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## TEACHERS' BELIEFS IN THE TRIANGLE OF PROFESSIONAL SELF-ASSESSMENT, PERCEPTION OF SELF-EFFICACY AND PERCEPTION OF ACHIEVEMENT IN THE QUALIFICATION PROCEDURE

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**Abstract.** The Hungarian Teacher Career Model including summative assessment of teachers' performance and functioning as a qualification procedure initiated our research investigating the interrelationships among teachers' self-assessment, self-efficacy beliefs and perception of achievement in the qualification procedure. In the frame of quantitative research design our two hypotheses were proved by statistical evidence. We can claim that Teachers' self-efficacy beliefs contribute to their professional self-assessment but only in case of some professional competences. Evidence has been provided to prove that it is the work with students that counts for teachers to feel professionally effective. Supporting students with proper teaching methods, considering their individual needs and building their community mean for teachers to be good at their profession. It has also been supported that Teachers' achievement assessed by and independent group of professionals is important but not the most important source of teachers' professional efficacy beliefs. These beliefs similarly to self-assessment are rooted in perception of quality work with students. All these facts have convinced us that it is the student's development that serves as the main standard for Hungarian teachers to assess their professional work. If we want to bring standards of qualification procedure (summative assessment) closer to standards of teachers' self-assessment, we should involve "clients" views and beliefs" in professional standards and help them compare their performance to those standards.

*Keywords:* self-assessment; teachers' self-efficacy; professional development

### 1. Introduction

With the introduction of the Teacher Career Model in 2013 teachers in Hungary have to take part in qualification procedure which ends in summative assessment of teachers' achievements. The official procedure makes them identify standards of professional development. Although they make their portfolios and present their views

on their career to an independent committee of professionals who assess them on the basis of the standards, the question rose in our mind whether the results of the summative assessment overlap their self-assessment and perception of self-efficacy and if it does, to what extent. To investigate the issue, first we explored scientific literature dealing with the notion of teachers' self-assessment and self-efficacy beliefs, and then we used quantitative research design to explore teachers' beliefs in a restricted region of Hungary. We gained empirical evidence about the interrelation of two notions, and our results convinced us that the existing system can be developed further with including "clients" views.

## 2. Scientific Literature Review

### 2.1. The concepts of self-assessment

Self-assessment is not a new notion in Educational Sciences. David Boud gives a short review of self-assessment research and its dilemmas in his book *Enhancing Learning through Self-Assessment* (1995). Self-assessment has a long tradition and examples of its use go back at least 60 years ago. Some researchers had already studied it in the 1930s, in the USA. First, they focused on students' self-assessment, grades generated by students were compared to those ones generated by their instructors. The main question was how precisely students can predict their own grades. This direction was quite strong in the 1970s but the focus of research was gradually placed to engaging students in activities which were related to their future professional tasks. By the late 1970s, there was a more general recognition of the educational value of self-assessment. It was due to the development of self-testing. In the 1980s, Heron (1989. pp. 81) came out with a clear rationale for self-assessment based on the importance of learners accepting the responsibility for their own learning and the need for developing self-assessment skills for professional life. Heron drew attention to the role of the peers taking part in self-assessment. After that, self-assessment as a special field of Educational Sciences has become popular in higher education of different sciences and in teacher-training as well (Boud, 1995: 50 – 51).

The concepts of self-assessment are very different. Some researchers think that it includes knowledge and beliefs which are necessary to acquire to be able to perform it. In conclusion, one should study everything to be able to assess himself (Berger & Luckmann, 1967; Schutz, 1972; Barnett, 1994). Nowadays, in the world where people face huge amount of new information, it is almost impossible. Another problem is rooted in development of concepts of knowledge. According to constructivism, we can make difference among individuals, how real world is reflected in their minds. Thus, knowledge is accompanied by beliefs, which are very different in each person. Who will tell us what knowledge and beliefs are to be assessed?

Self-assessment is considered as a skill with the help of which students will be able to find solutions to problems rising not only at present but also in the future (Boud, 1995: 58).

