The development of student conductors’ system of views
in the course of conductor training

Theses of doctoral dissertation

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1 Introduction

1.1 Reasons for the choice of subject matter

In my dissertation I aim to explore the views of students participating in conductor training and to follow and interpret changes in those views after admission. My motives for choosing this subject matter included the consolidation of recent societal expectations for supporting integrative and inclusive education which has an impact on the role and the task of conductor training and the circumstance that view studies that are widely applied in teacher research are lacking in studies directed at conductors. In order to theoretically underpin and support the empirical research into the views of student conductors as would-be teachers we thought it was necessary to review the most important basic principles of the conductive education system, the main stages of the development of the training, the specificities of the current training, and on the other hand the Hungarian and international specialist literature on the process of becoming a teacher, on research into the personality and activity of teachers as well as on the directions, foci and searchability of view studies.

The conductor as a teacher is the key figure in the conductive education of children and youths with disabilities originating from damage to the central nervous system aimed at preparing them for integration and inclusive education and assisting them. At the beginning the necessity and opportunities of supporting integration were related to the interpretation of the integration of children with disabilities and special educational needs, primarily in terms of education. Over time the interpretation of the goal focusing on supporting integration shifted towards inclusive, "mutually" integrative education (Atkinson, 2002; Papp, 2012; Giambona–Vassallo, 2013; Perlusz, 2013; Zászkaliczky, 2013; Réthy, 2013; Varga, 2015; Böddi, 2017), which entailed its extension from the area of education to the level of society (social inclusion) on the one hand (Potts, 2002; Williams et al., 2005; UNESCO, 2009; Asumah–Nagel, 2014; Varga, 2015), and brought about an expansion of the target group on the other, in respect of roma, immigrant, disadvantaged, extremely poor, elderly and female populations (Cserti Csapó – Orsós 2013; Szemenyei – Végh, 2013; Kokas –Lakatos 2013; Horváth, 2013).

Nowadays both Hungarian and European education policy considers the organisation, improvement and support of the training and further training of open-minded and qualified teachers who assist and implement the integration and inclusive education of children with special educational needs requiring special treatment as a priority. (Ferguson, 2008; Perlusz, 2013; Rózsáné, 2013; Feketéné Szabó, 2013; Mile, 2016; Túri, 2017b)
For a narrower group of the population with disabilities and special educational needs, namely children and youths with cerebral palsy (central nervous disorders), conductors have a crucial role in the successful preparation and implementation of integrative education. The conductor's duty is the conductive education of children and adults with disabilities originating from damage to the central nervous system. (Pető, 1955; Hári – Horváth – Kozma –Kőkúti, 1991; Beck, 2008; Feketéné Szabó, 2011). According to the basic principle of conductive education, central nervous disorders should be treated as a pedagogical task, a disturbance of the learning process, rather than a biological obstacle, since the symptoms are caused by the impaired functioning of the nervous system, the incoordination of the activities, and a local treatment of the problem is thereby not possible. (Pető, 1955; Hári, 1991; Balogh, 1998; Medveczky, 2003; Feketéné Szabó, 2008; Földesi, 2014). This is the foundation of the holistic approach of conductive education, namely that the disabled person cannot be healed by treating the disturbance of particular functions and areas, in accordance with the principle of wholeness, the integrative approach one should focus on the person as a coherent system. (Földesi, 2014, 2017; Balogh, 2018; Schaffhauser, 2016). Thus the conductive education activity will be successful by placing the human being in the centre, promoting the personality in a comprehensive manner, rather than by treating the single partial functions. (Hári, 1991; Balogh, 1998; Pintér, 2002; Feketéné Szabó –Hevér, 2011; Földesi, 2014; Benyovszky, 2015). Since we face a disturbance of the learning process, a pedagogical approach is needed, where the personality of the conductor as teacher and the conductive pedagogical activity can be the solution. (Feketéné Szabó, 2011). Conductor training is aimed to prepare candidates for working successfully and efficiently in this special pedagogical domain.

The decision for teaching as a career is motivated on one hand by the candidate's interests and aspects of career choice, on the other hand by prior experiences in their personal and school lives, the impressions gathered during their time at school as well as teacher models (Falus, 2004; Nagy, 2004; Dombi, 1999; Köcséné, 2007). When choosing teaching, the candidate presumably has a preliminary career attitude which may change with entry to the training, then with commencing the career, in reaction to their impact (Váriné, 1986; Köcséné, 2007), the influence of the training is, however, a considerably weaker 'intervention' compared to the beliefs originating from prior experiences (Richardson, 1996; Köcséné, 2007; Rodgers – Scott, 2008). The way of thinking and the pedagogical practice of teachers and candidates are indeed influenced by views based on previous personal and school experiences (M. Nádasi, 1999; Szivák, 1999, Falus, 2001; Dudás, 2007; Kálmán, 2013).
Views are typically psychic constructs of implicit nature, stemming from personal and school experiences, which, associated with various contents, imply personal constructions and have an impact on the receptive and interpretive system (Pajares, 1992; Bullough, 1997; Calderhead, 1996; Richardson, 1996; Falus, 1998, 2001). Candidates and teachers’ experience-based beliefs affect their way of thinking, pedagogical judgements and practice, serve as behavioural schemes and methodological patterns, function as a sort of filter (Hunyadyné, 1993; Richardson, 1996; Bullough, 1997; Falus, 2001; M. Nádasi, 2002; Kimmel, 2007; Dudás, 2007). Such former personal and school experiences are implicitly present in the candidates’ way of thinking and influence the acquisition of instructional contents and also their teaching practice later on (Thompson 1992; Falus, 2001; Hativaés Goodyear, 2002; Kimmel, 2007; Dudás, 2011). The training transmits knowledge, skills, expertise and competences that can be employed in the practice; participants have the opportunity to acquire these and thereby prepare for their future role and activity as pedagogues; what they accept and integrate into their evaluative system, however, is hugely influenced and filtered by their beliefs (Goodman, 1988; Falus, 2001; Kimmel, 2007; Dudás, 2011).

