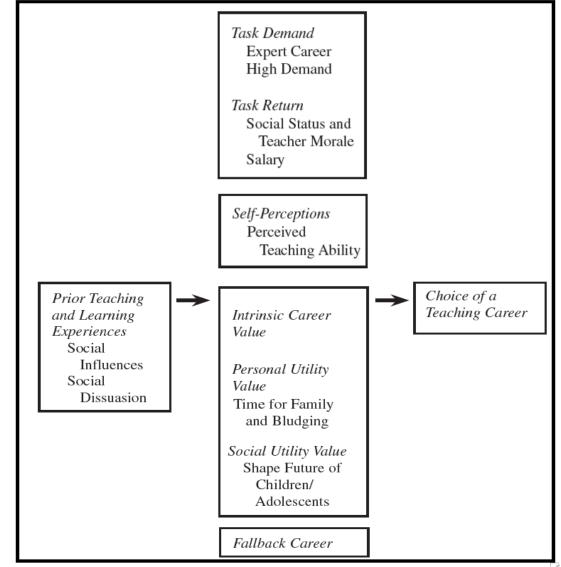


Figure 1: Theoretical model guiding development of Factors Influencing Teaching Choice (FIT-Choice) factors (Watt-Richardson, 2007)

The most common factors influencing choice of teaching as a career

Intrinsic motivation is an internal tendency manifesting in the search of new things and challenges, it has a close connection with efficiency, spontaneous interest and exploration. The success of teacher performance is usually assessed in two different ways – regarding teacher research [17]. According to the first approach, the teacher's personality plays a key role in the success, whereas the second approach claims that the toolbar of pedagogy can be acquired and those who own this knowledge can practise the profession in the most effective way.

In case of extrinsic motivation, the motivator is an external factor, for example receiving a reward or avoiding punishment, disgrace. This constellation is confirmed by various research among different teacher groups and in several countries, for example: English model [17], Cypriot model [49], Turkish model [55]. The possibility of professional development counts as individual extrinsic motivation, while former positive experiences with the profession also represents extrinsic power [48]. By analysing former research, we can conclude that in case of teaching career choice extrinsic motivation occurs in a small proportion, thus the Hungarian inservice teachers decided to become a professional mainly because of intrinsic factors. Besides

inner motivation, we cannot ignore those research results that show the importance of such outer factors as previous learning-teaching experiences. A large number of applicants choose this profession because previously they had seen a significant teacher character who served as a role model for them. Following the pattern is even more important if the candidates meet this role in their family [51]. As a result of a research studying teaching profession as a heritage and its reasons, it can be confirmed that if the teacher parent is committed, it is also more possible that the child will choose this profession. The profession is also a role and in these families the child has the opportunity to get to know the role, even to identify with it. The heritage effect can be explained with other factors, as well: the earlier the pattern comes, the stronger the impact is, moreover, it characterises the profession as the source of a value system [51]. Giving and receiving a value or pattern system is an important factor regarding motivation in teaching, it also strengthens the sense of vocation and the responsibility felt towards children.

Individual and teaching-related motivations can be found among both internal and external motivation, thus we can make distinction between four main groups: (1) individual intrinsic motivations, (2) work-related intrinsic motivations, (3) individual extrinsic motivations, (4) work-related extrinsic motivations.

a) Individual intrinsic motivations

From the group of individual intrinsic motivation emerges, categorised as altruistic motivation by some authors [19], [65], [20], the social contribution factor, so the desire to provide a service to society (e.g. [2], [4], [6], [27], and [31], [66]), as well as the rewarding nature of this profession – the professional can work on the preferred subject (e.g. [1], [27], [47], [9]). A great number of teachers chose this career because in their eyes it is a rewarding profession where they can work in a field they like, for example mathematics, sport and physical education, or arts [15], [1], [27]; [47], [53], [9]. Commitment to the profession turns out to be the most important in case of primary and secondary school teachers, while trainee teachers at the academic level are mostly driven by the scientific interest [58], [38], [26].