The third concept of self-assessment is a competency but we have to define what competence is. The conception used in higher education and education for the professions relates the attributes (knowledge, attitudes, values and skills) to the context in which professionals find themselves and with which they have to deal. According to this approach, assessment should reflect the nature of the actual work carried out within a given profession. Self-assessment practices can and do encourage learners to judge the extent to which their performance is of the required standard. Assessment in this conception has a communicative knowledge interest. But a dilemma has risen again. Who has the authority to decide what counts as valid knowledge? It is an open question and in this context self-assessment is a way of encouraging the development of students' critical judgement in relation to appropriate and valid knowledge. Barnett (1994) suggests that competence standards are always someone else's standards. Usually they are written by professionals in the field who are the people who decide on the standards. But what about standards of clients? It is a crucial issue to determine the adequacy of learning outcomes but learners come to the learning process with their own ideas about what they want to learn. Without the adequate dialogue with the students as clients they may question the validity or relevance of a given set of competency criteria. If students are prepared for professional practice, critical questioning of competency standards and learning outcomes must take place. In conclusion, the clients must be the parts of an ongoing dialogue (Boud, 1995: 60).

According to the fourth concept, self-assessment is a method within assessment, which is used by the teacher in teaching process (Black & William, 1998; Andrade & Boulay, 2003; Noonan & Duncan, 2005; Panadero, Brown & Courtney, 2014). Self-assessment can be realized within formative assessment when students reflect upon the quality of their work and make statements to what extent they could achieve their goals. Then with this knowledge in their mind, they supervise their own learning activities. The emphasis is on being the part of formative assessment.

In Boud's opinion, self-assessment includes two key stages: identifying standards to apply and making judgements about the extent to which somebody has met the standards. In an ideal case, the assessed person takes part in both parts (Boud, 1991: 5).

Hattie & Timperley identifies three steps of self-assessment:

- forming standards
- assessing learning activity on the basis of the standards
- supervising the whole learning activity on the basis of feedbacks which can refer to the final product and to the process as well (Hattie & Timperley, 2007: 91 – 93.).

These three stages give permanent information to the student about his learning process (Andrade, 2010; 94.). Andrade & Du (2007) emphasise that self-assessment should work as supplement to formal assessment during which the assessed person can reflect upon the quality of his work, to what extent he has achieved his goals, what his strengths and weaknesses are and then he can supervise his own learning activity.

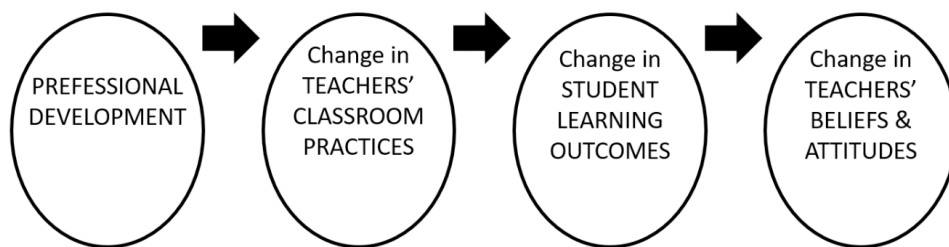
Self-assessment as a method is closely related to its role in self-regulated learning. Here it appears as a function by which the quality of learning can be developed. In self-regulation, the student applying different strategies keeps his thoughts, activities, emotions and motives under control in order to achieve his learning goals (Zimmerman, 2000: 19). Self-assessment is a process by which students can regulate their own learning. According to Alonso-Tapia & Panadero (2013), this is the point where two concepts of self-assessment (as a method and a skill) are connected. They say that if the teacher uses self-assessment as a method, he will develop students' skill of self-regulation to become self-regulated learners. It means that they will be able to plan, monitor and assess their learning, thus, the metacognitive processes of their self-regulation can develop in this way (Winne & Hadwin, 1998: 280.). It is essential to draw the attention to connecting these two concepts in teacher training (Alonso-Tapia & Panadero, 2013: 555).

## 2.2. Teachers' self-assessment beliefs

Since the end of 1990s life-long learning has given a wider perspective to professional development. Learning strategies and life-long competence development are two central issues of this concept<sup>1</sup>). Becoming an independent and responsible learner is the main goal. It explains why self-regulation takes priority by the concept of life-long learning. Teachers are also responsible for their professional development and self-assessment has been given a wider scope as the engine of their development.

It is important to mention some studies dealing with teachers' beliefs connected to self-assessment. Some researchers have proved that teachers' self-concept has a deep impact on the actual teaching processes. Their conclusion is that the first step is to change teachers' beliefs connected to teaching and learning processes if we want them to change their practices (Gow & Kember, 1993; Ho, Watkins & Kelly, 2001).

Guskey worked out his *Model of Teacher Change*, in which a significant change in teachers' attitudes and beliefs occurs primarily after they gain evidence of improvements in student learning (Guskey, 2002: 383).