The possibility of the successful exploration of views is supported by a broad research methodology; in addition to the traditional explorative research methods like the questionnaire (Golnhofer –M. Nádasi, 1981; Johnson, 1994; Nettle, 1998; Szivák, 1999; Köcséné, 2007), the interview (Golnhofer –Nahalka, 2001; Köcséné, 2007) and the depth interview (Richardson, Anders, Tidwell, Lloyd, 1991; Fülöp, 1993;) more recent methods have emerged that make a more in-depth examination of views possible, such as the concept map (E. Szabó, 1996; Zantig, Verloop, Vermunt, 2001; Dudás, 2007; Köcséné, 2007), aided recall (Falus, 1985; Kotschy, 1985; Meijer, Zanting, Verloop, 2002; Sántha, 2004), metaphor analysis (Vámoss, 2001, 2003; Köcséné, 2007; Dudás, 2007), sentence completion (Zanting–Verloop – Vermunt, 2001) and portfolio analysis (Bullough, 1993; Dudás, 2005).

A review of the specialist literature enabled me to design and theoretically underpin the empirical research and helped determine and establish the foci of the study. Taking all these theoretical aspects as a basis and with special regard to the results of two further studies (Dudás, 2007; Fűzi, 2012), I managed to finalise the focus of the research.
The candidates have relevant views related to the training in respect of themselves and their future profession already at their entry to the training (Dudás, 2007), and the quality of their subsequent pedagogical practice is influenced by their personality, their technical knowledge and the role model they play as well as the balance of those (Fűzi, 2012). On this basis the main focus of my research was placed on exploring how the students participating in conductor training see their future profession as conductors, how their views concerning this matter change and what they think about the underlying conductor training.

Thus I examined and analysed student conductors' system of views and its formation in two main thematic groups as follows:

1. Views concerning the conductor profession, including those in respect of a) the conductor's role and activity, b) general and personal factors determining the choice of career as a conductor, c) acceptance of diversity and special educational needs, d) integration and inclusive education,

2. views concerning conductor training, including those in respect of a) the perception of conductor training and b) whether conductors' skills can be acquired.

On the basis of a review of the specialist literature, selecting research methods to be applied for the empirical survey we built on research methodological approaches and tools known from and successfully employed in view studies.

2 Research objectives

In my research I aspired to explore what students think about their future profession, including the conductor's role and activity, how they see the general and personal motives of choosing the conductor profession as a career and their beliefs regarding diversity, special educational needs as well as integration and inclusive education. In my survey I also focused on revealing whether students' views regarding their future profession change during the training and what are the direction and tendencies in respect of such changes in beliefs. I endeavoured to shed light on whether there are considerable differences in terms of views concerning conductor training as regards relations between the conductors and between the students and the specialists participating in the training.
My research offered an opportunity to grasp which elements are most emphasised or highlighted in respect of the conductor's role and activity in the beliefs of those participating in the survey; similarly, I could also examine why young people generally decide for the conductor profession in accordance with their preconceptions and how this is reflected in their own motives of career choice. It became possible to discover differences and conformities between views concerning the content elements of conductor training and to analyse whether there are interrelations detectable between the particular views. When selecting the target group and implementing the survey it was taken into consideration that following the formation of the system of views compared to each other and itself must also be made possible.

2.1 Aim of research

A. A detailed examination and analysis of students' views regarding the conductor profession:

1. An examination of views regarding the conductor's role and activity in the scope of a cross-sectional analysis in order to reveal differences between the views of students entering the training, candidates in the upper years and professionals participating in the training as they formulate the characteristics of the role, the elements they find prevailing and the specialities of the activity, and to follow changes and directions in students' relevant views in the scope of a time series analysis.

2. A survey of general and personal motives of choosing conductive education as a career in the frame of a cross-sectional examination and a time series analysis in order to reveal students' opinions as to why young people decide for a career as a conductor in the first place and to represent the factors influencing their own choice of career as well as to disclose whether there is any change in their general and personal beliefs regarding the choice of the training resulting from the training.

3. A cross-sectional examination into student conductors' attitudes towards diversity and special educational needs including disabilities originating from damage to the central nervous system (cerebral palsy) and other symptom complexes and an exposure of upper-year student conductors' attitudes towards the same questions.

4. Detection of students' views in the frame of a cross-sectional and time series examination in order to form a picture about what students think of integration, inclusive education, of the relation between conductive education and integration
which they find prevailing and of the changes in their views in the course of the training.

**B. Detection and analysis of changes in students' and participants' views on conductor training and in students' beliefs as to whether the conductor profession can be acquired:**

1. Understanding views on *conductor training* in the scope of a cross sectional examination in order to disclose how students entering the training, upper year candidates and professionals participating in the training see the training, its elements that they find prevailing and its specialties as well as differences between instructors' and conductors' views becoming apparent subject to the number of years spent in this profession.

