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**Primary school class teachers' and general music teachers'
thinking about the development of children's musical abilities,
teaching and assessment**

Doctoral (Ph.D.) Thesis

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1. Introduction

The empirical researches being aimed at the teachers' thinking began in the 1970 years, in the course of which first the teachers' decisions, then the teachers' knowledge (Wilson, 1981; Shulman, 1986; Richard and Powell, 1992), then following this the teachers' beliefs (Pajares, 1992; Richardson, 1996; Calderhead, 1996, Falus, 2001a, 2001b, 2002, 2006) and the researchers started examining the teachers' reflective thinking (Schön, 1987; Griffiths and Tann, 1992; Taggart and Wilson, 1998; Valli 1997, in Kimmel, 2006; Korthagen, 2004; Kimmel, 2006; Szivák, 2002, 2003, 2010, 2014; Szivák and Verderber, 2016). The teachers' activity, the bringing up, took shape concerned in the course of their school experiences were consolidated a theory system, a belief system, defines it, which one their thinking extends on deep one's and verbally difficultly express (Calderhead, 1991; Johnston, 1992; Wubbels, 1992; Borko and mtsai, 1988; Hunyady, 1993, Richardson, 1996, Falus, 2001b; Dudás, 2007). The beliefs serve as a filter considering that of organizing the reception of the theoretical knowledge and the practice actually (Zeichner and Liston, 1996 in Falus, 2001b). These preconceptions difficultly can be made change in, all of the teacher's pedagogic activity is defined at the same time.

2. Theoretical background of research

Researches have demonstrated that general music teachers' beliefs about teaching influence teachers' behaviour (Bernard, 2009; Datnow and Castellano, 2000), the selection of the teaching methods, the learning outcomes (Kennedy and Kennedy, 1996) and their classroom activity (Russell-Bowie, 2009).

The issue of elementary classroom teachers and general music teachers involved in teaching singing-music has been focus of research in the 2000's years. (Biasutti, 2010). The researchers have examined the teachers' beliefs about the most efficient methodologies (Koutsoupidou, 2005; Persellin, 2003); the effectiveness of teaching (Schmidt, 1998; Butler, 2001; Mills and Smith 2003); and the characteristics of good teacher (Hamann, Baker and McAllister, 2000) while others have focused on beliefs about music education philosophy statements (Austin and Reinhardt, 1999); beliefs about the causes of success and failure in music (Legette, 2002); and belief patterns of general music teachers on the nature and significance of individual difference (Hewitt, 2005).

It is possible to distinguish two research trends involving primary classroom teachers' beliefs and upper primary or lower secondary general music teachers' beliefs, connected with their background and their training (*Biasutti, 2010*). Some research involving primary classroom teachers considered their confidence in teaching music (*Barrett and Rasmussen, 1996; Hennessy, 2000; Jeanneret, 1997; Mills, 1989, 1996*), while general music teachers were studied in relation to their musical identities as music teachers (*Hargreaves and Marshall, 2003; Hargreaves et al., 2007*), and how they perceive teaching as a career (*Mills and Smith, 2003*).

Researches, examining general music teachers' beliefs, suggest that many classroom music teacher believe that the musical ability is innate and his level depends on the success or failure of pupils' musical activities (*Biasutti, 2010; Brändström, 1999; Clelland, 2006; Evans és mtsai., 2000; Hewitt, 2006; Legette, 2002, 2012; Shouldice, 2013*).

The general music teachers' beliefs about the development of pupils' musical abilities show correlation with their beliefs about teaching, assessment and purposes of music education, as well as their interactions with children (*Sloboda, 2005; Shouldice, 2012, 2013*).

Choral conductors' beliefs and practical experiences about warm-up are different in term of musical background, age, demographic characteristics, choral conductors' qualification and the music teaching style (*Olesen, 2010*). Teachers' beliefs about warm-up in the general music lesson influence their teaching practices, composition and frequency of the application of the used warm-up exercises (*Asztalos, 2018*). There is a correlation between frequency of application of warm-up and the level of development of the children's singing ability and vocal training (*Asztalos, 2018*).