b) Work-related intrinsic motivations

Both in Hungarian and international literature the most common work-related intrinsic motivation among teachers, regarding career choice and profession stability, is the joy of working with children [2], [14], [10], [13], [14], [39], [47], [50], [56], [9], [33]. Further child-centred motivation is helping children to reach their goals [4], [10], [41] and having an influence on children's lives [11] [27]. Similarly, the desire to do a human activity also appears in these studies. The aspect that they want to work with and among people can be identified as a general teacher motivation [1], [56].

c) Individual extrinsic motivations

Among individual external (extrinsic) motivations career development aspirations [31], [32], [21], job security [31], vacations and free time [9], [21], [60], [61], salary and other rewards seem to be the most significant motivators [3], [2], [62], [63].

d) Work-related extrinsic motivations

According to several studies, among work-related motivational factors, regarding career choice, previous positive experiences with learning and teaching are also essential [4], [6], [31], [41]. Possible expectations of the employer [9], aspects related to workload and working environment at the early stage of working [39], [63], [21], and (for those who decided to stay at this profession) good working environment [32] can also be mentioned among work-related extrinsic motivations.

Aspects forming perception of teaching as a career

Besides the motivation for choosing teaching as a career, the questionnaire also focuses on the "Perception of teaching as a career". It examines the question via three main issues: prestige of the profession, advantages and disadvantages of the profession, assessment of the profession. Prestige and assessment of teaching as a profession is quite complex. On the one hand, we can connect teaching as a profession to the phenomenon of "engagement" that expresses an internal urge [22]. This can motivate employers to stay at educational institutions despite difficult financial situation or additional costs. On the other hand, prestige cannot be measured only financially because this profession provides a sort of symbolic capital for teachers - it is noticeable especially in smaller towns or villages, and where the institution-parent relationship is strong. Assessment of the profession's prestige and its perception can be originated not only in economic, but also in cultural aspects. A research carried out among Greek students [30] about career perceptions and changes in it showed that at the beginning of the teacher training, expectations about the career are based on individual experiences (from student life or based on the behaviour of former teachers). Literature in the topic highlights teaching practice as an essential factor in forming career perception. It can be seen as a relevant turning point during the training for two reasons. First, in the course of teaching practice pre-service teachers can develop their skills and lexical knowledge, as well. Second, teaching practice is the place where career perceptions and the identity of a teacher is forming, developing [37]. A research carried out among Turkish students [40] showed that difficulties experienced during teaching practice (e.g. discipline problems or workload) can lead to lower rates in employing as a teacher. However, in Hungarian studies the prestige of teaching as a career shows a lower status [33], it represents a significant social mobilization power. In Hungary the choice of teaching as a profession also means social advancement, it represents becoming an intellectual - the main function of teacher training is the education of first generational intellectuals [42], [21], [24], [25]. Several studies report that university students' opinion about social or financial prestige of teaching cannot be considered positive. In opposition to other jobs requiring university degree, teaching seems to stay at the bottom of the ranking – at the top we can find lawyers, doctors and economists, in contrast with professions in different fields of pedagogy [32], [61], [36]. Financial and social prestige are commonly referred motifs in Hungarian research studying career perceptions of teaching [42], [21], [26], [27]. Numerous studies among university students point out that the perception of the profession has a strong connection with their future intentions. Assessment by those who choose teaching and are planning to stay at the profession is more positive [58], [23], [15]. Out of Hungarian studies focusing on satisfaction with choice, N. Kollár says: according to students, empathy and authenticity are the most important factors, regarding personal characteristics [45]. His study was carried out with the help of university students who were the firsts in ELTE's Bologna system teacher training program. They were asked about their attitudes related to the profession and about their satisfaction with the education they have got so far. By analysing certain aspects of satisfaction with teaching as a profession, Chrappán reveals the characteristics of motivation and also the main components of job satisfaction in different student groups. According to him, the overall student picture is heterogenic regarding their study fields [9]. This heterogeneity is verified by two research of Németh. He worked with full-time trainee teachers and the results show that in case of kindergarten and primary school teachers, teacher activity is embodied in the emotional and social education of children, while in case of secondary school teachers it is the scientific knowledge transfer [44].