2. A study of beliefs *as to whether the conductor profession can be acquired* in the scope of a cross sectional and time series examination in order to get to know students' opinions as to how and where the conductor profession can be learned and what contents of the training and which specialists' input contribute primarily to the acquisition of the conductor profession.

### 2.2 Issues for research, hypotheses

At the time of their entry into the training, conductor candidates' views regarding the conductor profession (including the conductor's role and activity, diversity and special educational needs, the motives of career choice, integration and inclusive education) and the training (whether the profession can be learned, judgement on the contents of conductor training in becoming a conductor) are not known. Neither is the formation of such beliefs and the views of professionals (academic staff, conductors) participating in the training in respect of the conductor's role and activity and the professional contents of conductor training.

What are conductor candidates' views regarding

- the conductor's role and activity,
- the general and personal motives of choosing the conductor profession as a career,
- the recognition and acceptance of individual needs and special educational needs,
- integration and inclusive education,
- whether or not the conductor profession can be learned,
- the contents of conductor training?
What are the views of professionals and students involved in conductor training on the role and activity of the conductor, the professional contents of conductor training and its role in the process of becoming a conductor?

Is it possible to reveal changes in the views of students entering the training as they progress through their studies?

Is it possible to find conformities and differences between the particular views of particular cohorts or subject to the number of years graduates have spent in service?

Hypotheses

1. a. There are changes in conductor candidates' views regarding the conductor's role and activity during their studies.
1. b. The number of years spent in service has no impact on views regarding the conductor's role and activity.
2. During conductor training there is a transformation in conductor candidates' beliefs regarding the general and personal motives determining the choice of the conductor profession as a career.
3. Conductor candidates are sensitive towards the recognition and acceptance of individual needs and special educational needs.
4. There are changes in conductor candidates' views regarding integration and inclusive education during conductor training.
5. Conductor candidates and professionals participating in the training hold different views on conductor training and on the role of particular training contents in the process of becoming a conductor.
6. There are changes in conductor candidates' beliefs during the training as to whether the conductor profession can be learned.
3 Methods adopted for examining hypotheses, timetable of research, sampling

I chose mixed methods for examining the issues for research and the hypotheses formulated on this basis, so that the mixed and joint use of quantitative and qualitative methods would allow a complex use of the information gathered in the survey, and a more comprehensive and deeper understanding as well as a reliable evaluation of the data. Of the mixed method research strategies I adopted the *embedded mixed methods design* and analysed the quantitative and qualitative data in the scope of a primarily quantitative examination where qualitative methods (concept map, metaphor, interview) had a supplementary, supportive role.

Of the methods suitable for assessing the hypotheses of the study I decided for using the *questionnaire* (self-designed 1 to 5 Likert scale), the *concept map* and *metaphor creation* as well as the *semi structured interview*. For analysing the attitude scale I employed an SPSS application. For the *content analysis* of the metaphors and concept maps and for setting up a system of categories underlying the analysis, on one hand I took studies with similar aims known from the specialist literature as a basis (e.g. Dudás, 2006, 2007; Kimmel, 2007; Köcséné, 2007) and then, building on these, added two further elements, which I thought were necessary for the conductor’s role and activity, to the categories applied in Dudás’s study (2007); on the other hand I used MAXQDA, a software supporting qualitative text analysis. To process the data of semi structured interviews I carried out qualitative text analysis.

As part of the research a *cross-sectional examination* was performed during the spring semester of the academic year 2013/2014 in order to explore the views of all students as well as professionals participating in conductor training in a descriptive manner.

- From cohorts I, II, III and IV of the training (about 240 students) altogether 205 persons completed the attitude scales and created metaphors. From the 205 persons 59 were first year, 59 second year, 51 third year and 31 fourth year students.
- The views of *professionals* involved in conductor training (academic staff, conductors) were also examined, 54 professionals (15 academic staff, 39 conductors) volunteered to participate in the study. Selected were those who provided data about the time when they joined the profession. An aspect of selection was also the representation of time spent in the profession, thus three generation groups were formed: Professionals who had been in service for a) 0-6 years, b) 7-20 years, c) 21+ years.
In addition to the cross-sectional examination, in 2016 I took semi structured interviews among fourth year students at the end of their training in a convenience sampling procedure. About 20 students from the cohort were willing to participate.

Another part of the research was when I conducted a time series linear examination starting from the academic year 2013/2014 among first year conductor candidates (59 persons) in order to present the development in views. The survey was then repeated every year up to the academic year 2016/2017, thus embracing the whole period of training of the students involved. During the survey I again adopted quantitative and qualitative methods, employing the questionnaire (self-designed 1 to 5 Likert scale), the concept map and metaphor creation. In order to assess hypotheses, I applied the attitude scale in respect of all questions of the research while the metaphor and the preparation of concept maps were used for examining the conductor’s role and activity. The results of the attitude examination were evaluated in two phases:

- For examining the development in views, first the findings of the attitude scale completed at the start of the survey by then first year students were compared with responses given four years later by fourth year students. (N=59)
- Secondly the views of a narrower sample, students who had contributed throughout the four years (N=16) were analysed in order to reveal the dynamics of changes in students’ views from year to year.