**Figure 1.** Professional Development and Teacher Change (Guskey, 2002)

Guskey's conclusion is whatever the student learning outcome considered, it is vitally important to include some procedures by which teachers can receive feedback on that outcome to assess the effects of their efforts. When they gain evidence and see that a new programme or innovation works well in their classrooms, change in their attitudes and beliefs can and will follow (Guskey, 2002: 388).

Some researches focusing on the motives of teachers as learners proved that they feel more dedicated to learn something new if they can directly benefit from learning and use it in their everyday teaching practice (Simándi, 2016: 37).

Harris & Brown examined the beliefs about the goals of teachers' self-assessment (Brown, 2004; Harris & Brown, 2009). James & Pedder (2006) studied teachers' self-assessment practices and beliefs connected to them. In their opinion, they are influenced by teaching and learning goals and by accountability. According to Remesal (2007), the goals regulate learning and teaching processes, accountability supports mainly schools and students. The latest researches have examined how teachers' self-concept influences teaching and teachers' ability to assess their students' abilities (Yeung, Craven & Kaur, 2014).

Teachers' beliefs and their self-assessment are very important in regulating teachers' way of thinking, problem solving, realizing teaching strategies and everyday classroom practices (Zheng, 2009). These beliefs make a long-term influence on teachers' professional development and can be crucial indicators of their professionalism. Zheng concludes that it is important for teachers to assess their beliefs, benefit from their strengths in the process of teaching. He emphasises the importance of self-assessment and self-reflection in this matter. They make teachers able to develop in their life term. Zheng points out that acquiring self-assessment strategies and assessing self-efficacy must be basic parts of teacher-training. He proposes to take more advantages of the research results to make students' learning more effective (Zheng, 2009).

### 2.3. Teachers 'self-efficacy beliefs

The notion of self-efficacy beliefs has been taken a deeper interest among researchers since 1990s. It was introduced by Bandura (1977) working out *Social Cognitive Theory*. Self-efficacy is a person's belief in his innate ability to achieve goals. "It is a personal judgement of how well one can execute courses of action required to deal with prospective situations." Individuals who have high self-efficacy will exert sufficient effort that, if well executed, leads to successful outcomes, whereas those with low self-efficacy are likely to cease effort early and fail.

Bandura (1982) identifies four factors affecting self-efficacy:

- experience, or "enactive attainment",
- modelling, or "vicarious experience",
- social persuasion,
- physiological factors.

According to Roche & Marsh, high self-efficacy beliefs are closely connected to self-concept. They say that it is important not only for students taking part

in teacher-training education, but also for more experienced teachers (Roche & Marsh, 2000).

In the *Recursive Model of Self-evaluation*, Athanasou (2005) claims that the same components can be detected in self-evaluation and self-efficacy: social messages, personal factors and situational factors.

- Social messages are comparisons that we make with others, the social and cultural stereotypes that form the background of our perceptions and the feedback that we receive from others.

- Personal factors include the ability to self-evaluate the ability or level of achievement of a person and the ability to relate to relevant standards and goals.

- Situational factors include inter alia: (a) the specific content area; (b) the prior experience with the criterion; (c) whether the self-assessment is made prior to or following learning; (d) whether there is any social desirability associated with the judgement; (e) whether the criterion is norm referenced or criterion-referenced; or (f) the format or manner in which the self-assessment is elicited. An additional situational factor is that people do not apply similar calibrations before and after tests. The degree of certainty in estimating ability to perform before and after an exam can be different (Athanasou, 2005: 293 – 296).

We cannot define the notion of self-efficacy without mentioning a new aspect, which is called collective self-efficacy. We should not forget about the fact that individuals are always parts of an organization. The collective belief in performing the task successfully also contributes to the achievements of an organization. Bandura made difference between individual and collective self-efficacy beliefs (Bandura, 1977). Collective self-efficacy beliefs determine what goals a group of people want to achieve and how much effort they want to make to achieve the goals or in case of failure, the unity of the group survives or gets eroded. Groups with high collective self-efficacy beliefs are able to make higher achievements and the sense of community is stronger than in case of groups with lower collective self-efficacy. The shared knowledge, responsibility and multiple connections in the organization strengthen the relationship if individual self-efficacy beliefs and collective achievements (Stajkovic & Luthans, 1998: 73).

As we are focusing on teachers' professional development, we have to talk about one more aspect of self-efficacy and it is teachers' self-efficacy beliefs. It includes teachers' motives, professional achievements and their acknowledgement, job satisfaction. It has an impact on their motivation and further professional goals. The teacher who has got high-teacher self-efficacy belief has stronger bounds to his profession, professional community, his students and their parents. He feels stronger motivation to make better learning environment. The teacher with lower teacher self-efficacy beliefs identifies the school as an organization and its leaders, students, his colleagues as parts of this organization, and he considers them as the complex system assisting his higher professional achievements (Caprara et al., 2006).