A number of international research has been made to explore the general music teachers' beliefs about content, forms, frequency of the assessment and their relationship with teaching and learning (*Livingston, 2000; Hepworth-Osiowy, 2004; Farmer, 2004; Talley, 2005; Hornbach és Taggart, 2005; Barkley, 2006; Peppers, 2010; Salvador, 2011; Delaney, 2011; McQuarrie és Sherwin, 2013*), and correlation between beliefs about development of musical abilities and assessment (*Talley, 2005; Niebur, 1997; Salvador, 2011*).

In my dissertation, in order to investigate teachers' beliefs about musical abilities, I examine the musical abilities on the basis of the principle of ability allocation of National Core Curriculum (2012), expanding it with some elements of the Erős' (1993) model of musical basic abilities and supplementing with the music perception abilities (*Erős, 1993; Turmezeyné és Balogh, 2009; Janurik, 2010; Koelsch, 2014; Asztalos, 2016*) and music

production abilities (Erős, 1993; Gembris, 2006; McPherson, 2006). At the same time, I examine Brandström's (1999) theory that the beliefs about musicality have two directions: 1. *absolute approach*, 2. *relativistic approach*. In order to examine the teachers' beliefs about warm-up, I used Olesen's (2010) Choral Warm-Up Philosophy Instrument, which I supplemented with some items from my teaching practice to extend the general music lessons and better fit to the characteristics of Hungarian music education. In order to examine the teachers' beliefs about teaching, assessment, and professional development, I have taken a slice of the analytical framework of *OECD TALIS* (2009), which explores the teachers' beliefs and examines the relationship between beliefs and the professional training and practical experiences of teachers. The classroom teachers' and general music teachers' beliefs about teaching and assessment have been examined on the bases of two different educational approaches: 1. *direct transmission (teacher-oriented) approach*; 2. *constructivist (student-oriented) approach* (Kim, 2005, in OECD, 2009; Szivák, 2016).

In order to examine the teachers' beliefs and practical experiences about teaching, assessment and professional development, I took over some questions of the questionnaire of the National Teacher Research (Sági, 2015), which provided an opportunity to compare the results of my research with the findings of the National large-scale Teacher Research (Sági, 2015).

3. Research problem

Beside Katalin L. Nagy's questionnaire-based teacher research, I did not find any research that examine primary school class teachers', and general music teachers' beliefs and practical experiences about teaching, assessment and professional development. I did not find any research, that examine primary school class teachers', and general music teachers' beliefs and practical experiences about development of 8-grade primary school children's musical abilities in Hungary. At the same time, there is no research, that examine the differences between primary school class teachers' and general music teachers' beliefs about development of music specialized or not music specialized lower primary school children's musical abilities, and music specialized or not music specialized upper primary school children's musical abilities. There is no research results about that, there would be differences or similarities between primary school class teachers' and general music teachers' beliefs and the different stages of their teaching practices.

The exploration and understanding of the lower primary school class teachers' and general music teachers' beliefs in the different stages of their teaching practices would be key importance both for the development of practical pedagogy and for the general music teacher training and further training.

4. Aims of research

The aim of the doctoral research is to reveal and examine the primary school class teachers' and general music teachers' beliefs and practical experiences about opportunities for development of primary school pupils' musical abilities, warm-up, teaching, assessment in general music lessons, teacher competences and professional development. Meanwhile, I intend to explore the relationship between the primary school class teachers' and general music teachers' beliefs and their training, qualification and practical experiences. In addition, in a few places, I compare the primary school class teachers' and general music teachers' beliefs and practical experiences with the beliefs and practical experiences of lower and upper primary school teachers of National Teacher Research (*Sági, 2015*), related to teaching, assessment, teacher competences and continuous professional development.

5. Research questions and hypotheses

My research questions and the related hypotheses are detailed below, my goal is to empirically verify or reject.

Q1.1 How are musical abilities organized in the teachers' thinking, who teach general music in 8-grade primary schools?

Q1.2 What are the differences between the primary school class teachers' and general music teachers' beliefs about development of 8-grade primary school childrens's musical abilities, furthermore what are the relationships between lower primary school class teachers' and general music teachers' beliefs about development of children's musical ability and their professional training, practical experience and instrumental education?