As part of the view studies, in the scope of a correlation analysis I aimed to detect connections and interferences between the beliefs of students versus academic staff and conductors. In the course of the correlation analysis, responses to the questionnaires filled in during the four year survey (from 2013 to 2017) by students, conductors and academic staff (380 questionnaires) were analysed, thus questionnaires completed in the frame of the cross-sectional and the time series examinations were also included in the sample for analysis. Methods employed for the cross-sectional examination comprised variance analysis, cross-tab analysis and correlation.
4 Research findings

4.1 Findings of cross-sectional examination

1. Views on the conductor’s role and activity

According to the outcomes of the *attitude scale* students emphasised the holistic approach, well-founded professional knowledge, positive characteristic traits (qualities, competences) and conductor's expertise as attributes of the role. In the evaluation of the role comprehensive personality development and statements presenting the conductor as a special pedagogue prevailed.

The conductor's activity was considered a comprehensive, variegated, multifaceted and complex occupation. Among the conductor's characteristic traits a thorough grounding, commitment, a responsible attitude, empathy, understanding and patience were emphasised. As the special field of the activity the pedagogical approach, as typical characteristics assistance, guidance and control were accentuated. Among the skills observation, motivation, cooperation and communication skills and a good grasp of situations were deemed most important.

In the frame of a so-called simile-based metaphor collecting the students created *metaphors* related to the conductor's role and activity, by completing and explaining incomplete sentences: "The conductor is like ..." "The conductor's activity is like ..." When analysing the metaphors I formed so-called meaning-related sets, assigning to them corresponding or in terms of meaning closely related expressions. Finalising the sets established I leaned on the written explanations attached to the similes. After the grouping, on the basis of the grouping scheme known from Dudás's study (2007) and adding further two elements I created the major content category units and subgroups as follows:

<table>
<thead>
<tr>
<th>Category units</th>
<th>Subcategory units</th>
</tr>
</thead>
<tbody>
<tr>
<td>- interdisciplinary professional</td>
<td>owns comprehensive knowledge and competence</td>
</tr>
<tr>
<td>- helper</td>
<td>patron, supporter / companion, partner</td>
</tr>
<tr>
<td>- manager</td>
<td>manager, controller / organiser, coordinator</td>
</tr>
<tr>
<td>- constructor</td>
<td>designer / innovator / executor</td>
</tr>
<tr>
<td>- artist</td>
<td>creator / master</td>
</tr>
<tr>
<td>- pedagogue</td>
<td>instructor / educator / teacher</td>
</tr>
<tr>
<td>- supernatural person</td>
<td>spiritual leader / person of mystical impact</td>
</tr>
</tbody>
</table>
After arrangement in category units, qualitative content analysis as well as the MAXQDA text analysing software were employed for the analysis. Summing up the students' responses, taking the cohorts into consideration separately and also in total I found that the conductor's role was typically linked with the simile 'helping professional' and 'interdisciplinary professional' due to the wide spectrum of knowledge and competences that can be utilised in various areas, and on the other hand stressing the supportive, assistive character of the role.

The conductor's activity is seen as a multifactorial, complex job where in addition to helping, controlling and the pedagogical activity, knowledge connected with further domains and the ability to put those jointly in practice are also manifested. Interpretations of the role where the conductor is considered a supportive, creative person who promotes progress and the representation of the nature of the conductor's activity was supplemented by the definitions 'art-creation' (gardening) and 'interdisciplinary activity' were reinforced by the interviews.

According to the summative evaluation of the outcomes of the attitude scale, the metaphors and the interviews, in respect of the conductor's role the students see the conductor as an assistive, supportive professional and an interdisciplinary specialist who is capable to cooperate both in a homogeneous and a heterogeneous team, open-minded to accept individual demands and special educational needs and supports integration and inclusive education. The students describe conductors and their occupation in multifaceted, complex activities that require special expertise.

2. Views on the general and personal motives of choosing the conductor profession as a career

In students’ opinion the general motives for choosing the conductor profession include principally commitment to the conductor profession, working with children and the recognition of the profession both at national and international level. As for the distribution of answers according to cohort differences were found only in the ranking of the first three most frequently mentioned motives: first and second year students saw commitment to the profession as the primary motivation to choose the conductor profession as a career while third and fourth year students think that the desire to work with children is the most influential factor. Beliefs regarding the personal motives for choosing the conductor profession are the same as those set forth under the general motives and the responses by cohorts are the same as
the ranking in relation to general choice of career. Students present *commitment to the profession* and the *disposition to work with children* as the factors that had the greatest impact on their personal choice; among the personal motives the emphasis on the *positive pedagogical approach* appears as a new element in addition to the national and international recognition of the profession.

The outcomes of the interviews further reinforced students’ evaluations that emerged during the attitude scale, most respondents indicated the disposition to work with children as the factor influencing their own choice of conductive education as a career. Less accentuated were professional commitment to the occupation and inspiration or influence by some close friend or relative.

### 3. Views in respect of individual needs and special educational needs

Students have a *positive attitude* towards accepting individual needs, already *at entry to the training* they are *very open-minded and acceptive towards individual needs and they have an acceptive attitude towards special educational needs* as well. The students’ acceptive attitude towards special educational needs also entails accepting children and young persons with cerebral palsy and other symptom complexes. *Their open-minded, acceptive approach and empathy further improves and extends to full scale as they progress through the training.*

Comparing the cohorts we can see that students saw their attitudes towards individual needs and special educational needs as positive already at commencement of their training (75%). It is an interesting difference that first and second year students had a greater tendency to characterise themselves as having positive attitudes towards special educational needs and cerebral palsy than their fellow students in the fourth year of the training. As for negative attitudes, however, we can see that fourth year students thought those were the least characteristic of them, thus respondents did not check off any of the negative attitudes listed.

