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THESES OF DOCTORAL (PhD) DISSERTATION

SZILARD HORVATH

UNIVERSITY OF KAPOSVAR

FACULTY OF ECONOMIC SCIENCES

2020

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RESEARCH OF THE PEDAGOGICAL CAREER MODEL

Made by:
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1. Objectives of the dissertation

The objective of my dissertation is to establish that the CXC 2011 introduced by the Act on Public Education and described in Government Decree 326/2013 (Implementation of Act XXXIII of 1992 on the Proficiency System of Teachers and the Status of Public Servants in Public Institutions) its purpose. As a result, if teachers have become more motivated. I wish to get an answer to how satisfied they are with the career model, how it is structured and the tasks that it entails and the salaries that are essential for proper motivation. I wish to see and show if the career model has a deterrent effect on teachers not leaving the teaching career for other, possibly better paid jobs in the private sector. Beyond the general belief, I want to examine whether different opinions are related to, for example, gender, age, place of residence, possibly career time, or whether different groups of educators have similar views on the impact of the proficiency system on their work. So, if they can be handled as an homogenous group. Using the results revealed in the analyses, I intend to make suggestions for improving and refining the teacher career model in order to improve the quality of the Hungarian public education.

In order to answer the above questions, I would like to confirm the following hypotheses that I formulated during my research:

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Hypothesis 1: The teaching career model in its current form is not capable of motivating educators, encouraging them to work better, or keeping good professionals in the job.

Hypothesis 2: Among other factors, wages play an important role in the motivation of the educator and through this in his / her professional work. The judgment of the career model is influenced by the region in which the educator works and the average income in that region.

Hypothesis 3: The mistake of the pedagogical career model is to treat the large and diverse pedagogical community as a homogeneous unit, not allowing for proper differentiation within the pedagogical community.

Hypothesis 4: The pedagogical career model, among other things, does not motivate educators properly because teachers perceive certification as very overwork and disagree with mandatory certification procedures. Furthermore, the methods used in the certification process are not considered appropriate.

Hypothesis 5: Due to the pedagogical career model there is no general proof of the increasing students' competences.

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2. Thematic and Methods

I examined the possible relationship between the quality of public education, the motivation of teachers and the processes taking place in the country based on primary and secondary data. Primary data comes from questionnaires completed by public educators and in-depth interviews with relevant educators. Secondary data are derived from the domestic and international literature, the Central Statistical Office and the Office of Education.

Teachers' opinions were surveyed using an anonymous online questionnaire. During the time available, 6,124 questionnaires were completed.
For the analysis and evaluation of the questionnaires, besides the functions of Microsoft Excel, I also used its reporting (cross-table) function. In order to examine the closeness of the connections I used primarily the SPSS program. I used the Cramer coefficient to measure the closeness of the hypothesized relationships.
To determine whether the respondents form a homogeneous group or whether they can be divided into several distinct groups, I performed a cluster analysis. By this I wanted to see and show if there was a consensus among the respondents. One of the central questions in cluster analysis is how many clusters can be distinguished in the database. I used the Calinski – Harabasz index to determine the number of clusters.
To examine whether there is consensus or strength of consensus among respondents on a particular variable, Likert-scale questions were estimated with a logit model and binary questions with a logit model.

In order to gain a deeper and more accurate understanding of the results, I conducted in-depth interviews, which made it possible to explore the topic

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more precisely. When choosing the subjects for in-depth interviews, I tried to reach the widest possible range of interviewees within the educator community.

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3. Results and assessments

3.1. Investigating the Teacher 's Career Model Appropriateness and Motivational Power

Hypothesis 1: The teaching career model in its current form is not capable of motivating educators, encouraging them to work better, or keeping good professionals in the job.

At the beginning of the questionnaire, questions were asked educators' opinions on the adequacy of the career model. I asked them to classify the career model according to the criteria given and used by the teachers. This method is practically equivalent to a five-step Likert scale.

Questions asked and examined here:

1. To what extent do you consider the recently introduced teacher career model to be appropriate? Based on the criteria given, please rate it on a scale of 1-5! (1 does not consider it at all, ..., 5 considers it very good)

1.1 Overall?

1.2 The categories of the career model (Trainee, Teacher I, etc.)?

1.3 How to enter the higher payment categories (years, categories)?

1.4 Extent of the higher payment to get by step on a higher category?

From the answers it appears that for each question the modus is 3, which is the value most teachers have indicated. From this it can be concluded that the majority of the teachers judge the examined questions in a neutral way, therefore they have no significant influence on them, they suit to the changes in the law.

Figure 1 shows the distribution of answers (grades) to the questions.

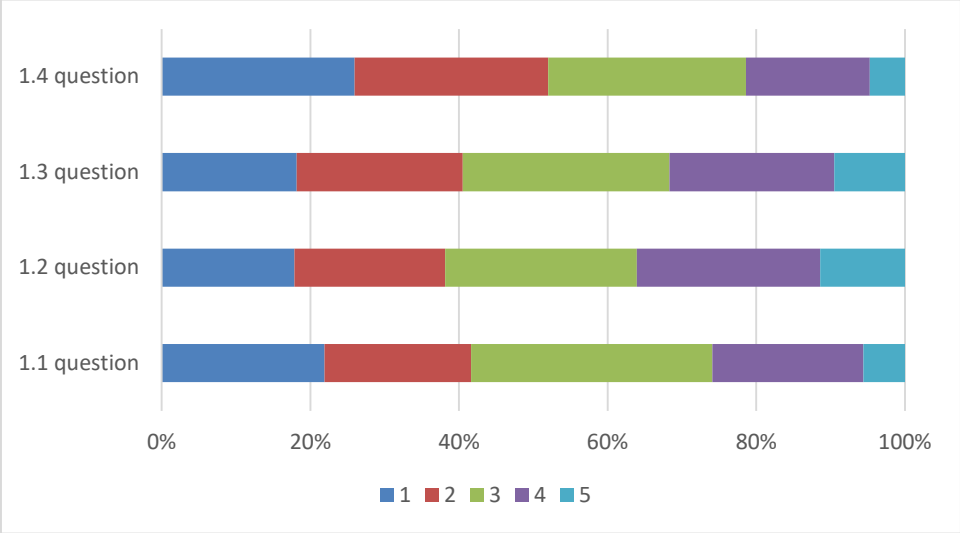

Figure 1: Distribution of grades given to questions 1.1-1.4
Source: self-edited, 2018.