- **H1.1** I suppose that in the general music teachers' thinking the musical abilities are organized into groups according to the principles of distribution of musical ability of the National Core Curriculum (2012).

- **H1.2** I suppose that general music teachers, furthermore more trained, more experienced general music teachers and general music teachers who have been learning to play an instrument for a long time, consider some of the 8-grade primary school children's musical abilities more developed.

Q.2 What are the differences between primary school class teachers' and general music teachers' beliefs about warm-up, furthermore what are the relationships between primary school class teachers' and general music teachers' beliefs about warm-up and their professional training, practical experiences, length of singing studies and choral singing?

- **H2.1** I suppose that the development of vocal formation of children is more visible in the general music teachers' belief about warm-up than in primary school class teachers' beliefs.
- **H2.2** I suppose that the primary school class teachers and general music teachers who have been singing in the choir for a long time, in their beliefs about warm-up, strongly emphasize the importance of constructing of warm-ups and the development of children's singing voice, while at the same time there is no significant correlation between the primary school class teachers' and general music teachers' beliefs about warm-up and their professional training, practical experiences and length of singing studies.

Q3. What are the differences between primary school class teachers' and general music teachers' beliefs about teaching, furthermore what are the relationships between primary school class teachers' and general music teachers' beliefs about teaching and teachers' professional training, practical experiences?

- **H3.** I suppose that the student-oriented educational approach is more pronounced in the general music teachers', furthermore more trained, more experienced primary school class teachers' and general music teachers' beliefs about teaching.

Q4. What are the differences between primary school class teachers' and general music teachers' beliefs about assessment, furthermore what are the relationships between primary school class teachers' and general music teachers' beliefs about assessment and their professional training, practical experiences?

- **H4.** I suppose that the student-oriented educational approach is more pronounced in the general music teachers', furthermore more trained, more experienced primary school class teachers' and general music teachers' beliefs about assessment.

Q5. What are the differences between primary school class teachers' and general music teachers' beliefs about teachers' competences and professional development, furthermore what are the relationships between primary school class teachers' and general music teachers' beliefs about teachers' competences, professional development and their professional training, practical experiences?

- **H5.** I suppose that general music teachers, furthermore more trained, more experienced general music teachers are more prepared for a number of teacher competencies than teachers and their self-education and further professional training patterns are different.

6. Research methods

I used mixed methodology in the research, that is to say, quantitative and qualitative methods. The research was based on empirical data collection, which includes both qualitative and quantitative elements. Answering my research questions, on the one hand, requires to available larger number of differentiated respondents, on the other hand, besides the interpretation of large sample data, deep drilling is also needed, so I considered that the mixed research method (in this case, questionnaire and semi-structured interview is best suited for my research. A kevert kutatási módszerek közül az *értelmező szekvenciális tervezés modelljét* (Creswell, 2012; Király és mtsai, 2014) választottam. From the mixed research methods I chose the model of the explanatory sequential design (Creswell, 2012; Király et al., 2014). The model is biphasic: the first step is the quantitative data collection and analysis, and, in the second phase, after the results of the quantitative analysis, qualitative data collection and analysis follows. In the final step, the main role is interpretation. Quantitative and qualitative data together contribute to a better understanding and study of the research topic. In order to reveal the primary school class teachers' and general music teachers' beliefs I used the self-filled online questionnaire method on a large sample, and then, on a smaller sample, the conceptual map and metaphor technique were used in the framework of the semi-structured interview.

6.1 Online questionnaire

In the spring of 2017, I have made a self-filled online questionnaire survey with teachers who were teaching general music in the 8-grade primary school music ing singing and music subjects in the eight-year primary school. The online questionnaire was prepared with Qualtrics.programe. The questions in the questionnaire were grouped around five main topics

1. General, introductory and demographic issues (1-22. questions)
2. Opportunities for developing children's musical abilities and warm-ups (23-40. questions)
3. Teaching and learning methods (41-44. questions)
4. Assessment at general music lessonsusic classes (45. question)
- 5.) Teacher competencies; as a part of professional development (46-50. questions)

For the analysis of the online questionnaire's data I used statistical methods from the processing methods. In the descriptive statistical studies I calculated frequencies, averages, sstandard deviations. The following methods of mathematical statistics were used to investigate the correlation between variables: one-way analysis of variance, correlation, factor analysis (Varimax rotation) and Chi square test (*Falus and Ollé, 2008*). The data was processed with SPSS 24 software. The majority of the questionnaire consisted of multiple-choice questions and questions based on a 4-degree Likert-scale, and partly on open questions.