Tools and methods

Pattern and method of the survey carried out among higher education students

Cognitive pedagogy served as the conceptual frame of our research [12]. The empirical research was carried out via a validated questionnaire. 57 elements of the FIT-Choice Scale, along 18 factors examines motivation for choosing teaching as a career to a larger extent, but four factors (expert career, high demand, social status, and salary) presents the perception of teaching as a career. Respondents can express their level of agreement or disagreement in connection with certain aspects (reflecting certain factors) along a seven-point scale. The elaboration of the scale was originally based on Australian research pattern but later it was applied in several European countries, as well [6], [31], [66]. Psychometrical characteristics (reliability, validity) of the survey instrument were monitored regularly [65]. Reliability of certain questionnaire modules were between Cronbach $\alpha = 0.61$ and 0.91. Scores under 0.8 have not been analysed in this present study, thus in our research we calculate with data of 8 subfactors. Data recording was carried out by filling a personal questionnaire. The research also contained a self-edited list of questions, based largely on demographic data. When forming the questions, our goal was to prevent stereotypes – we did not want the respondents to find out the aim of the questions easily. Reliability of certain questionnaire modules, regarding the 8 subscales, were between Cronbach $\alpha = 0.81$ and 0.91. To the descriptive and statistical analysis of the questionnaires we applied SPSS Statistics 25.0. We calculated mean rating and standard deviation, results of our analysis (according to school year, gender and place of living) were compared with paired sample Ttest.

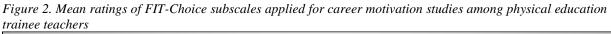
The target population of our research was those 409 (MAge= $22,46\pm2,31$ years, 251 men – 61,4%, 158 women – 38,6%) students who have active status at one of the public higher education institutions and who attend full-time teacher training program.

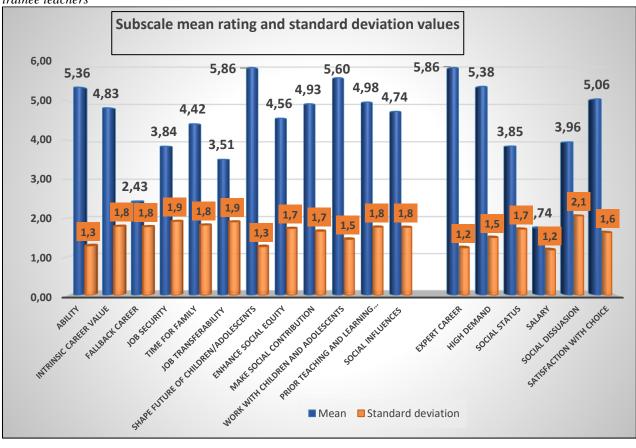
Survey pattern was formed by 121 first-year, 124 second-year, 35 third-year, 55 fourth-year, 35 fifth-year and 39 sixth-year students classified according to their school years.

Distribution according to their place of living shows that 69 students (16,87%) live in Budapest, 216 students (52,81%) live in other cities, and 124 students (30,32%) live in town/village. Our aim is to illustrate multiple viewpoints and the multidimensional picture of teaching as a profession. Both the questionnaire in connection with motivations and the question block, measuring career perception, were recorded among all of the students participating the research.

RESULTS

Most subfactors in connection with career motivation and perception, based on their values exceeding the scale's midpoint and mean rating along the 18 subfactors, evolve a defined structure of different motivational elements. The highest mean rating in case of certain subfactors is almost three and a half times higher than the lowest mean rating (minimum: 1,7; maximum: 5,9). It indicates that the examined motivational dimensions play quite different roles in those trainee teachers' lives who are before career choice.