On the basis of the examined aspects, the teachers' opinion did not reach the triple average, that is, the average level, which suggests that the teachers are not satisfied with the structure, categories and the rate increase of the salary model.

The Calinski – Harabasz index is the highest in the case of two clusters, so I performed the cluster analysis on two groups. Table 1 shows the average of the respondents' ratings and the answers given to the questions by the two groups.

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Table 1: Cluster analysis of the answers to the questions 1-12

Question		total	cluster 1	cluster 2	Kruskal-Wallis test
1.1.	How well do you think	2.68	3.65	1.90	0.0001
1.2.	The career model cat.	2.91	3.90	2.13	0.0001
1.3.	Higher Payment Cat.	2.83	3.69	2.13	0.0001
1.4.	He/She is in the higher category	2.48	3.19	1.92	0.0001
2.	How burdensome you feel	3.99	3.52	4.37	0.0001
3.	Do you think it is good to be a teacher	2.07	2.28	1.89	0.0001
4.	The extent to which it motivates	2.71	3.86	1.79	0.0001
5.	Do you feel motivated to	0.36	0.63	0.14	0.0001
6.	Is it motivated by the higher	1.93	2.45	1.51	0.0001
7.	In his view, the new advancement	1.58	1.91	1.31	0.0001
8.	Do you think it is mandatory	1.38	1.69	1.12	0.0001
9.	Do you consider it appropriate	0.19	0.34	0.10	0.0001
10.	Don't you worry about that	2.57	2.31	2.78	0.0001
11.	Do you think the rating is good	2.48	2.80	2.22	0.0001
12.	What experience do you have	2.31	2.73	1.98	0.0001
	N	6 124	2 722	3 402	

Source: self-edited, 2020.

Table 1 illustrates the differences between the clusters. The averages show that the first cluster includes the more satisfied and the second cluster the less satisfied teachers. For questions 2 and 10, opinions seem to be reversed because of the direction in which the questions are asked. Based on these, opinions are not homogeneous. It also appears that 55.6% of the respondents (3402 teachers) belong to the dissatisfied group.

Table 2 shows the clusters formed by the various criteria and the average of the grades given by the individuals in the given clusters.

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Table 2: The cluster analysis taking into account various criteria

takes into account	cluster 1	cluster 2	total	Kruskal-Wallis test
gender	0.20	0.18	0.18	0.9086
age	2.45	2.38	2.40	0.0009
qualification	3.45	3.24	3.34	0.0001
experience	4.03	3.81	3.92	0.0001
classification	3.09	2.46	2.75	0.0001

Source: self-edited, 2020.

Table 2 shows that in the case of the examined variables there is no significant difference between the two clusters, in all other cases, which means that the respondent's age, education, career (experience), and by type of institution, teachers can be divided into two groups. Teachers who are older, have longer careers, are more educated, and are classified in a higher category of educators are more positive about the career model. Using this result, it is worth examining whether the approach of treating teachers as a homogeneous society is correct (see Hypothesis 3).

Questions 4 and 5 address the motivational power of the career model, which reads:

4. To what extent is the new career model motivating you? Please rate it on a 1-5 scale! (1 not motivating at all,…, 5 very motivating)
5. Do you feel motivated to enter the Masters?

Based on received answers, teachers evaluate the motivational power of the career model to an average of 2.71, which I will discuss later. Only 36%

(2,204 people) of the respondents said that they wanted to become a Master, asked it in the question 5 about the desire to become a Master.

Of the 2,204 teachers who answered yes, 1,034 are still in the category of master teachers. If we disregard the views of current master teachers, only 22.9% of respondents feel motivated to enter the Masters.

The distribution of the answers to question 4 is shown in Figure 2.

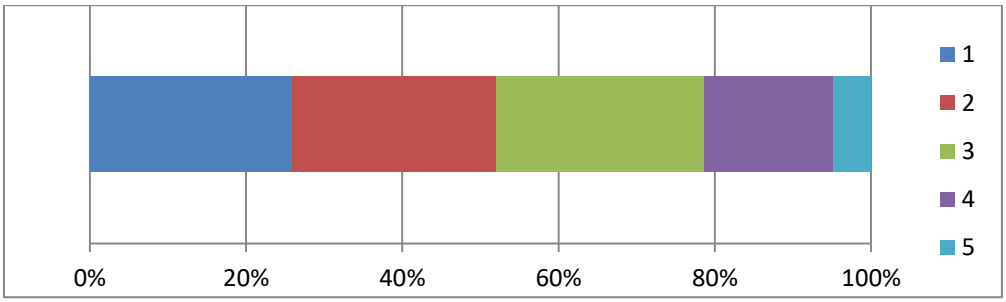

Figure 2: Distribution of answers to question 4
Source: self-edited, 2019.

Figure 2 clearly shows that the number of negative reviewers exceeds the number of positive reviewers. More educators evaluated the motivational power of the career model for one or two than four or five, which is why the average score of 2.71 may have developed.

In addition to the motivational task, another crucial point is whether the career model has a role in preventing educators from leaving their profession and seeking other, better paying jobs in the competitive marketplace. This is what question 7 asks, which reads:

7. Do you think that the new proficiency and wage system has a deterrent effect on the career teacher leaving the career path?

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More than half (54%) of the responding teachers believe that the career model does not have a deterrent effect on the teacher not leaving the school job for another one. In my opinion the 11% rate „yes" is very disappointing.

3.2. Impact of wage levels on teacher motivation

Hypothesis 2: Among other factors, wages play an important role in the motivation of the educator and through this in his / her professional work. The judgment of the career model is influenced by the region in which the educator works and the average income in that region.