Several researchers have studied the relationship between teachers' self-efficacy beliefs and students' achievements (Bandura, 1997, 2001; Caprara, 2002), the relationship between dedication to professional development and job satisfaction (Caprara, Barbaranelli, Borgogni, Petitta et al., 2003; Caprara, Barbaranelli, Borgogni, & Steca, 2003). The results provided evidence for mutual strengthening connections between teachers' self-efficacy beliefs, students' achievements and teachers' dedication to the professional development (Caprara et al., 2006: 476).

### **3. Method and Material**

#### **3.1. Aims**

The quality of teachers' work has become a crucial issue in Hungary parallel to the international trends. A new Teacher Career Model was introduced in Hungary in 2013. The model gives a wider scope of professional development to Hungarian teachers by letting them edit their portfolios and presenting their views, beliefs about their professional development. The legal procedure the teachers can go through is called *qualification procedure* which ends in a summative assessment by an independent committee. At the end of the procedure depending of the results, teachers get into a higher category of teachers, and it means rise in salary as well. As the Model is quite new and has not been studied yet, we carried out a research focusing on teachers' self-assessment and self-efficacy beliefs. The aim of our research, which is a part of a wider-scale investigation, was to examine how teachers' self-efficacy beliefs influence their self-assessment, is there a difference in teachers' self-efficacy beliefs depending on whether they have taken part in the qualification procedure within the frame of Teacher Career Model, and whether a summative assessment influences their self-efficacy beliefs.

Research hypotheses:

1. Teachers' self-efficacy beliefs contribute to their self-assessment.
2. The qualification procedure influences teachers' self-efficacy beliefs.

#### **3.2. Method**

Participants and procedure

Teachers of public education of six counties in the North and North-East of Hungary with a teachers' population of 31133 (KIRSTAT, 2017) were sent an on-line questionnaire, between 10 February and 19 March 2018. We used snowball sampling (Babbie, 2008. 206). The public database of the Hungarian educational authorities called KIR contains all contacts of operating institutions nationwide. We sent the questionnaire accompanied with a formal letter to principals asking them to share the questionnaire among their colleagues. The selected institutions belong to primary and secondary education. The sample shows a heterogeneous picture of teachers with different teaching experience, of age, of teachers' category, teachers' qualifications, positions at their institutions and of location.



Overall, 670 teachers filled in the questionnaire.

**Table 1.** The properties of the sample

| <b>Frequency distribution for teachers' sex, age, years of teaching experience, teachers' category, location and qualification N=670</b> |                  |                     |
|--|------------------|---------------------|
| <b>sex</b>   | <b>frequency</b> | <b>per cent (%)</b> |
| male   | 134              | 20                  |
| female   | 536              | 80                  |
| <b>age</b>   |                  |                     |
| 21-24 years old  | 30               | 4,5                 |
| 25-30 years old  | 77               | 11,5                |
| 31-40 years old  | 236              | 35,2                |
| 41-50 years old  | 12               | 1,8                 |
| 51-60 years old  | 255              | 38,1                |
| over 60 years old  | 60               | 8,9                 |
| <b>years of teaching experience</b>  |                  |                     |
| 1-4 years  | 17               | 2,5                 |
| 5-10 years   | 71               | 10,6                |
| 11-15 years  | 62               | 9,3                 |
| 16-20 years  | 78               | 11,6                |
| 21-25 years  | 80               | 11,9                |
| 26-30 years  | 132              | 19,7                |
| 31-35 years  | 110              | 16,4                |
| over 36 years  | 120              | 17,9                |
| <b>teachers' category</b>  |                  |                     |
| Trainee teacher  | 16               | 2,4                 |
| Teacher I  | 247              | 36,9                |
| Teacher II   | 272              | 40,6                |
| Master Teacher   | 131              | 19,6                |
| Teacher- Researcher  | 4                | 0,6                 |
| <b>location</b>  |                  |                     |
| Heves county   | 234              | 34,9                |
| Borsod-Abaúj-Zemplén county  | 158              | 23,6                |
| Jász-Nagykun-Szolnok county  | 142              | 21,2                |
| Hajdú-Bihar county   | 66               | 9,9                 |
| Nógrád county  | 46               | 6,9                 |
| Szabolcs-Szatmár-Bereg county  | 24               | 3,6                 |
| <b>position</b>  |                  |                     |
| teacher-primary school junior section  | 17               | 26                  |



|                                       |     |      |
|---------------------------------------|-----|------|
| teacher-primary school senior section | 206 | 30,7 |
| teacher-secondary school              | 235 | 35,1 |
| teacher-engineer                      | 20  | 3,0  |
| art teacher                           | 6   | 0,9  |

### 3.3. Instrument

The questionnaire consisting of four components containing 23 questions with 82 items. For cloze, teachers rated a 5-point response format (from 1=Strongly disagree to 5=Strongly agree). Most of the items have been generated on the basis of results of a previous qualitative content-based analysis and reference literature.