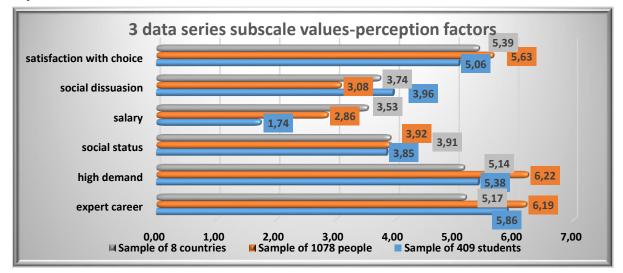
If we examine the structure based on mean ratings, we can see that the most defining motivational dimensions are "shape future of children/adolescents" and "expert career". This supports the prioritised intention of candidates that with their work they contribute to the children's/adolescents' value system which is possible due to their expertise. These motivational dimensions are outstanding not only because of their high mean ratings but also because of their low (around 1,2) standard deviation. "Work with children and adolescents" also reached a high mean rating but "ability" and "expert career" (mean rating above 5) also seems to be defining. "Personal utility values", such as "job transferability" or "job security" reached low, below scale-midpoint-rating (under 4). Choosing teaching as a "fallback career" is not a typical characteristic either (its mean rating is one of the lowest: 2,43). In case of values of the scale's low priority, rear range, in opposition to the most significant motivational dimensions, teachers seem to be less coherent (standard deviation values around 1,8).

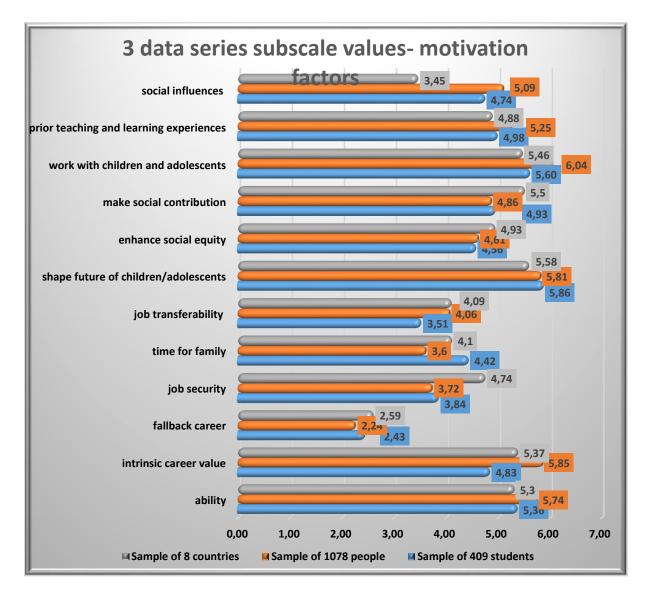
Factor "expectations in connection with the profession" is outstanding among mean ratings of the main factor, consisting of 6 subscales, regarding perception of teaching as a career – mean ratings were, in case of both subfactors, above 5. These results show that students are aware of the fact: their choice of profession requires high expectations, great expertise and difficult career. Results of a former study carried out among in-service teachers, in both cases, exceeded value 6 [48]. Two other subfactors expressing career perceptions describe additional positive aspects of perception. These are the "social dissuasion" which describes the negative effects of society and which has an under-midpoint mean rating (3,96); and the "satisfaction with choice" subfactors that present the possible advantages of the profession, "social status" and "salary", gained fairly low, under-midpoint mean ratings (3,85 and 1,74).

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Figure 3. Comparison of unweighted average calculated by mean ratings of eight countries based on the subscales of FIT-Choice Scale (own calculation based on Watt and Richardson, 2012), Hungarian values and own students' sample values





By highlighting the value difference of three different samples, the following result outlines: regarding mean ratings of "intrinsic career value" and "salary" subscales, mean ratings of inservice teachers in Hungary show a result which is higher by one scale value than the result of students. The reason of this lower intrinsic value can be the fact that strong professional and career elements are not typical in trainee teachers' lives, while towards their graduation it is getting stronger – due to their expanding experience and commitment. Mean rating (1,74) of the "salary" subscale indicates that for students the amount of energy and contribution shows almost an inverse proportion. It is confirmed by several studies that low teacher salaries are one of the early indicators of leaving the profession.