3.2.1. Assessment of income provided by the teacher 's career model

According to the original law text, a beginner teacher who has a college degree can count on 180% of the current minimum wage and 200% on a gross income as a university graduate. Later, the law text was amended so that the basis for the calculation of wages is not the current minimum wage, but the so-called projection base.

Figure 3 illustrates how educators perceive the wage increases associated with different categories' steps. I also examined the closeness of relations among satisfaction with salary increases when switching among teacher categories. The Cramer index is only 0.155, so there is no any significant relation. Nevertheless, I consider it worthwhile to examine separately the opinions formed in the given teacher categories, the evolution of which is shown in Figure 3.

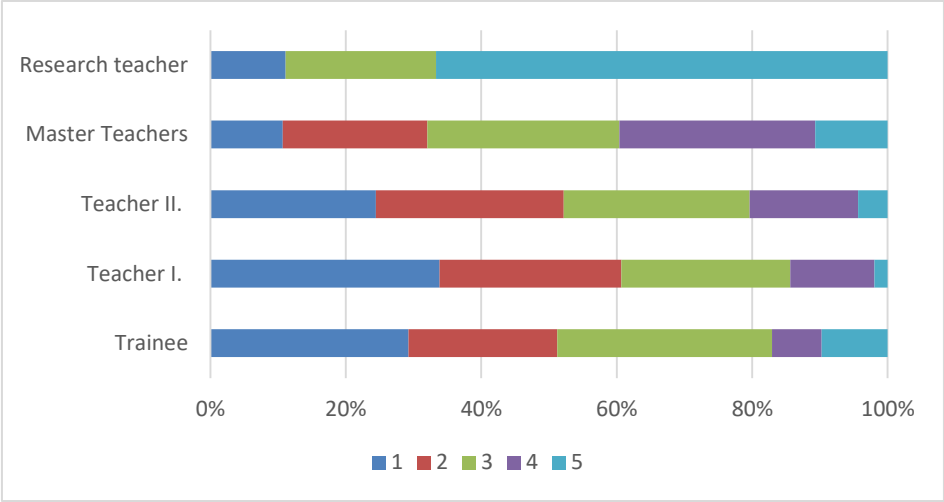

Figure 3: Distribution of career model qualification by teacher category
Source: self-edited, 2018.

Although there is no significant correlation among teacher rankings and satisfaction with grade level during salary increases, in Teacher I. category teachers appear to be much more dissatisfied than Master Teachers.

3.2.2 Impact of average territorial wages on career modeling

I assume that in the capital and in those counties where the national average is above by the income level, teachers are less satisfied with the career model, less motivated, and have no positive effect on teachers not leaving the school job.

In those counties, I found the correlation between average income and the motivational power of the career model to be higher than the average of 2.71 (national average) and the county's average net income is below the national average. This demonstrates that, in areas where the net salary of the

population is below the national average, teachers consider the proficiency system to be above average. Similarly, I examined the opposite effect. In the case of the 20 examined areas (19 counties and the capital), the correlation can be detected in 15 cases, which means 75% of the examined areas.

Figure 4 shows the proven territorial relations. In the counties indicated by smiling faces, the above average is positive, while the sad smiles indicate a negative relation. In the counties where the face is in a neutral mood, the examined relation cannot be detected.

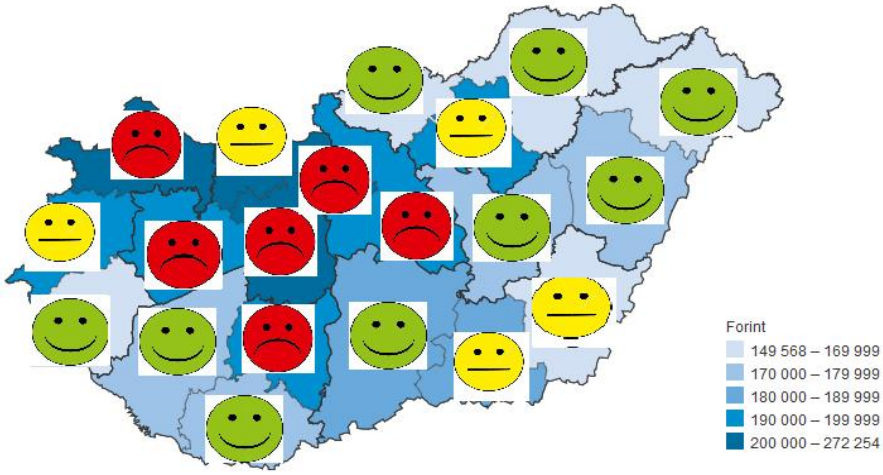

Figure 4: The relationship between the motivational power of the career model and the average income of the county
Source: self-edited, 2018

Examining the inhibitory effect of a teacher attrition in career model, it is not detectable than it is with motivation in closely relation.

The result clearly shows that wages play an important, motivating role. Paying for a career model should not break away from the competitive market. By setting the projection basis for teacher salaries at HUF 101,500, wages are expected to slip again in the same way as before with the salary scale for civil servants.

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3.3 Investigating the treatment and relevance of the educator society as a unit (homogeneous)

Hypothesis 3: The mistake of the pedagogical career model is to treat the large and diverse pedagogical community as a homogeneous unit, not allowing for proper differentiation within the pedagogical community.

3.3.1 Influence of educational institution, field and level of education on career model assessment

Table 8 shows teachers' perceptions of how motivated they are by the career model and the impact of leaving the profession on the types of institutions employing the teachers.

Table 8: Motivational power and impact on leaving careers by institutions

	Motivational	impact on leaving career %		
Institution type	**power**	**negative**	**neutral**	**positive**
kindergarten	**3,08**	**16**	**39**	46
primary schools	**2,61**	**10**	35	10
high school	2,43	**10**	28	**62**
vocational school	2,37	0	**48**	**52**
secondary school	2,29	5	33	**61**
vocational high school	2,44	8	35	**56**
other	**2,89**	**13**	36	**51**
average:	2,59	9	36	48

Source: self-edited, 2018.