**Table 2.** The components of the questionnaire

| Blocks                          | Number of questions | Items sum | Items in cloze | Items in open questions |
|---------------------------------|---------------------|-----------|----------------|-------------------------|
| Self-assessment                 | 6                   | 34        | 23             | 11                      |
| Qualification procedure         | 7                   | 19        | 16             | 3                       |
| Teachers' self-efficacy beliefs | 1                   | 11        | 11             | 0                       |
| General data                    | 9                   | 18        | 18             | 0                       |
| Sum                             | 23                  | 82        | 68             | 14                      |

The instrument's content validity was ascertained by a previous content analysis supported by MAXQDA software and conducted with Philip Mayring's step-by step model, and including terms related to teachers' self-assessment and self-efficacy from the reference literature. The construct validity and reliability were provided by pre-testing the instrument (N=10) and calculating internal consistency of the scales (internal consistency-Cronbach's  $\alpha > 0,71$ ). The block *Teachers' self-efficacy beliefs* (11 items) have been selected from a previous research conducted by Caprara (Caprara et al, 2002), whose psychometric properties have been ascertained.

**Table 3.** Inner consistency of Likert scales

| Scales   | Pre-test N= 10   |         | Test N=670       |         |
|--|------------------|---------|------------------|---------|
|  | Cronbach's alpha | Items=N | Cronbach's alpha | Items=N |
| Self-assessment on the basis of the professional competences | 0,935            | 8       | 0,944            | 8       |

|   |       |    |       |    |
|---|-------|----|-------|----|
| Teachers' beliefs about self-assessment             | 0,711 | 13 | 0,895 | 13 |
| Teachers' beliefs about the qualification procedure | 0,74  | 8  | 0,834 | 7  |
| Teachers' self-efficacy beliefs                     | 0,882 | 11 | 0,841 | 11 |

To meet the criteria of objectivity we edited mainly cloze and provided anonymity. The online form made it possible to fill in the questionnaire not depending on time and place. We organized the questions into separate blocks and wrote minor explanations next to certain terms. After collecting data we used SPSS 22 Statistics software to analyse them.

### 3.4. Results

The items in the cloze can be classified on the basis of the following aspects:

Aspect of Teacher-students-3. *As a teacher am capable of getting recognition and appreciation from my students.* 5. *I am quick in managing and resolving class conflicts and bad behaviours.* 6. *I can make my students respect rules and codes of conduct.* 7. *I am capable of engaging even the most reluctant and difficult student in my class activities.* 9. *I am capable of dealing effectively with the problem behaviours of my students.*

Aspect of Teacher-parents- 1. *As a teacher I am capable of getting recognition and appreciation from parents for my work.*

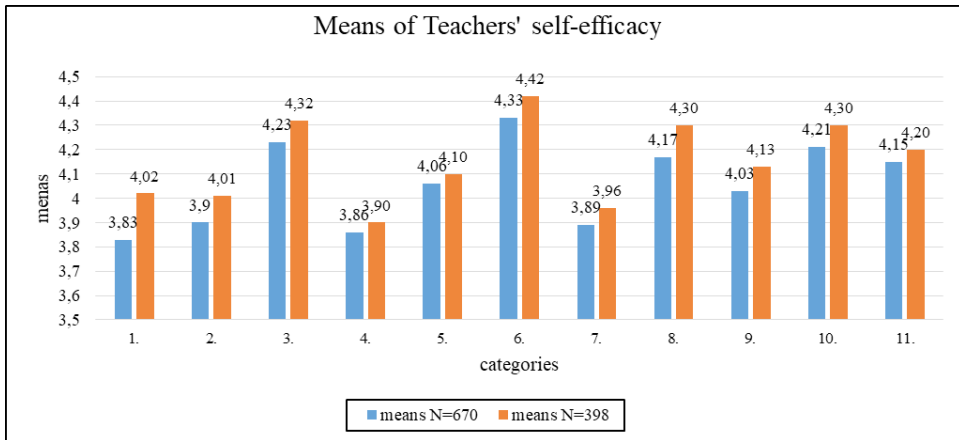
Aspect of Teacher-colleagues- 10. *I am able to earn the trust and appreciation of all my colleagues.*