As students progress through the training, they show a tendency to feel more confident, determined and professional while feeling insecure and perplexed diminishes which can be regarded as an effect of the training. According to the findings, students had three dominant attitudes i.e. acceptance (indicated by 168 students), open-mindedness (marked by 159 students) and the friendly-cordial attitude (144 students).
We can see from the findings that in respect of individual needs and special educational needs the students have an established approach, namely an open-minded and accepting attitude, already when entering conductor training, which becomes steadier and more definitive as they approach graduation.

4. Views on integration and inclusive education

The detection of beliefs regarding integration and inclusive education was based on the evaluation of answers given to the 1-5 attitude scale, which did not reveal significant differences between the opinions of students and professionals in relation to integration and inclusive education. The outcomes reflect a strong consensus in considering conductive education a possible path, a vehicle in preparing for integration (mean between 4.308-4.593), participation in conductive education in a group is seen as a precondition of successful integration for children with CP (mean between 4.471-4.576). There is firm conviction and understanding in respect of the contribution of sport, leisure and special extracurricular activities to the integration of children with CP (4.329-4.616). Neither students nor conductors share the view that mainstream kindergartens and schools are for the most part suited to admit and appropriately occupy children with CP (1.339-1.588), nor do they agree with the belief that all children with CP can be integrated (1.492-1.961).

As for the evaluation of integration, there are minimal discrepancies in estimating the necessary length of conductive education and thereby the time frame for preparing for integration; differences in the related views emerge among students, between conductors and academic staff and among conductors. According to the response values, it is mainly first year students (3.847) who think that for the sake of successful integrative education conductive education should not exceed the minimum period of time necessary, while those in the upper years are insecure regarding this issue (mean value between 3.094-3.556). No consensus can be seen in the opinions of conductors and academic staff (2.816).

5. Views on whether the conductor profession can be acquired

Concerning the issue as to whether the conductor profession can be acquired, both students and professionals emphasise the importance of supervised practical work in the frame of theoretical and practical training. According to students’ opinions, the conductor’s job can be best acquired by spending the highest possible number of hours in the practice (4.472 – 4.729); on the other hand, learning from experienced professionals in the practice (4.186,
4.838) and learning from each other in task situations during group practices (mean value between 4.052 – 4.3535) are also important elements. Beliefs that the profession can be best learned from conductor instructors in charge of practical training ranked lowest (2.667-3.00), neither did respondents share the opinion that it can be attained primarily by acquiring elements of theoretical knowledge (2.635-3.00).

6. Views on conductor training

Conductor candidates and professionals participating in the training hold different views on conductor training and on the role of particular training contents in the process of becoming a conductor.

The hypothesis was assessed in the scope of a cross-sectional examination. The hypothesis was partly verified, since students and professionals hold different views regarding the role of the training in the process of becoming a conductor, significant differences were seen in half of the statements formulated in relation to the examination of the question.

The greatest difference between beliefs emerged was manifested in the evaluation of professional course units related to conductive pedagogy. While more than half of the professionals thought that professional course units related to conductive pedagogy, knowledge elements transmitted by themselves had the greatest contribution to the process of becoming a conductor being successful, only one fifth of the students shared this opinion. Views diverged also regarding the issue whether ongoing practical work should have more emphasis and a higher number of lessons; while three fourths of the professionals supported the idea, the majority of the students were rather negative. Opinions corresponded where the three domains of the academic training (conductive pedagogy, methodology and medical biology) were considered equally essential in conductor training and the need for a more proportionate, 1/3 – 1/3 – 1/3 division of lessons was stressed. Consensus was found also regarding the view that acquiring conductive practice was more significant for becoming a successful conductor, thus opportunities for gathering experience in the practice as manifested in hours should be more commensurate with the theory.

In addition to the attitude scale, responses appearing in the interviews stressed the specialities of the training i.e. the high number of academic and practical lessons, practice orientation and the opportunity to gather experience, which, in accordance with result based learning, provides the opportunity for students to find employment immediately after graduation and enables them to start service without the need for further practical training, building on their
own experiences, independently and responsibly. Students deem the current proportion between academic and practical training contents appropriate and the training efficient.

The formulated proposals for a revision of the training as follows:

- harmonisation of contents: revision of how theory and practice can be built one upon the other and harmonised;
- updating and improvement of academic training, integration of missing contents;
- revision of external and internal practicums with regard to changes in the spectrum of symptoms appearing in the practice area;
- revision of the entrance procedure.

4.2 Findings of time series analysis

1. Changes in views regarding the conductor’s role and activity

a. There are changes in conductor candidates' views regarding the conductor's role and activity during their studies.

Our hypothesis i.e. that there are changes in conductor candidates' views regarding the conductor's role and activity during their studies was verified with the help of the attitude scale, the concept map and the metaphor analysis.

I examined the development of students’ views regarding the conductor's role and activity first by comparing the answers given by first year students who had just entered the training and evaluations provided by fourth year students approaching graduation, applying an attitude scale (N=59). Evaluating the outcomes I found that by the end of their training students’ beliefs in respect of the following had consolidated: The conductor is a pedagogical specialist who provides comprehensive personality development, has a promoting role, is capable to efficiently pursue his/her activity in the educational, health and social spheres, must have a thorough grounding in conductive pedagogy, medical biology and methodology and works successfully both in homogeneous and heterogeneous teams.