Following the kindergarten teachers, the teachers of student hostels were placed in the other category, which is the second most motivated group. Apart from the two excluded categories, the Cramer coefficient is 0.19 to determine whether there is a correlation between institution type and motivation level. Based on this, it can be said that there is no justifiable correlation between the institution employing the teacher and the motivation of the teacher.

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Due to the level of education and the mixing of programs, any teachers cannot be recruited and treated separately. The Cramer coefficient is 0.295, which suggests a weak correlation. The Cramer score was similar to the judgement of the educator's special field and the power to discourage profession leaving.

3.3.2 Impact of the qualification of teachers on career model assessment

Table 9 shows the average of motivating power grouped by the highest qualification of teachers.

Table 9: Motivational power by level of qualification

	Motivational power (average)	number of persons
University (MA, MSc)	2,21	988
university + special exam	2,99	1264
college (BA, BSc)	2,18	1620
college + special exam	3,17	2188
high school	1,00	2
no pedagogycal qualification	2,00	6
scientific degree	2,82	56
Total	2,71	6124

Source: self-edited, 2019.

The Cramer index value (0.176) and the values in the table show that there is no correlation between the motivation of the teacher and the highest level of qualification of the teacher. Table 9 shows that teachers with advanced qualifications, like as a special exam, are more motivated than average. One reason for this is that they are teachers who have been assigned to the Master Teacher category at first time. Figure 5 shows the effect of teacher qualification level and the prevention of leaving career.

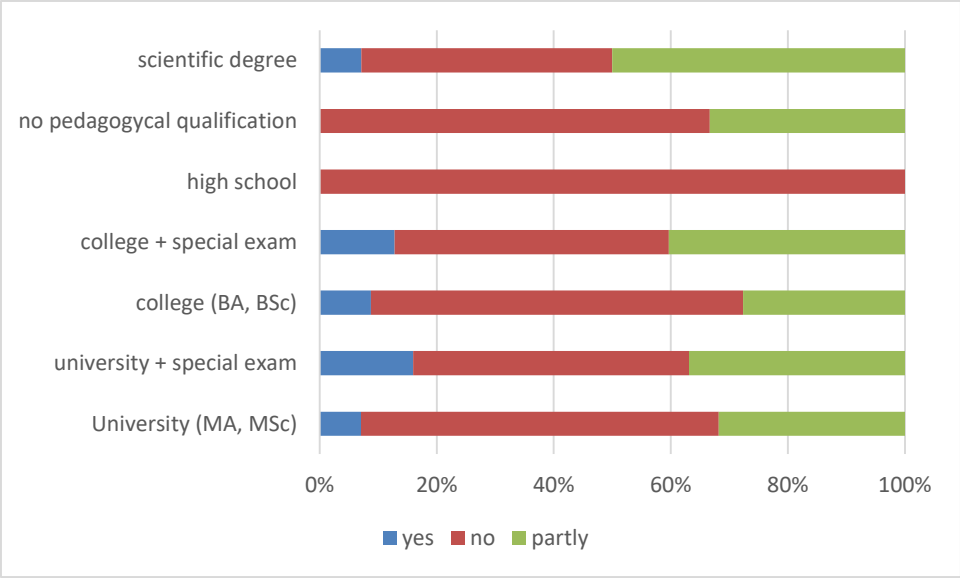

Figure 5: The impact of leaving education by qualification
Source: self-edited, 2019.

Figure 5 shows that the number of teachers who say they have a positive influence on the career model is a fraction of those who believe that they do not or partially discourage them from leaving the profession. The value of the Cramer coefficient is only 0.12 between the impact on leaving career and the qualification of the teacher, which suggests that there is no significant relation between them.

3.3.3 Impacts of gender and age of teacher on this career model assessment

18.4% of the responding teachers are male and 81.6% are female. Contrary to the assumption, slightly more than 40% of men and 35% of women would like to become a master, which is a financial and moral appreciation for teachers. 33.8% of responding male teachers and 33.3% of women said that it was not the moral esteem of the higher category but the additional income that motivated him/her.

Figure 6 shows the motivation of the proficiency system by gender.

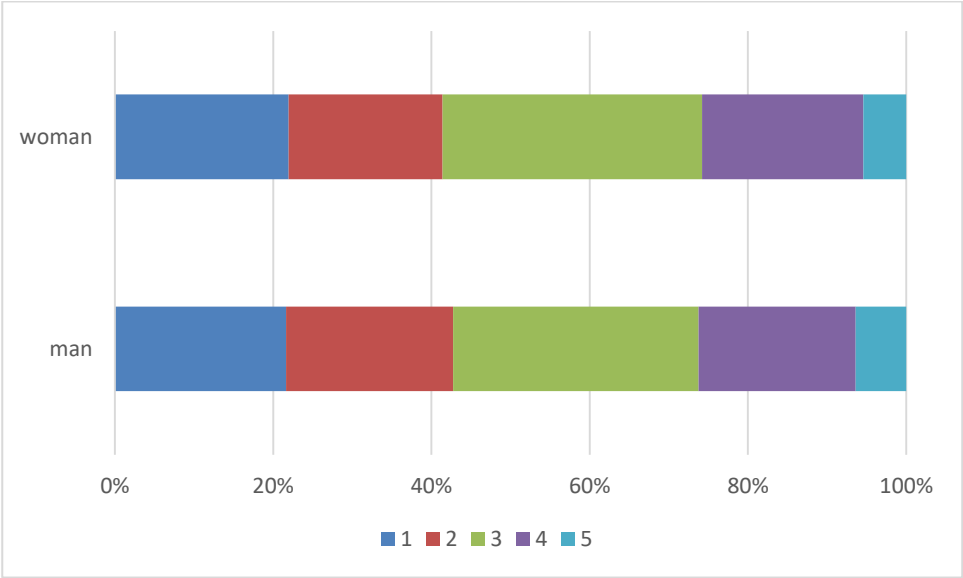

Figure 6: Gender distribution of career model assessment
Source: self-edited, 2018.

The colouring of the two bands almost overlaps, and it shows that considering the rate of men and women their experiences are similarly in the motivating power of the proficiency system. From this it can be concluded that no hypothesis can be established and this is also supported by the value of the Cramer index, which is only 0.047.