6.2 Semi-structured interview

In the autumn of 2017, I have made semi-structured interviews with the primary school class teachers and general music teachers in which I examine the primary school class teachers' and general musc teachers' belief and practical experiences about the musical ability, the musical talent, the development of musical abilities, the teaching, the assessment, the teacher competencies and the continuos professional development. The duration of the interviews was 50 minutes each. I used metaphor examinations and conceptual mapping within the framework of the interview.

One of the latest methodologies for exploring teachers' beliefs is the metaphor study, which is based on the fact that the system of beliefs is the least verbalizable and aware, so it could be visualized and explored using a simulation (*Vámos, 2001*). The metaphor

examination can contribute to determining the generic content of pedagogical concepts. In the course of my research, I used a metaphor analyses tool for musical ability, musical talent, development of the musical ability, teaching and assessment, and, I also used the explanations of the metaphors in the analysis. The analysis of metaphors is a report analysis, whose purpose is to explore the common feature between the two entities (*Vámos, 2001, 2003*).

The conceptual map was created on an unstructured way, during which the teachers themselves named all the concepts, that they considered important from the point of view of the topics, so they expand the relationship of concepts and the content of the concept. Teacher comments on these were also recorded. This kind of visual representation helps the recalling, understanding and researching of the concepts. In the interpretation of the figure I examined the complexity, structure and content of the given concepts: development of musical ability, teaching, assessment. The conceptual maps were processed qualitatively. Using the conceptual map, you can explore the differences in the thinking of beginners and experienced teachers; teachers' beliefs, content and structure of teachers' knowledge; the relationship between teachers' knowledge, beliefs and behavior (*Szivák, 2002, 2014*).

7. Sampling for the research

7.1 Sampling for the online questionnaire

Because there was national data available to me neither about the number of teachers who have been teaching general music at 8-grade primary schools nor about the number of specialized music primary schools, so the questionnaire research was based on the sample of primary public education institutions. The basic population of the study is made up of eight-grade primary education institutions in Hungary. On the basis of the data of the Public Education Information System (2015/2016), all working primary schools (except for 12, 8, 6 grades secondary schools and the institutions of special education) were sorted into our database. I have sent an anonymous, electronic (online) questionnaire to this basic population (2116 primary schools) to the school management, asking the secretariat to send the questionnaire to the teachers who have been teaching general music subject at their school.

The online questionnaire was filled by 448 teachers, who have been teaching general music subject, 176 primary school class teachers (39.3%) and 272 general music teachers (60.71%). Of these, 176 primary school class teachers (39.3%) and 105 general music teachers (23.4%) have been teaching general music subject not in specialized music lower classes; 39 general music teachers (8.7%) in specialized music lower classes; 270 general music teachers (60.3%) not in specialized music upper classes; 28 general music teachers (6.2%) in the specialized music upper classes.

23 primary school class teachers (5,1%) and 38 general music teachers (8,5%) have been conducting not specialized music lower-primary children's choir; 25 general music teachers (5.6%) specialized music lower-primary choir; 94 general music teachers (21%) not specialized music upper-primary choir; 15 general music teachers (3.3%) specialized music upper-primary choir; 73 general music teachers (16%) non specialized music lower and upper-primary choir.

Respondents have been teaching on average for 21 years, but there is a little difference between the different groups of teachers: primary school class teachers have been teaching on average for 19 years, while primary school general music teachers have been teaching for 22 years. Beginners and teachers over 40 years old have the lowest proportion of the sample (around 2% and around 4.2%).