The above views are in harmony with the theoretical principles appearing as the elements of the conductive educational system which underlies conductor training:
- comprehensive personality development holistic approach (Pető, 1955; Hári-Horváth-Kozma-Kökúti, 1991; Beck, 2008; Feketéné Szabó, 2011; Földesi, 2014; Benyovszky, 2015, Schaffhauser, 2016);

- homogeneous / heterogeneous team work (Hári, 1991; Pintér, 2002; Medveczky, 2004);

- efficiency in border areas (Balogh, 1994; Medveczky, 2004; Szabó and Hevér, 2011);

- knowledge of border areas essential for the activity (Hári, 1973, 1982, 1991; Feketéné Szabó, 2013);

- consolidation of acknowledging pedagogy as a primary specialist area (Hári, 1980, 1982).


In respect of views concerning the conductor’s role and activity, however, we can observe that some opinions, that are not necessarily in accord with the basic principles of conductive education and the training it underlies, have gained strength and their relation needs clarification.

- the roles as pedagogue and movement therapist are emphasised jointly (contrary Pető, 1955, Balogh, 1994; Feketéné Szabó, 2013);

- evaluation of the conductor as a professional providing movement therapy (contrary Hári, 1990);


Progress in students’ views regarding the conductor’s role and activity is apparent not only from the first to the last year of the training but also during its process, changes and shifts can be observed from year to year (N=16). In respect of eight questions changes occur continuously and point in one direction (increasing or decreasing); in four cases we can see a variant of that, i.e. except one diverging, deviating value the changes in views are regular in direction. In five cases I found varying, irregular, fluctuating differences in the pattern of values. In one case the annual mean values stagnated.

- Conductors’ views emphasising the success of conductors’ developmental work comprising all age groups and the close interrelation between conductors’ activity and movement therapy became firmer and the changes were continuous and pointed in one direction.
- Changes were regular with one deviating value in students’ opinion interpreting the conductor’s role as a joint role as pedagogue and therapist and in their belief that conductors are capable to pursue their work in all professional domains.
- Fluctuating changes of irregular pattern were seen in students’ opinion according to which the knowledge of neurorehabilitation subjects are essential for the conductor’s job.

According to the findings of concept maps and metaphor analyses, first year students entering the training see the conductor dominantly as a helping professional, estimations as interdisciplinary professional and pedagogue are also accentuated. In later years this evaluation is somewhat realigned, in the second year the interdisciplinary quality is more emphasised in addition to the assistive and supernatural characteristics of the role. By the end of the training the concept of the conductor becomes more distinguished, in addition to the primarily assistive and interdisciplinary image views stressing the pedagogical, managerial and artistic-creative traits also emerge. There is a transformation also in beliefs concerning the conductor’s activity during the training; students emphasised the interdisciplinary nature, complexity and multifacetedness as specialities of the occupation; students’ views highlighting the pedagogical character of the activity became more definite. In interviews made with fourth year students numerous qualities of the conductor’s role were underlined, reinforcing the outcomes of metaphors and concept maps, according to which the conductor appeared as a helping professionals in most of the identical interpretations.

b. The number of years spent in service has no impact on views regarding the conductor's role and activity.

The results of the survey verified the hypothesis according to which the number of years spent in service had no impact on the views of conductors and academic staff regarding the conductor's role and activity; irrespective of the number of years they spent as practising pedagogues, their estimations of the role and the activity were similar.

Regarding the conductor’s role unanimousity was found in the views of professionals, responses in this respect showed a similar distribution in all generation groups. Minimal differences were seen between the opinions of the different age groups only in respect of two questions regarding the role and two regarding the activity. The group of professionals with the longest time in service shared the opinion that the knowledge of neurorehabilitation subjects was essential for the conductor’s job. Concerning the question as to whether the
conductor can be more efficient in a homogeneous team consisting of conductors only, the group of novice professionals had a different view. Only one fourth supported the high rating of the homogeneous team while half of the medium group and more than half of the most experienced group agreed that work in a homogeneous team could be more efficient.

In respect of evaluating the conductor’s activity there were only two questions where generational views varied: about two thirds of the youngest professionals disagreed with the opinion that leisure, recreational and special extracurricular activities should have more emphasis during conductive education while only one third of both the medium and the most experienced group rejected this possibility. The medium group proved the least enthusiastic about strengthening the role and importance of school instruction contents during their conductive educational activity while in both the beginners’ and the most experienced group the majority supported the idea that more emphasis should be placed on the academic domain at school.

2. Changes in views regarding the general and personal motives determining the choice of the conductor profession as a career

_During conductor training there is a transformation in conductor candidates' beliefs regarding the general and personal motives determining the choice of the conductor profession as a career._

The outcomes of the attitude scale _did not verify this hypothesis_. The findings were that views regarding the general motives determining the choice of career remained unchanged throughout the training; in some cases further new elements emerged such as the impact of positive pedagogue models and work experience as volunteers, however, the _results revealed_ that _there had been no significant changes in students’ views even in the upper years_, since every year _commitment for the profession_ and the _liking for working with children_ were _indicated as the two strongest factors determining the choice_. A shift can be observed in the consolidation of views since the mean values increased in respect of both factors. If we add the outcomes of the interviews we can ascertain that our students join in the belief that those with maximum commitment to the profession, an open mind towards accepting diversity and giving top priority to working with children are most likely to have success with their work and remain in this profession.
The analysis of freshmen’s views regarding their own decision for the conductor profession provided the experience that choosing conductive education as a career was based on carefully considered and determined career orientation and targeted interest. The ranking of respondents’ personal motives of choice was similar to the ranking of general motives. Occupying children and commitment to the profession took the first and second places among first year students; beliefs were similar in the other years as well, the same two factors were highlighted without any significant realignment.