Figure 7 illustrates whether the career model has a retention force for leaving the profession (question 7).

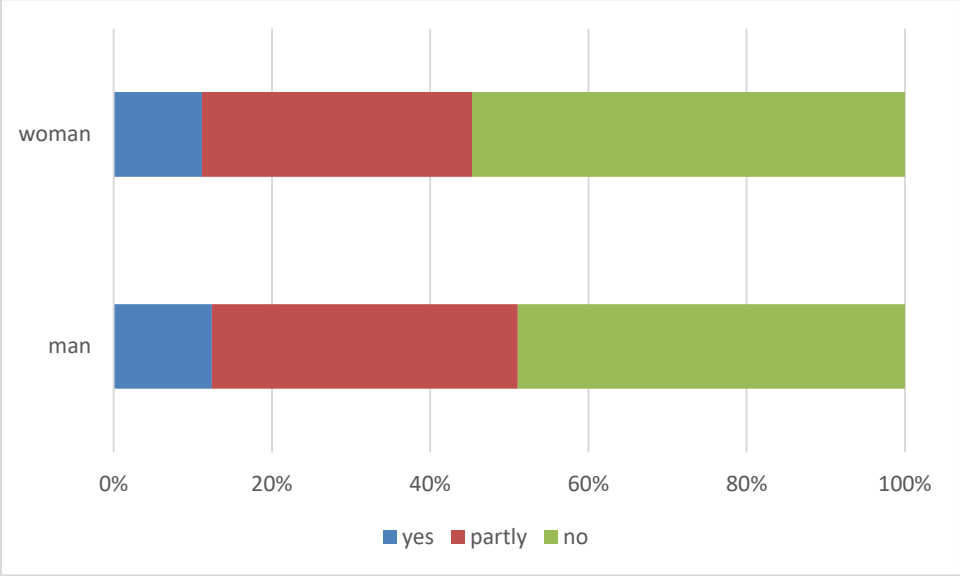

Figure 7: Gender-based assessment of career impact of career model
Source: self-edited, 2018.

Both genders also have a very similar view of the impact of the proficiency system on leaving profession, as shown in Figure 7. There is no correlation either with the value of the Cramer index, which is only 0.045. The Cramer coefficient is 0.072 between age and inhibitory effect on leaving career, which also shows a lack of relation.

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3.3.4 Influence of career time on career model assessment

Table 11 shows the rating (classification) of the motivating power on a Likert scale, grouped according to the time spent by the respondent teachers in their careers.

Table 11: Distribution of motivating power based on spent time in career

	rating of the motivating power (classification)				
spent time in career	1	2	3	4	5
years 0 – 5	21%	25%	33%	19%	3%
years 6 – 10	34%	20%	25%	15%	6%
years 11 – 20	29%	17%	27%	20%	6%
years 21 – 30	27%	14%	26%	21%	13%
more than 31 years	27%	16%	21%	22%	14%
total:	**28%**	**16%**	**25%**	**21%**	**11%**

Source: self-edited, 2019.

The Cramer score is only 0.076, and an overview of the table shows that there is no demonstrable relation between time spent on the teaching career and motivation. Practice time spent on the teaching career is also not a factor in judging the tendency to leave the profession, where the Cramer coefficient is 0.069. Within each age group, it can be said that the number of unsatisfactory and sufficient grades are exceeded by the good and the excellent.

With the logit model I examined the questions discussed in chapters 3.3.1, 3.3.2, 3.3.3, 3.3.4.

The study shows that, despite the cluster analysis used previously, teachers may not be categorized by gender, but men are slightly more satisfied than their female colleagues and men are more motivated to enter the masters.
The result of the logit model also indicates that more experienced teachers (who have been in the profession for a long time) are less positive about the

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career model. This can also be explained by the fact that many educators who have been in the teaching profession for decades have automatically been placed in Teacher Category I, but they are also dissatisfied with the categories of teachers and salaries. But teachers who are in a higher category are more positive about their questions than their colleagues in the lower category. It is an interesting result that teachers who have been in the profession for a long time find the certification procedures more burdensome than their less experienced colleagues. From the departmental part of the model, it can be seen that the assessment of the career model by counties is very similar, with very little difference. The model illustrates the results compared to Baranya County.

3.4 Assessment of qualification processes

Hypothesis 4: The pedagogical career model, among other things, does not motivate educators properly because teachers perceive certification as very overwork and disagree with mandatory certification procedures. Furthermore, the methods used in the certification process are not considered appropriate.

When asked whether a mandatory qualification was required, 51.5% (3,154) of the respondents said that it was not necessary and whether they considered it appropriate to have a Teacher II. Grading is compulsory up to grade 5, 58.9% (3,610) of respondents said they did not consider it good. Respondents in the Master Teacher category were treated separately because they are in the privileged position of being at the top of the hierarchy and not having to face certification procedures. 85.4% of Master Teachers say they need a compulsory qualification, compared with only 30.2% of those who are in Teacher Category I.

The research showed that those educators who volunteered for the certification process were more motivated and satisfied with the structure and categories of the career model. The Cramer coefficient has a value of 0.468, which means a moderate correlation, so it is worth waiting for the educator to develop voluntarily: to reach a higher level and thus to undertake more work. Personal motivation also manifests itself in the sense that those who are more motivated volunteers and are already more likely to be in the Master Teacher category. For this, the Cramer coefficient is 0.548, which means a strong average correlation.

This can be explained by the fact that the salaries of master teachers are significantly higher and they do not have to fear the qualification procedures and their possible negative consequences. However, the fact that teachers in Teacher I are the least motivated may indicate that the system is inadequate. It is important to mention that this average of 2.11 reflects the opinion of 41.5% of the respondents.

The answer to question 2 of the questionnaire, that is, how much do you feel it is burdensome to receive the additional tasks related to the qualification is shown in Figure 19. Here, I also asked the teachers to rate them on a five-point Likert scale.