7.2 Sampling for semi-structured interviews

In the qualitative research- semi-structured interviews - my aim was to explore the inner, hidden, unique, context-dependent elements, because the complexity of the methods also limits the size of the population to some extent. I have made versatile analyses on small samples. The aimed convenience – layered convenience – concentrated sampling method was used to select the interview participants. The sample included 10 primary school class teachers and 10 general music teachers. In the selection of teachers I considered that in my sample there should be a primary school class teachers and general music teachers who have been teaching in the village, town, county seat and capital, who have been teaching in 8-grade primary schools. In addition, thought it was important to have beginner and experienced teachers in my research sample.

8. Results of research

8.1 Primary school class teachers' and general music teachers' beliefs about development of musical abilities

During my research it was revealed that in the thinking of teachers, who have been teaching general music at 8-grade primary schools, the musical abilities are divided into 6 groups instead of 4 groups: **1. musical reception abilities; 2. musical perception abilities I.; 3. musical perception abilities II.; 4. musical reproduction abilities and memorization; 5. musical writing, reading and improvisation abilities; 6. singing, singing performance abilities.** The latter two are two important pillars of the Kodály concept.

I discovered significant differences between the primary school class teachers' and general music teachers' beliefs about development of musical abilities of **not specialized music lower primary school children**: according to general music teachers' beliefs the *musical perception abilities of 2. factor* (perception of tonality; perception of interval; perception of harmony; perception of form; perception of tone) and *musical writing, reading and improvisation abilities* can be more developed, while according to the primary school class teachers' beliefs the *musical perception abilities of 3. factor* (perception of tempo; perception of dynamic; perception of melody; perception of rhythm) can be more improved. There is no significant correlation between *primary school class teachers' training, practical experiences*, and their beliefs about the development of musical abilities of not specialized music lower primary school children. At the same time, the more trained, qualified the general music teacher is, the stronger is his / her belief that *musical writing, reading and improvisation abilities* of not specialized music lower primary school children can be developed more widely. Furthermore, the more practiced, experienced the general music teacher is, the belief that *musical reproduction abilities and memorization* of not specialized music lower primary school children are improvable, is getting stronger.

There is a significant correlation between the general music teachers' beliefs about development of **specialized music lower primary school** children's musical ability and the teachers' training and practical experiences, according to which the more trained, qualified the general music teacher is, the stronger is his /her belief that specialized music lower primary school children's musical *writing, reading and improvisation abilities*, can be improved more widely; and the more the practiced, experienced the teacher is, the stronger

is his /her belief that specialized music lower primary school children's *singing and singing performance abilities* can be developed more widely.

There is a significant correlation between the general music teachers' beliefs about the development of **non specialized music upper primary school** children's musical ability and the teachers' training, because the more trained, qualified general music teachers' belief, that *non specialized music upper primary school children's musical reproduction abilities and memorization* are improvable, is getting stronger.

There is a significant correlation between the general music teachers' beliefs about the development of **specialized music upper primary school** children's musical ability and the teachers' practical experiences, because the more practiced, experienced the general music teachers is, the stronger is his / her belief, that the *specialized music upper primary school children's musical writing, reading and improvisation abilities* can be developed more widely.

There is a significant correlation between the **length of general music teachers' instrumental learning** and the teachers' belief about the development of children's musical abilities, because the general music teachers, who have been learning more time playing instrument, believed that the musical perception, reception, writing, reading and improvisation abilities of primary school children can be developed more widely. There is no significant correlation between length of primary school class teachers' instrumental learning and their beliefs about the development of musical abilities.

The statement, that the music teachers' beliefs about the musical ability have two directions: 1. the *absolute approach*; 2. *relativistic approach* (Brändström, 1999; Evans et al., 2000; Legette, 2002; Clelland, 2006; Hewitt, 2006; 2012; Biasutti, 2010; Shouldice, 2013, 2018), can be supported in the interviews. The majority of primary school class teachers represented the absolute approach, while in the beliefs of one half of the general music teachers was dominated the absolute approach and, in the beliefs of the other half of general music teachers was stronger the relativistic approach. The results showed, that the concept of the development of musical ability were appeared as a caring or building activity in the primary school class teachers' beliefs, while the general music teachers' beliefs about the concept of the development of musical abilities were more heterogeneous and were created five categories: 1. building activity; 2. creative activity; 3. developing; 4. caring activity; 5. struggle.