Aspect of Teacher-professional leaders (principal, deputy principal)- 11. *I am able to earn the trust and appreciation of my principal.*

Aspect of Teacher-professional task- 2. *I am capable of overcoming all challenges I encounter in meeting my teaching objectives.* 8. *I am capable of organizing and completing my work when I encounter unexpected or demanding task.*

Aspect of Teacher-teaching and learning environment-4. *I am capable of taking full advantage of technological innovations in my teaching.*

The means in the sample are between 3,83 and 4,33. The figures clearly show that students and cooperation with them are the most important factors for teachers (*I can make my students respect rules and codes of conduct. As I teacher, I am capable of getting recognition and appreciation from my students.*) Then, it is followed by colleagues (*I am able to earn the trust and appreciation of all my colleagues.*) and the professional task (*I am capable of organizing and completing my work even when I encounter unexpected or demanding tasks.*).



**Figure 2.** Means of Teachers' self-efficacy

Comparing figures of teachers taking part in the qualification procedure (N=398) to those of the whole sample (N=670), we can see that the same categories were given the highest means, but the means of qualified teachers are higher. To determine whether there is significant difference between the qualified and non-qualified teachers, we carried out Independent-Samples T test.

**Table 4.** Comparing means of Teachers' self-efficacy beliefs of teachers taking part in qualification procedure to those of teachers not taking part in qualification procedure

| Comparing means of Teachers' self-efficacy beliefs of teachers taking part in qualification procedure to those of teachers not taking part in qualification procedure |     |     |      |              |             |       |        |     |       |
|---|-----|-----|------|--------------|-------------|-------|--------|-----|-------|
| Have you taken part in qualification procedure?   |     | N   | Mean | St Deviation | Levene test |       | t-test |     |       |
|   |     |     |      |              | F           | Sig.  | t      | df  | p     |
| 1.  | yes | 398 | 4,02 | 0,914        | 24,512      | 0,000 | 6,271  | 668 | 0,000 |
|   | no  | 272 | 3,54 | 1,051        |             |       |        |     |       |
| 2.  | yes | 398 | 4,01 | 0,889        | 8,578       | 0,004 | 3,701  | 668 | 0,000 |
|   | no  | 272 | 3,75 | 0,888        |             |       |        |     |       |
| 3.  | yes | 398 | 4,32 | 0,721        | 2,517       | 0,113 | 3,588  | 668 | 0,000 |
|   | no  | 272 | 4,11 | 0,746        |             |       |        |     |       |
| 4.  | yes | 398 | 3,90 | 0,863        | 11,548      | 0,001 | 1,179  | 668 | 0,239 |
|   | no  | 272 | 3,81 | 1,037        |             |       |        |     |       |

|     |     |     |      |       |       |       |       |         |       |
|-----|-----|-----|------|-------|-------|-------|-------|---------|-------|
| 5.  | yes | 398 | 4,10 | 0,779 | 0,025 | 0,875 | 1,536 | 668     | 0,125 |
|     | no  | 272 | 4,01 | 0,810 |       |       | 1,524 | 566,870 | 0,128 |
| 6.  | yes | 398 | 4,42 | 0,733 | 1,836 | 0,176 | 4,049 | 668     | 0,000 |
|     | no  | 272 | 4,18 | 0,770 |       |       | 4,011 | 562,799 | 0,000 |
| 7.  | yes | 398 | 3,96 | 0,902 | 0,992 | 0,320 | 2,640 | 668     | 0,008 |
|     | no  | 272 | 3,78 | 0,862 |       |       | 2,663 | 599,510 | 0,008 |
| 8.  | yes | 398 | 4,30 | 0,793 | 5,784 | 0,016 | 5,011 | 668     | 0,000 |
|     | no  | 272 | 3,99 | 0,754 |       |       | 5,059 | 601,032 | 0,000 |
| 9.  | yes | 398 | 4,13 | 0,787 | 3,214 | 0,073 | 4,134 | 668     | 0,000 |
|     | no  | 272 | 3,87 | 0,857 |       |       | 4,068 | 548,769 | 0,000 |
| 10. | yes | 398 | 4,30 | 0,695 | 6,496 | 0,011 | 4,002 | 668     | 0,000 |
|     | no  | 272 | 4,08 | 0,709 |       |       | 3,987 | 574,703 | 0,000 |
| 11. | yes | 398 | 4,20 | 0,898 | 4,711 | 0,030 | 1,812 | 668     | 0,071 |
|     | no  | 272 | 4,07 | 0,890 |       |       | 1,815 | 585,718 | 0,070 |