Mean ratings for FIT-Choice by school year

When processing student data, my first step was the examination of mean ratings divided by school year based on the subscales of FIT-Choice Scale. Within the main factor "motivation for teaching as a career" 4 subfactors showed almost similar patterns. These factors are "ability", "shape future of children/adolescents", "enhance social equity" and "make social contribution".

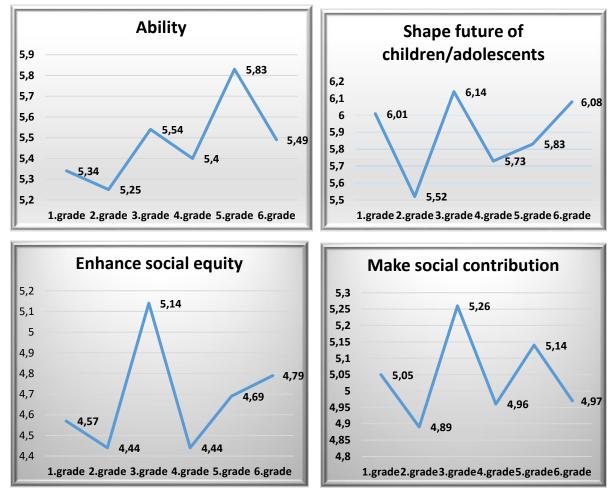


Figure 4. Mean rating of FIT-Choice Scale's 4 subfactors in motivation for teaching as a career divided by school year

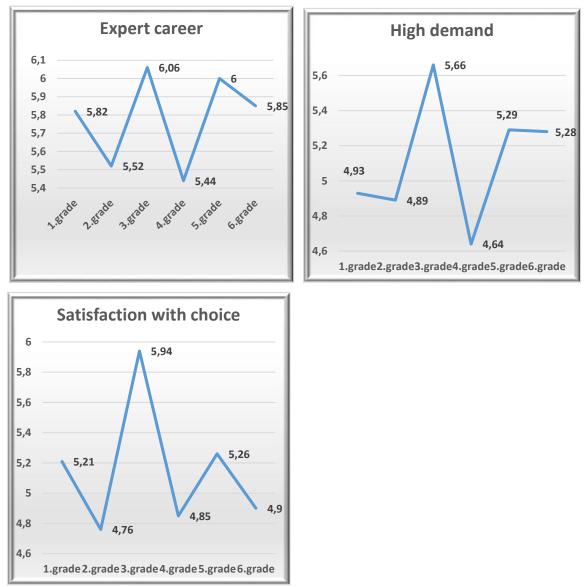
Our results show that expectations set about teaching differ from experiences gained during the first year of study. Mean ratings from the second year indicate that students start to realise the amount of expertise they need in order to become a professional teacher. Hesitation regarding their ability is a characteristic of this year because students also realise the amount of energy

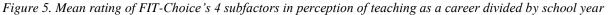
they need to invest until graduation. However, classroom observations and microteaching of peers, beginning in their third year of study, mean positive feedback for students. They have to function in familiar environment, among peers they know which creates a sense of security and joy of teaching. Due to these experiences they believe again in their own abilities. 3 subscales of "social utility value" ("shape future of children/adolescents", "enhance social equity" and "make social contribution") concerns also students of second year. Low mean ratings show that students are afraid they will not be able to make positive social contribution as teachers, thus a job such as teaching, full of with responsibilities is beyond their current abilities. In their fourth year, the amount of both theoretical and practical curriculum increases, which is illustrated by their decreasing subscale values, as well. In this year students have to work in real-life circumstances, they have to perform tasks in lesson segments or during the whole lesson in the practice school. They make lesson plans lesson by lesson, while they try to do their bests and teach according to their plans. We highlight that from 18 subscales the difference is significant in case of 12 between year 2 and 3, as well as between year 3 and 4. In the following table (Table 1.) we marked only 7 subscales and the significant relationship between year 2 and 3, and between year 3 and 4 because these subscales showed the greatest similarity in subscale pattern of years.