In the more practiced, experienced primary school class teachers' and general music teachers' beliefs appear more interconnected, organized, thematized the concepts related to

the concept of development of musical ability; which refers to the complexity of the concept, the development of musical ability affect the development of the whole personality.

Hypothesis H1.1 has rejected. In the case of general music teachers, the hypothesis H1.2 has been verified, and in the case of primary school class teachers the hypothesis H1.2 has rejected.

8.2 Primary school class teachers' and general music teachers' beliefs about the warm-up

There is no significant correlation between the frequency and modes of warm-ups and the primary school class teachers' and general music teachers' training, practical experiences and length of their singing studies. There is also no significant correlation between the primary school class teachers' and general music teachers' beliefs about warm-up and their training, practical experiences.

Significant difference between the primary school class teachers' and general music teachers' belief about the warm-up can be traced to how much the development of children's singing voice is considered to be the main purpose of warm-up. According to general music teachers, the development of children's singing voice as the main goal of warm-up is more present in the their thinking, than by the primary school class teachers.

The length of choral singing of general music teachers is significantly correlated to their *beliefs about the structure of the warm-up* (Factor 5) and to the belief that the *development of children's singing voice is the main purpose of warm-up* (Factor 3). The longer the teachers have been singing in the choir, the stronger is their belief that the main purpose of warm-up s to develop the children's singing voice; and conscious, professional structure of warm-ups become more important

Hypotheses H2.1 and H2.2 have been verified.

8.3 Primary school class teachers' and general music teachers' beliefs about the teaching

Among the teachers' beliefs about the teaching, it should be emphasized that, according to the **primary school class teachers**, *their own personality*, while according to the beliefs of the **general music teachers** and the 8-grade primary school teacher participants of the

National Teacher Research (Sági, 2015) -, the *purpose of the lesson* has the greatest impact on the choice of learning organization procedures.

The most used *sources of information* are the *textbook* and *workbook* by primary school class teachers, by general music teachers and by primary school teacher participants of National Teacher Research (Sági, 2015) The **general music teachers** use more often *the sources of information, that available in the library / media library* in their lessons, than the primary school class teachers, which can be explained by the fact that the upper-primary music lessons contain more music listening material than the lower-primary classes, so these tools are more common needed in the upper-primary schools. The teachers (who have been teaching general music subject) use more often the *complex digital teaching materials*, the *internet* and *educational audio materials* in their teaching, than the primary school teacher participants of National Teacher Research (Sági, 2015), but use less of them. sources of information available in a library, media library, and self-made demonstration tools.

The *explanation* of classical teaching methods, furthermore the *students lectures* and *volunteer self-directed or group student lectures of interactive teaching methods* are used more often by general music teachers, than by primary school class teachers. Primary school class teachers use more often the *game* of the interactive learning methods, than the general music teachers. The difference between the two groups of teachers can also be caused by the age characteristics of the children they teach, as primary school class teachers only teach lower-grade children, while general music teachers mostly teach upper-level students.

Between neither the training of primary school class teachers nor the training of general music teachers and their belief about teaching there are significant correlation. The primary school class teachers at the beginning of their careers use more often the lecture of the classical teaching methods than more experienced teacher, while more experienced teachers use more often *complex digital teaching materials* as a new generation of teaching methods in their general music lessons, than less experienced teachers.

The spontaneously evolved metaphors of the teaching, as target concept, are extremely heterogeneous. During the metaphor analysis, 7 major conceptual categories were born. Main conceptual categories: 1. knowledge transfer; 2. creative activity; 3. building activity; 4. discovery; 5. caring activities; 6. endless process; 7 struggle.

So, in the primary school class teachers' and the general music teachers' beliefs about the teaching can also find a teacher-oriented and student-oriented approach of teaching and learning.

Hypothesis H3 is partially verified.