The p-value of Levene test is bigger than 0,05 in five cases (teacher-students aspect) which means that (*As a teacher am capable of getting recognition and appreciation from my students (3.), I am quick in managing and resolving class conflicts and bad behaviors (5.), I can make my students respect rules and codes of conduct (6.), I am capable of engaging even the most reluctant and difficult student in my class activities (7.), I am capable of dealing effectively with the problem behaviors of my students (9.),* the result of T test is not significant and we used the Equal variances assumed output. With the exception of *I am quick in managing and resolving class conflicts and bad behaviors (5.)*, the variance difference between two groups is the same and it is significant. In conclusion, there is no significant difference between the qualified and non-qualified teachers as far as their self-efficacy is concerned related to students.

In case of other items *As a teacher I am capable of getting recognition and appreciation from parents for my work (1.), I am capable of overcoming all challenges I encounter in meeting my teaching objectives (2.), I am capable of taking full advantage of technological innovations in my teaching (4.), I am capable of organizing and completing my work when I encounter unexpected or demanding tasks (8.), I am able to earn the trust and appreciation of all my colleagues (10.), I am able to earn the trust and appreciation of my principal (11.)* which cover the aspects of teacher-parents, teacher-teaching and learning environment, teacher-professional task, teacher-colleagues, and teacher-leaders of the institution, the p-value of Levene test is smaller than 0,05. It means that we carried out Welch's T test (Equal variances is not assumed output). According to the results, with the exception of *I am capable of taking full advantage of technological innovations in my teaching (4.)* the variance of two groups is different and the difference is significant. In conclusion, the fact whether a teacher has taken part in qualification procedure or not has an influence on his self-efficacy beliefs with the exception of his relationship with students.

In the second phase of our investigations, we examined if teachers' self-efficacy have influence on teachers' self-assessment. First we have to clarify what the teachers' professional competences are in Teacher Career Model:

1. competence: Professional content knowledge
2. competence: Planning pedagogical processes
3. competence: Teacher's professional support to students
4. competence: Teaching considering individual differences
5. competence: Assisting create community
6. competence: Pedagogical evaluation
7. competence: Professional communication and cooperation
8. competence: Dedication to professional development.

**Table 5.** Correlations between self-assessment of professional competences and Teachers' self-efficacy beliefs

| N=670                         |   | 2. I am capable of overcoming all challenges I encounter in meeting my teaching objectives. | 4. I am capable of taking full advantage of technological innovations in my teaching. | 7. I am capable of engaging even the most reluctant and difficult student in my class activities. |
|-------------------------------|---|---|---|---|
| 3. competence self-assessment | r | -,133**   | -,140**   | -,102**   |
|                               | p | 0,001   | 0,000   | 0,008   |
| 4. competence self-assessment | r | -,104**   |   | -,124**   |
|                               | p | 0,007   |   | 0,001   |
| 5. competence self-assessment | r | -,117**   |   |   |
|                               | p | 0,002   |   |   |

We conducted Bivariate correlation and we can draw the conclusion that aspects of self-efficacy beliefs like *I am capable of overcoming all challenges I encounter in meeting my teaching objectives* (2.) and 3. and 4. competences have weak, negative connection and it is significant ( $p < 0,01$ ). It means that in the fields of profession such as Teacher's professional support to students, Teaching considering individual differences and Assisting create community the stronger the teachers feel need for professional development the less they feel effective in these fields of profession. It is also interesting that these three competences focus on students as individuals and as community and the aspect of teachers' self-efficacy beliefs emphasizes the Aspect of Teacher and professional task. There is a weak and negative connection between the aspects of self-efficacy *I am capable of taking full advantage of technological innovations in my teaching* (4.) and 3. competence self-assessment and it is significant ( $p < 0,01$ ). If teachers

feel the need of development in the competence of Teacher's professional support to students (3. competence), they believe that the use of technological innovations in everyday practice should be encouraged. The aspect of self-efficacy *I am capable of engaging even the most reluctant and difficult student in my class activities.* has weak and negative influence on 3. and 4. *competence self-assessment* and it is also significant ( $p<0,01$ ). It means that including students of all abilities can be difficult for teachers, and these problems are attributed to lack of methodological competence and that of dealing with students considering their individual needs. There is no connection between other aspects of teachers' self-efficacy beliefs and their professional self-assessment.