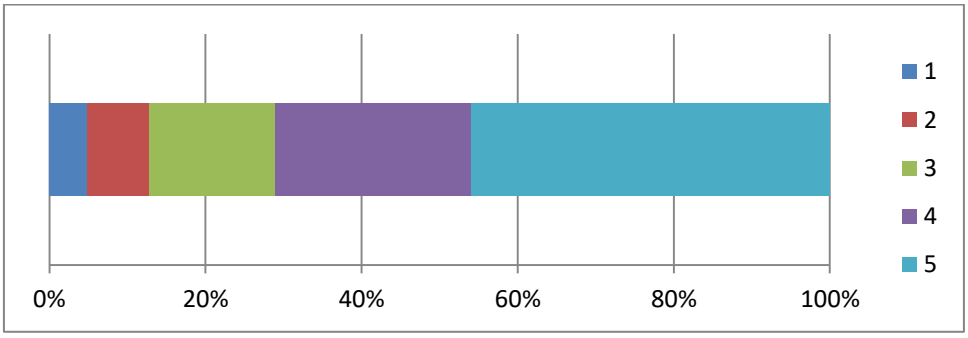

Figure 8: The burden of certification procedures
Source: self-edited, 2019.

It is clear from the figure that a large proportion of teachers feel that the additional tasks associated with certification are burdensome or very demanding. If a certification process is very onerous, the motivation to get into a higher category is obviously reduced. I examined this issue further on the basis of which category the teacher is currently in.

Figure 9 shows the judgement of qualification burden and relations among rating.

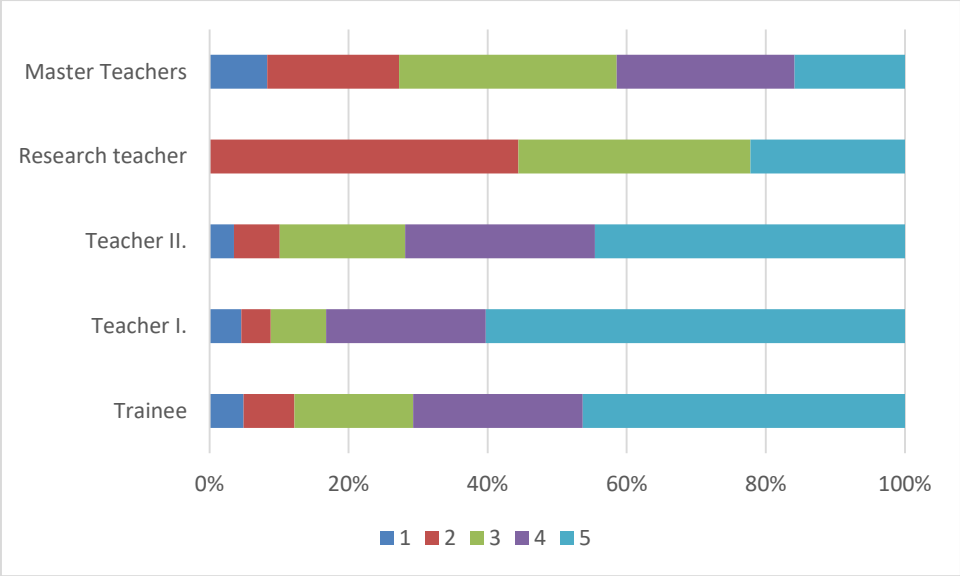

Figure 9: Assessing the burden of ratings
Source: self-edited, 2019.

It is clear that Teacher I. and Teacher II. category teachers who are either ahead of or certified in the category will find the process much more burdensome than the master teachers, many of whom have been placed in this category through training, so they have not been previously qualified under the current qualification procedure.

The logit model also confirms the previously established fact in the classification-based part of the survey (see Table 12). Teachers who are

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classified in a higher category, in this case the Master Teacher category, are much more satisfied with each examined topic. Similarly, the previous statement that masters teachers find compulsory qualifications much less burdensome than their colleagues in the lower grades is justifiable.

29.3% of the respondents, 1,800 teachers say that they can use it later, while 70.7%, as 4,324 believe that the time invested in the qualification and its products can not longer be used for educational purposes during their work.

Question 19 of the questionnaire reads: In your opinion, is it not a problem that the qualifier is unable to discover the real weekdays in the institution, only to evaluate the teaching work in the institution on the basis of a "sterile, occasionally organized environment"?
996 teachers, 16.2% of respondents believe that this is not a problem, 2,332 people, 38% think it is partially problematic, while 2,796 people, 45.8% think it is a problem that classroom visits do not reflect the real, everyday work of teachers.

3.5 Influences of teacher career model on student achievement

Hypothesis 5: Due to the pedagogical career model there is no general proof of the increasing students' competences.

First, I tried to get an answer to the question based on the teachers' opinion. Of the 6,124 respondents, only 810, 13.2% said that they were very good, 2 366, 38.6% said that they were partially improving and 2 948, 48.2% of the respondents answered that students' competences were not improved by the introduction of the teaching career model. The results were reviewed based

on the survey of the last 10 years between 2008-2017. We know that the career development system was introduced in 2013, so the interval studied provides sufficient information on pre- and post-introduction competency outcomes. Figure 10 illustrates the average mathematical competency scores for classes 6, 8, 10.

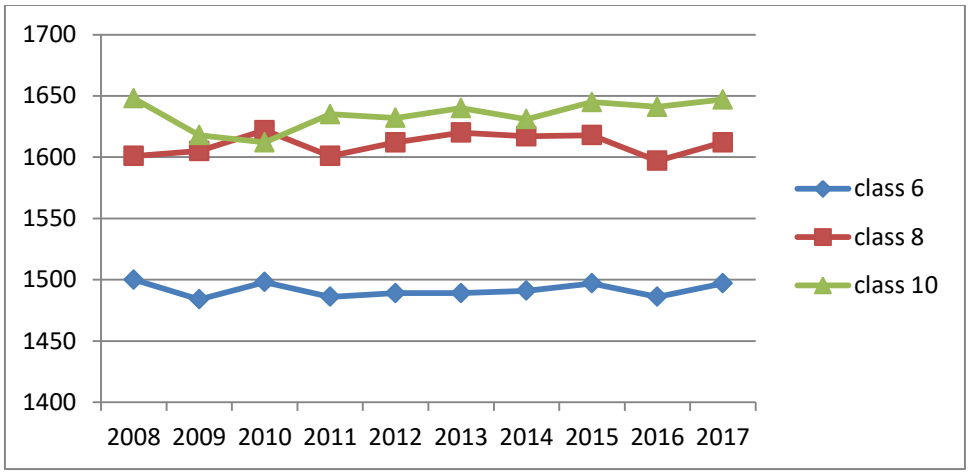

Figure 10: Mathematical results of competency measurements
Source: own edits (based on Szabó et al., 2018)

Figure 11 illustrates the competency outcomes of reading comprehension 2008-2017.