Subfactors	Mean ratings of 2 nd year	Mean ratings of 3 rd year	Mean ratings of 4 th year	Paired sample T-test values in 2 nd and 3 rd year p <0,05	Paired sample T-test values in 3 rd and 4 th year p <0,05
<u>Ability</u>	5,25	5,54	5,4	0,002	0,029
Shape future of Children/adolescents	5,68	6,14	5,73	0,004	0,018
Enhance social equity	4,44	5,14	4,44	0,002	0,002
Make social contribution	4,89	5,26	4,96	0,009	0,001
Expert career	5,52	6,06	5,44	0,000	0,000
High demand	4,89	5,66	4,64	0,009	0,000
Satisfaction with choice	5,94	4,85	5,26	0,000	0,000

Table 1. Mean ratings of 7 FIT-Choice Scale subscales and values of paired sample T-test (own editing) p < 0.05

Within the main factor "perception of teaching as a career" the subfactors that showed similar patterns among years are "expert career", "high demand" and satisfaction with choice". It is illustrated by the diagrams of Figure 4.





3 subscales of teacher perception show similar results to the above analysed subscales. According to this, smaller teaching tasks make students realise that teaching is a complex profession which requires precise preparation and without routine they need longer preparation time. Diagram of "satisfaction with choice" also anticipates that although third-year students consider "teacher tasks" difficult, they see the beauty of the profession and they are satisfied with their choice. Generally speaking, all 7 diagrams of Figure 1 and 2 shows a significant increase in motivational and perception values during the fifth year of studies. Students are more confident due to their expanding knowledge and practical experience. In their sixth year of study due to the teaching practice (45-minute-lessons with various classes) and the excessive workload, we can notice a smaller decrease of values.

FIT-Choice mean ratings based on students' place of living

Different types of residence as living context was examined among trainee teachers by Gabriella Pusztai in their handbook *Follow-up study of pre-service teachers II*. They pointed out that students from the countryside reached higher scores in several fields in opposition to students from Budapest or from other cities. This thought is supported by our current results

because students from the countryside reached higher mean ratings in 12 subscales of the total 18, while significant difference can be seen only in case of 4 subscales ("enhance social equity", "make social contribution", "prior teaching and learning experiences" and "salary"). These results indicate that students from towns and villages feel more responsibility for community engagement regarding intellectuals from the countryside.

FIT-Choice mean ratings by gender

According to our third criterion for assessment, we compared genders and we found significant differences in favour of women in case of 11 subscales. Mean ratings of women are higher in case of other subscales, as well – except the "fallback career" subscale (Figure 6). Based on the results we suppose that men imagine themselves in other professions. Professions that are more secure and provide higher salaries. They apply for teaching jobs, based on their qualifications, only if they cannot find jobs in other fields.