In summary we think that among young people choosing conductive education as a career the interest in the conductor profession developed early, their choice of career was carefully considered and conscious and their career identity was reinforced by the training. Finding employment in the conductor profession was unanimously seen as a primary aim by the respondents. In spite of the determined choice of career many of them thought they had had limited knowledge of the characteristics and specialities of conductor training.

3. Changes in views regarding integration and inclusive education

There are changes in conductor candidates’ views regarding integration and inclusive education during conductor training.

The hypothesis was verified by the survey, there are considerable changes in student conductors’ views regarding integration and inclusive education.

The development of students’ views concerning integration and inclusive education was first examined by comparing responses from first year students entering the training with estimations from fourth year students approaching graduation adopting the attitude scale (N=59). Evaluating the outcomes I found the following:

- Views recognising integration as the aim of conductive education got stronger as did opinions stressing the role of sport and leisure occupations in supporting and preparing for integration. Estimations of conductive education as a possible way of integration reflect a strong belief that remained unchanged.

- Views emphasising the necessity of interval conductive education in respect of developmental milestones remain static, as do beliefs that conductive education has a repository of tools that can be adapted for supporting integration.

- The estimation of conductors’ efficiency in implementing inclusive education decreased, the evaluation of mainstream institutions (kindergarten, school) in respect
of their suitability to admit children with CP and to provide for them appropriately was also less favourable. Opinions that integration is possible for every child with CP also got weaker.

Development in students’ views regarding integration and inclusive education was seen not only between the first and the last year of the training but also in the course of the training, from year to year (N=16).

- Students’ opinions are not particularly favourable as to what extent mainstream institutions are prepared for accepting children with CP and become even more manifested as they progress through the training. Students increasingly disagree with the view that conductive education’s repertoire of tools is adaptable to integrative education.
- There are changes in students’ opinions towards greater insecurity as to whether conductors are successfully prepared for inclusive education; likewise, views supporting conductive education in the group setting start to differ but still show strongly supportive evaluations.
- Students’ beliefs concerning the importance of sport and leisure activities in respect of integration gain strength, as they do concerning the question whether all children with CP can be integrated. There were changes in students’ views regarding the possible minimum length of conductive education, turning into supportive beliefs by the end of the training.
- Students are insecure about the preparatory effect of conductive education for integration, even though preparation for inclusion and integration is emphasised as the aim of conductive education and conductive education is regarded as a path leading to successful integrative education.

4. Changes in views as to whether the conductor profession can be acquired

There are changes in conductor candidates' beliefs during the training as to whether the conductor profession can be learned

The outcomes verified this hypothesis. There were changes in students’ views as to whether the conductor profession could be learned, their opinions based on both individual and independent experiences and assignments and practical situations became more resolute, as did their views in favour of learning from each other. Opinions stressing the importance of
practical training, of learning from experienced professionals in practical situations gained strength and became a conviction. In students’ eyes the acquisition of the conductor profession is not absolutely attached to studying academic contents, the theoretical foundation and the strong practice orientation are deemed much more favourable.

Students’ evaluations comprised proposals regarding the revision and updating of the training. They recommended that the organisation and monitoring of practicums be revised, academic courses be updated and expressed a demand for a more efficient harmonisation of theory and practice in respect of content and time.

4.3 Findings of correlation analysis

My correlation analysis entailed analysing answers given to 380 questionnaires completed by students and conductors during the four year period of the survey (starting in the autumn of 2013), thus the sample for analysis also included responses to the questionnaires filled in as part of the cross-sectional examinations and the time series analysis. Variance analysis, cross-tab analysis and correlation were adopted primarily as methods of the correlation analysis.

1. I employed cross-tab analysis for examining the correlation between knowledge deemed essential for the conductor’s activity and emphasis on certain contents of the training, looking for significant connections between knowledge elements and elements of the training.

- There is significant correlation between the emphasis on neurorehabilitation subjects and the opinion as to whether all three domains of the training are equally important for becoming a successful conductor. The chi-square significance is 0.000 i.e. less than 0.05 which is the limit; Cramer’s V value which determines the strength of association is 0.213 i.e. the association between the two variables is of medium strength. 71.4% of those deeming neurorehabilitation subjects essential agree with the view that the number of lessons of course units in the domains of conductive education, teaching methodology and medical biology respectively should be equal. Thus those who definitely agree to a greater emphasis on neurorehabilitation subjects are more likely to favour an equal distribution of lessons among the three fields.

- There is a correlation between respondents’ opinions as to whether neurorehabilitation subjects are essential and whether they think that the total number of lessons should be divided more proportionately, to 50-50%, between academic course units in conductive pedagogy and medical biology versus foundation course units in
methodology and subject pedagogies (general pedagogy, psychology, educational science). The chi-square significance that measures the association between responses to the two statements is 0.005 which is below the 0.05 threshold value which means that the correlation is significant, while Cramer’s V value is 0.176 thus there is a weak association.