8.4 Primary school class teachers' and general music teachers' beliefs about the assessment

The three most frequently forms of assessment are used by **primary school class teachers**: *textual assessment*, *assessment based on observing of classroom work*, and *written assessment*, while **general music teachers** mostly *assess on the basis of classroom work*, *textual assessment* and *assessment based on questioning of learned material*. The textual assessment, written assessment, and pair-assessment are more often used by primary school class teachers, than general music teachers. The less trained the general music teachers are, the more often use the assessment of homework as a form of assessment, while the more trained, qualified the general music teachers are, the more often use the *assessment based on the observing of the group work*. There is no significant correlation between primary school teachers' training and the frequency of application of assessment forms, but the more experienced the primary school class teachers are, the most often use the *self assessment*, and the more experienced the general music teachers are, the more often use the *peer-reviews* as an assessment form.

The half of the primary school class teachers and general music teachers, who participated in the interviews, consider the assessment as a guideline and only a minor part of teachers consider the assessment as competition or qualification, or just as compulsion.

During the interviews, the problem of classification was discovered, since this five-degree scale does not accurately reflect the individual abilities and efforts of the children. It is also more problematic in the general music subject than elsewhere, as the development of musical abilities can show great differences within an age group. More than half of the interviewees stated that the aim of the classroom assessment was to explore and remedy the backwardness, to recognize and develop talent, to develop pedagogical activity, to improve teacher efficiency, and to promote student personal development; to self-assessment

H4. Hypothesis is partially verified.

8.5 Primary school class teachers' and general music teachers' beliefs about the teachers' competences and professional development

The primary school class teachers and general music teachers also consider pedagogical development, innovation and analytical, research knowledge as their weakest competences,

which underpin the results of the National Teacher Research (Sági, 2015), The teachers' practice, experience is less important in acquiring these competences.

According to **primary school class teachers**, their two most powerful competencies are advanced the *autonomy and responsibility* and *support, organization and management of learning*; while according to **general music teachers** have indicated *engagement in the organization, institution; autonomy and responsibility; child / student personality development; methodological and specialist knowledge*. The *professional methodological and specialist knowledge; planning the pedagogical process; engagement in the organization and institution; continuous professional self-reflection and analytical, researcher knowledge* are considered more advanced by the **general music teachers** than by the primary school class teachers.

There is no significant correlation between primary school class teachers' and general music teachers' beliefs about the teacher competences and their training. The more experienced the teachers are, the more prepared they are to help the development of children's groups / student groups and communities in terms of competence. In terms of general music teachers, the more experienced the general music teachers are, the more they are prepared for communication, professional cooperation and career identity; involvement in organization, institution and continuing professional self-reflection competencies. It can be said that in practice, general music teachers are increasingly embedded in the institution, where their cooperation and involvement in the institution become stronger; while teachers' internships are related to the development of child groups / groups of students.

The strengthening of professional competencies is, of course, essential not only for career starters but for all teachers as well, and as the expectations towards them become more and more complex, continuous professional development is also indispensable for experienced teachers (Szemerszki, 2015).

The non-formal discussions and discussions with colleagues are among the most common extracurricular activities, which reinforces previous research result (TALIS, 2009; Sági, 2015). In the last 12 months, general music teachers have read more literature and participated more in the activities of professional groups within the institution, and, in the work of pedagogical professional groups, workshops, networks than primary school teachers participating in National Teacher Research (Sági, 2015) and teachers of general music teacher in my sample.

In my research the main aim of the visiting to lessons of the primary school class teachers is to gain experiences, while the main aim of the visiting to lessons of the general music teachers and primary school teacher participants of National Teacher Research are the transfer of experience and counseling.

My research has confirmed the statement that primary school class teachers and general music teachers are more likely to be characterized by forms of learning within the institution and that they are least involved in research and international education / training conferences and seminars (Sági, 2015).

I did not find any significant correlation between the participation in further education and the training of primary school class teachers and general music teachers, or the participation in further training and the experience of general music teachers.

The further teacher training in them personalized development and the identification and development of outstandingly talented children / pupils in the field of professional development of general music teachers have a greater impact.

My research also supports the assertion that learning among teachers is mostly done through informal professional meetings with colleagues, participation in the activities of professional groups within the institution, in-house lessons and studying (independent) literature. (Sági, 2015)

H5. Hypothesis is verified.