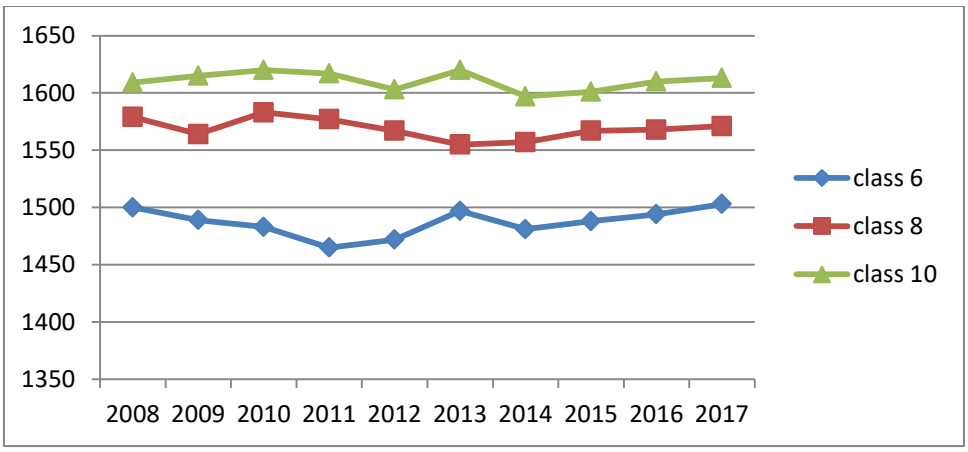

Figure 11: Results of reading comprehension
Source: own edits (based on Szabó et al., 2018)

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The figures show that students' competences are not improved based on the national competency measurement results and even are stagnated at the 10 year interval. Although one of the aims of the career model is to enhance the pedagogical competencies needed by the teacher in preparing for his or her qualification, and after having these competencies, the teacher will be able to perform higher level teaching and pedagogical work. This is demonstrably not noticeable results provided by students. Not to be forgotten that much depends on the role of the school in local society, the socio-cultural dimensions of the environment and the socialization attitude of the students.

4. Conclusions and recommendations

Hypothesis 1: The teaching career model in its current form is not capable of motivating educators, encouraging them to work better, or keeping good professionals in the job.

The results of the evaluated questionnaires and the in-depth interviews show that the majority of teachers do not consider the teaching career model as good enough, therefore they are not suitable for motivating the teachers to perform better quality work. Teachers rated the motivational power of the career model at an average of 2.71. Teachers who do not belong to the Master Teacher category are not motivated to move forward, as Teacher II. Qualification is mandatory up to the category level, from there they have no way to go unless they want to belong to an activity-based category. The category Teacher II. is only an obligatory “gathering place” for already qualified teachers and it does not indicate the outstanding pedagogical and professional work of the teacher, so the moral and professional appreciation cannot be ensured with the present structure.

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In light of the reported results, I consider the first hypothesis to be correct.

I suggest introducing an additional category for teachers who volunteer to be challenged and who belong to a more professionally, morally recognized segment of the educator community, but for some reason are unable or unwilling to undertake extra work. Teachers who have previously worked as a master teacher but who are unable to take on extra tasks (for example due to a deteriorated medical condition) could be relegated to this category. I recommend the category name Excellent Teacher Category.

Hypothesis 2: Among many other factors, wages play an important role in the motivation of the teacher and through this in his / her professional work. The judgment of the career model is influenced by the region in which the teacher works and the average income in that region. Beginner teacher wages and lower teachers' wages are significantly lower than the national average wages, which can be used to measure the motivation of teachers. Master teachers' salaries are significantly 40% higher than teachers' one in the cathegory of Teacher II, so their motivation is significantly higher. It is also clear from the results how much tens of thousands of forints influence the motivation of the teacher. This is also proved by the survey by which I examined the influence of the level of competitive market wages in the territorial distribution. In 15 of the 20 areas examined, the assumption was made that the average territorial wages have an effect on the motivation of the teacher, so the average regional income has an influence on the motivation of the teachers.

Hypothesis 2 is considered to be justified.

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Based on the original plan, I recommend adjusting the teacher salary to a given percentage of the minimum wage, the projection base should be the same as the minimum wage. Surveys have shown that teachers' salaries move around the average salary significantly improving the satisfaction and motivation of teachers.

Hypothesis 3: The mistake of the teacher career model is to treat the large and diverse teacher community as a homogeneous unit.

The surveys show that the kindergarten teachers are the most motivated in the pedagogical community, but there is no correlation between the kind of teacher and the institution and level at which the teacher is employed.

There is no correlation between the gender of the teacher and the motivation of the career model and the ability to leaving profession. On the other hand, the age, experience and career of the teacher have little effect on the judgment of the career model. Career model takes into consideration time and experience on the career path and rewards educators over time.

None of the investigated elements of Hypothesis 3 can be justified to the extent that the career model should be further differentiated. So they were all rejected. Based on these, it can be concluded that the educator society can be considered contrary to the assumption as a homogeneous society, so it is correct that the pedagogical career model encompasses the whole educator society, there is no need to differentiate it from different aspects.

Based on these, I reject hypothesis 3.

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Hypothesis 4: The pedagogical career model, among other things, does not motivate educators properly because teachers perceive certification as very overwork and disagree with mandatory certification procedures. Furthermore, the methods used in the certification process are not considered appropriate.