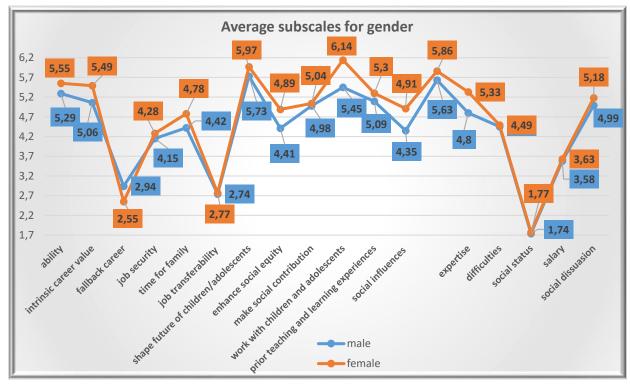
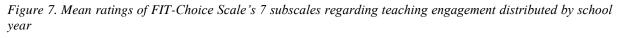
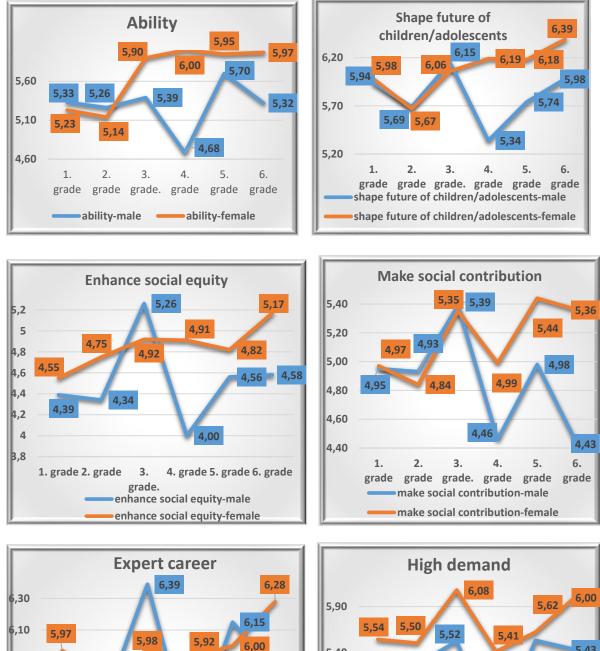


Figure 6. Comparison of FIT-Choice subscales by gender

Comparison of FIT-Choice Scale subscales distributed by gender and school year

Examination of subscales in different classes distributed by gender also seemed to be an exciting research field (Figure 7). In order to analyse, this part of the research was based on 7 subscales where a significant difference can be observed between the results of year 2 and 3, as well as between year 3 and 4.









Satisfaction with choice 5,90 5,87 5,46 5,40 4.98 5,69 5,56 5,28 5,28 4.95 4.90 4.65 4,40 4,470 3.98 3,90 1. grade 2. grade 3. grade. 4. grade 5. grade 6. grade satisfaction with choice-male satisfaction with choice-female

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Analyses based on gender also strengthens the statement: after all the positive experiences students gained during their third year of study, excessive workload and high requirements of the fourth year has a negative effect on their teaching engagement. It is especially true for male students who, in their fourth year, marked significantly worse values in every field of our study. However, it can be observed that diagrams show almost similar values, regardless of gender, about career expectations in the first and second year. It can be declared that students' opinion about career motivation and perception divides significantly, regarding gender, in their fourth year of study.

CONCLUSION

In opposition to our analyses, formerly published research in teachers' career motivation followed a protocol based on significantly different structures. Thus, we can compare the results only in case of students' residence and the subscales in general.

When comparing mean ratings of the other eight countries, of Hungary and our own sample we can see a remarkable difference in opinions about the value of teacher salaries. According to international research, teaching as a career found to be inferior to other professions in the eyes of trainee teachers regarding both social and financial prestige [62], [34] – which is proved by our results, as well. In opposition to Pusztai's 2015 study, examination by the different types of residence did not show great difference in career motivation.

Our research brought remarkable results in case of school year distribution. Parallelly with study processes, along with the increasing amount of time spent together with students, a typical pattern can be observed. After the almost similar results of the first and second year, regardless of gender, students of the third year show more confidence and the strengthening of the thought: "I am at the right place". Teaching engagement shows the biggest difference between male and female students during their fourth year of study. This is a watershed year in their final decision of becoming a teacher. A negative tendency can be observed at the subscales, in case of both genders, however, decrease of mean ratings is especially high among male students. Vision of the future, financial security might become more important at this stage of life, thus male students feel more insecure about being able to provide appropriate existential background as teachers for themselves and for their families. Research data is consistent with the above mentioned – these results report the feminisation of the profession above European average [44]. As a conclusion, we can say that our research results prove that, however, more male

students start teacher training, female graduates stay at the profession in a higher proportion. It is a phenomenon that in/from their fourth year of study male students start thinking about other alternatives than teaching as a career. The fact that male students have higher mean ratings only in case of "fallback career" subscale also strengthens our statement.

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