9. Summary

1. The dissertation is the first to organize the musical abilities based on the beliefs of general music teachers. A new result is that in the thinking of general music teachers the musical abilities are divided into four groups: 1. musical reception abilities; 2. musical perception abilities 1.; 3. musical perception abilities 2.; 4. musical reproduction abilities and memorization; 5. musical writing, reading and improvisation abilities; 6. singing, singing performance.
2. The dissertation is the first to examine the differences between primary school class teachers' and general music teachers' beliefs about the development of musical abilities, warm-up, teaching, assessment, teacher competences, continuous professional development; furthermore the relationship between beliefs and teachers' training and practical experience.
3. The general music teachers consider that the some of musical perception abilities, musical writing, reading and improvisation abilities can be developed more widely, than, according to the primary school class teachers' beliefs.
4. More trained, qualified, experienced general music teachers consider pupils' musical writing, reading and improvisation abilities; musical reproduction abilities and memorization, as well as more experienced general music teacher the singing, singing performance can be developed more widely. The more time the teacher have learned to play an musical instrument, the more they think about the musical perception, reception, writing, reading and improvisation abilities of primary school children can be developed more widely.
5. The longer the teachers have been singing in the choir, the stronger is their belief that the main purpose of warm-up is to develop the children's singing voice; and conscious, professional structure of warm-ups become more important
6. So, in the primary school class teachers' and the general music teachers' beliefs about the teaching can also find a teacher-oriented and student-oriented approach of teaching and learning.
7. In the more experienced primary school class teachers' and more experienced general music teachers' beliefs about the teaching and assessment more often appear the student-oriented approach of teaching and learning.

8. The professional methodological and specialist knowledge; planning the pedagogical process; engagement in the organization and institution; continuous professional self-reflection and analytical, researcher knowledge are considered more advanced by the general music teachers than by the primary school class teachers.

10. Limitations of research, usability of results, further possible directions of research

Among the **limitations of my research**, I have to mention that to the forming of the sample of questionnaire research there was no central data collection or record of how many classroom teachers and general music teachers were teaching general music subject in eight grades of primary school in Hungary, so the whole population was formed by 8-grade primary schools in Hungary, assuming that each institution has at least one general music teacher. The findings of the research can be applied to this group of respondents.

Sampling for the interview was also difficult, as the classroom teacher and general music teacher took part hard in the interviews due to their many school and extra-curricular tasks. So only 20 people could participate in the interview.

The **results of my research can be used** both in primary school teacher and general music teacher training and, in postgraduate teacher training:

- As there is a significant correlation between the many beliefs about the development of musical ability and the qualifications, training of teachers, who teach general music, it would be important to place more emphasis on changing of these beliefs of prospective classroom teachers /and general music teachers in the teacher training program.
- Primary classroom teachers and general music teachers should acquire much more theoretical and practical knowledge about warm-up, and children's vocal training.
- Students should be directed towards a learner-oriented teaching and learning approach in point of learning organization procedures, information sources, and methods.
- It would be very important for primary classroom teachers to be more confident in knowledge of general music subject and methodology, because they deal with children in a very sensitive and important period in terms of development of musical ability, and primary school teachers would be responsible for the multifaceted and

professional music development of the lower primary school children, which can be used to build the further musical development of children in the upper primary classes.

- Unfortunately, this is rarely case in practice. Therefore, I would consider it important to deepen the professional, methodological and specialist knowledge and to develop reflective thinking during teacher training.

Other possible directions for research:

1. It would be useful to examine the correlation between the general music teachers' beliefs about development of musical ability, teaching assessment and the development of the children's musical abilities, the music learning process and learning outcomes, and the teachers' interactions with children.
2. It would be useful to conduct further research that examine effect of teachers' beliefs about warm-up on the teaching practice, the composition, frequency of application of warm-up, and the development of children's singing abilities in primary schools in Hungary.
3. After exploring the beliefs and experiences of teachers, teachers should consider how much they use and what they use in their teaching practice, and examine how these affect the children's learning process and outcomes.
4. In the framework of longitudinal research, it would be worthwhile to examine the same general music teachers' beliefs about development of musical ability in the context of practical teaching and then to follow the changes in them.

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