I recommend abolishing the mandatory certification procedure. Teachers need to confirm that this is an opportunity worth taking advantage of. It is necessary to monitor the work of teachers, but it does not have to be an integral part of the career model in this way.

As a result of the examinations, it can be stated that the teachers do not consider the methods used in the certification to be inadequate, and as a result, their resistance to the certification increases.

Hypothesis 4 is deemed to be justified.

During the certification process, I recommend that the educator prepare a material that can be used in everyday life, which can be utilized later by the teacher himself or by his or her colleagues or the entire educator community.

The visits of classes should not be held at a pre-agreed time, but at any time from the time you apply for the certification procedure to the end of it. In this way, up-to-date and preparedness of the teacher work could be measured more objectively.

Hypothesis 5. Due to the pedagogical career model there is no general proof of the students' competences.

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In addition to the teachers 'opinion, the results of the competency measurements prove that the improvement of the students' competences is not perceptible, so it cannot be explained by the teacher career model.

I consider the hypothesis 5 was correct.

Using the results of the examinations and the accepted and rejected hypotheses, I propose to modify the pedagogical career system as illustrated in Figure 12, so that it really serves the purposes originally formulated. When designing the categories and the conditions of entry into the teacher career model, I have taken into account the elements of the existing system, so that the modification does not adversely affect the already qualified teachers belonging to the given category.

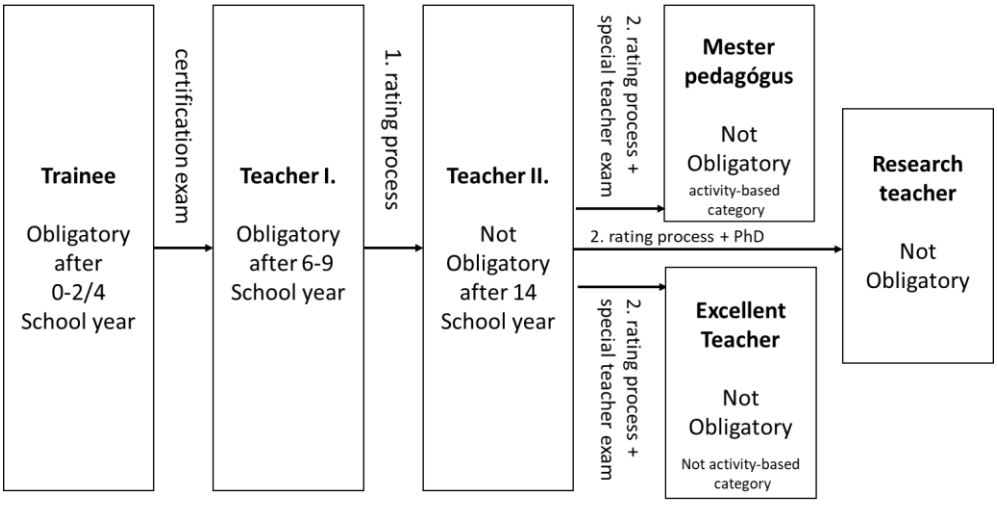

Figure 12: Proposal to modify and supplement the pedagogical career model
Source: own editing, 2019.

Figure 12 shows that I would like to extend the career model with another category of "Excellent Teacher". Enabling the previously classified teacher into the category Teacher II to continue volunteering. However, this category

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is not activity-based, so it does not require additional tasks from these teachers for higher wages. After qualifying for the Excellent Teacher category, I propose another 15% salary increase.

Currently, the 180% of the screening base HUF 101,500 is HUF 182,700, which is supplemented by the guaranteed minimum wage of HUF 210,600. After the salary increase, it changes to 182,700 * 1,3 = 237,510 HUF. This amount is only slightly higher than the mandatory wage of the professionally qualified people, so since the starting point is the HUF 101,500 projection fund, any possible increase will not ensure wage predictability. So, instead of the projection base, the current minimum wage should be considered as a starting point. If the minimum wage is used instead of the projection base, but the multipliers are reduced by 20-20%, the wages would be as follows:

The salary basis for a college-educated teacher would be 160% of the current minimum wage, or 180% for a university degree. This amount is below the initial 180 and 200% multipliers, but would guarantee wage alignment with the competitive market.

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5. New scientific results

With my research, I proved that the pedagogical career model introduced in September 2013 does not affect the work of teachers in the current form according to the expectations of legislators. The majority of teachers believe that the promotion system does not encourage the pedagogical community to work at a higher level and does not influence them not to leave the teaching profession.

I proved that there is a correlation between the motivation of teachers and the wage level in the given area (county), which proves that income plays a decisive role in the motivation of teachers.

It has been shown that the pedagogical community can be considered homogeneous in terms of the promotion system. No sharp differences of opinion can be detected among the gender, age, education or type of institution employing the teacher, on the basis of which the career model should be further differentiated.

I made a proposal to supplement the teacher career model with the introduction of a new category, Excellent Teacher and to abolish the compulsory qualification. Based on these, I have created a flow chart of my proposed new teacher career model.

I proved that it was a mistake to separate teacher salaries from the minimum wage. If the budget does not allow the initial minimum wage of 180% and 200%, respectively, to be paid to beginner teacher in category Teacher I, with lower multipliers but fixed teacher wages should ensure the predictability of the teaching career to the minimum wage.

Through the results of national competency measurements, I proved that the teacher career model has no demonstrable positive effect on students' achievement.

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6. Publications on the topic of the dissertation

6.1. Publications in Hungarian

Scientific Journals (Article):

Horváth, Sz. (2019): A pedagógus életpályamodell megítélésének megoszlása nemek és korosztályok alapján Közép-Európai Közlemények 12 : 3 / No. 46, p. 165-149.

Horváth, Sz.; Bertalan, P, T. (2017): A jövedelem motiváló ereje az oktatásban [Motivacioni faktor prihoda u obrazovanju] [The motivating power of income in education] Évkönyv - Újvidéki Tudományegyetem Magyar Tannyelvű Tanítóképző Kar, p. 121-132.

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6.2. Publications in foreign languages

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