To find evidence that the qualification procedure influences teachers' self-efficacy beliefs, it is important to examine whether there is connection between teachers' self-efficacy beliefs and the perception of achievement of teachers having taken part in the qualification procedure.

**Table 6.** Teachers' self-efficacy beliefs and perception of achievement of teachers having taken part in qualification procedure

| <b>Teachers' self-efficacy beliefs and perception of achievement of teachers having taken part in qualification procedure</b><br><b>N=398</b> |                                |  |
|---|--------------------------------|--|
| <b>Teachers' self-efficacy beliefs</b>  | <b>p&lt;0,05<br/>p&lt;0,01</b> | <b>perception<br/>of achieve-<br/>ment</b> |
| As a teacher I am capable of getting recognition and appreciation from parents for my work.   | r                              | 0,098                                      |
|   | p                              | 0,051                                      |
| I am capable of overcoming all challenges I encounter in meeting my teaching objectives.  | r                              | 0,042                                      |
|   | p                              | 0,403                                      |
| As a teacher am capable of getting recognition and appreciation from my students.   | r                              | 0,125*                                     |
|   | p                              | 0,013                                      |
| I am capable of taking full advantage of technological innovations in my teaching.  | r                              | 0,022                                      |
|   | p                              | 0,658                                      |
| I am quick in managing and resolving class conflicts and bad behaviours.  | r                              | 0,131**                                    |
|   | p                              | 0,009                                      |
| I can make my students respect rules and codes of conduct.  | r                              | 0,210**                                    |
|   | p                              | 0,000                                      |
| I am capable of engaging even the most reluctant and difficult student in my class activities.  | r                              | 0,209**                                    |
|   | p                              | 0,000                                      |
| I am capable of organizing and completing my work when I encounter unexpected or demanding task.  | r                              | 0,104*                                     |
|   | p                              | 0,038                                      |
| I am capable of dealing effectively with the problem behaviours of my students.   | r                              | 0,091                                      |
|   | p                              | 0,069                                      |

|  |   |         |
|--|---|---------|
| I am able to earn the trust and appreciation of all my colleagues. | r | 0,141** |
|  | p | 0,005   |
| I am able to earn the trust and appreciation of my principal.      | r | 0,087   |
|  | p | 0,083   |

Each category of Teachers' self-efficacy has got a weak and positive connection with the perception of achievement. In four cases the connection is 99% significant ( $p < 0,01$ ). Two categories have a connection of 95% level of significance ( $p < 0,05$ ). The strongest correlation is detected between the perception of achievement and the aspects *I can make my students respect rules and codes of conduct* ( $r = 0,210$ ;  $N = 398$ ;  $p = 0,000$ ), and *I am capable of engaging even the most reluctant and difficult student in my class activities* ( $r = 0,209$ ;  $N = 398$ ;  $p = 0,000$ ). In four cases out of six significant the focus is again students.

#### 4. Conclusions

The aim of our study was to present results of a research investigating the relationships among teachers' self-assessment, self-efficacy beliefs and perception of achievement in the qualification procedure. The definition of the research questions was initiated by the Hungarian Teacher Career Model including summative assessment of teachers and functioning as a qualification procedure. We analysed data gained with an online questionnaire to get a deep insight into Hungarian teachers' self-assessment along new standards of the Teacher Career Model and their self-efficacy beliefs. We were seeking for connections between self-assessment, self-efficacy beliefs and perception of achievement indicated by the qualification procedure. Our two hypotheses were proved by statistical evidence. We can claim that Teachers' self-efficacy beliefs contribute to their self-assessment, but it can be stated only in case of three professional competences (3, 4. and 5. competences). Evidence was given to prove that it is students (either we talk about an individual or as a group people) that counts for teachers to feel professionally effective. Supporting students' learning with proper methods, considering their individual needs and building their community take priority in teachers' assessing themselves as good professionals.

Our second hypothesis has been supported by the fact that bivariate correlation showed weak, and positive connection between the perception of achievement of teachers taking part in qualification procedure and self-efficacy beliefs. It makes us conclude that teachers' achievement assessed by and independent group of professionals is important but not the most important source of teachers' professional efficacy beliefs. Secondly, as four aspects of self-efficacy gaining significance is directly connected to students (their respect, their involvement, their conflicts and behaviours), we have been convinced that it is students and cooperation with them that serves as reference for Hungarian teachers to assess their professional work. We agree with Boud when he says that it is important to involve "clients" in working out standards and helping them compare



their performance to the standards. This way the standards will take “clients” point of view showing richer scope of assessment, and provide more complete overlap between professional standards and those of self-assessment.

## NOTES

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