- **Positioning neurorehabilitation subjects as essential is correlated to the degree how much the respondent agrees with the opinion that conductive pedagogy – medical biology course units together have a disproportionately low share of lessons (1/3) opposed to the 2/3 of methodological-subject pedagogical and foundation course units.** The chi-squared test showed that the significance of the correlation between the answers to the two statements was 0.005 while Cramer’s V value was 0.173, thus the strength of association in this case was low. 68.8% of pro-neurorehabilitation respondents agreed with the view that the number of lessons dedicated to medical biology and conductive pedagogy contents was too low as opposed to the weight of methodological and foundation subjects while the proportion of those who shared this view was 55.6% among those placing less emphasis on the significance of neurorehabilitation lessons. It is obvious in respect of this question also that basically the majority of both groups are in favour of changes in the proportions among the types of subjects but the majority that supports the idea has a higher proportion among those preferring neurorehabilitation.

- Finally, there is a significant correlation between whether the respondents agree with the instructional-educational subjects being essential and whether in their opinion the division between the number of academic lessons in conductive pedagogy and medical biology and the number of lessons in founding subjects i.e. methodology and subject pedagogies should be more proportionate i.e. 50-50%. The chi-squared test measuring the significance of the correlation between the two variables provided a significance of 0.00, thus the correlation is significant since the value is lower than the 0.05 limit. Cramer’s V value is 0.208, that means that the association is medium strong. Within the group supporting the importance of neurorehabilitation subjects a smaller proportion, 13.9% are in favour of the 50-50% division while in the group positioning neurorehabilitation subjects as less essential 32% agree with the said distribution. Most respondents share the view that basic studies on instruction and education are indispensable. Among those, however, who are less positive in this relation, the occurrence of views according to which all three domains (course units in conductive
pedagogy, teaching methodology, medical biology) would deserve equal shares of lessons in the training, is lower.

2. Correlations between the interpretation of the characteristics of the conductor's role and activity and conductors' self-image

- A significant correlation can be found between considering the conductor primarily a specialist of movement development and giving tasks promoting motor development a dominant role while accomplishing conductorial tasks. The F-test provided a significance of 0.000, on the basis of the eta squared the role variable accounts for 8.5% of the heterogeneity of the factor score.

- Someone who thinks that conductors' primary area is pedagogy will probably consider the time dedicated to learning within the children's daily routine important and academic, instructional tasks dominant (corr=0.335). The same applies to the movement promoting role, since respondents who look upon the conductor as a specialist providing movement therapy are more likely to think that contents related to motor development should prevail in their work and endeavour to design the programme accordingly, giving priority to promoting motor skills. It is an interesting correlation that respondents who view the conductor as a person who is capable to develop children at any age i.e. to influence the child's progress have much greater ambition to set independent developmental goals and estimate themselves as autonomous professionals shaping the programme actively. Active conductors who prefer to intervene regard their profession as a determinant factor of the child's progress (corr=0.258 and corr=0.203).

- There is a significant correlation between conductors' attitudes to present themselves as active and aspiring to shape the programme and emphasising the indispensability of neurorehabilitation subjects, the significance of the F-test is 0.001 and the eta squared which indicates the association between the two variables suggests that the explanatory variable, in this case the emphasis on the indispensability of the neurorehabilitation subjects, accounts for 6.9% of the heterogeneity of the variable of the conductors' active self-image. Analysing the mean factor scores of the groups we can find that the more someone agrees with the statement that "knowledge of the neurorehabilitation subjects is indispensable for the conductor's job", the more they will look upon themselves as active conductors.
3. Correlation between personal choice of career and characterisation of the conductor:

- We can see from the findings that the association between the responses "commitment to the profession as a motivation" and "dedication as a characteristic of conductors" is much stronger than average. It is no surprise either that those having work experience as volunteers emphasised interest and open-mindedness among conductors' features; neither is it particularly remarkable that the correlation between applying to the training for the love of children and sociability as a feature of conductors is high.

- Those who decided for this career in the hope for a secure employment opportunity or due to being afflicted have greater tendency to think that competences related to management, directing and organisation are crucial for conductive educational work.

5 Summary, conclusions

(1) Students' concept of the conductor change as their progress through the training, by the end of the training opinions stressing further educational, managerial or creative features related to the role emerge in addition to the emphasis on the supportive, assistive and interdisciplinary character of the job. There were changes in students' views during the training also regarding the conductor's activity; in respect of its nature candidates highlighted complexity and the presence of interdisciplinary competences, by the end of the training students' opinions stressing the pedagogical aspect of the conductor's activity became more explicit. The number of years spent in service has no considerable impact on the views of conductors and academic staff regarding the conductor's activity and role.

(2) There were changes in students' opinions regarding the acquisition of the conductor profession, views based on individual and independent experiences and assignments as well as those originating from practical situations and supporting learning from each other became more explicit by the end of their studies.

(3) Even though to a small degree but also professional views regarding inclusive education and integration tend to change and develop.

(4) Beliefs regarding general and personal choice of career did not change with progress through the training, students upheld the opinion that young people including themselves decide for the conductor profession primarily because they are committed to the profession and like working with children. Some new motives emerged among the factors influencing
the choice of career e.g. the effect of positive pedagogue models and work experience as volunteers which may affect young people's decision for the conductor job but had no impact on the weighting of the opinions.

(5) Conductor candidates are sensitive, open-minded and empathic towards recognising and accepting individual needs and special educational needs already at entry to the training, as a result of the training this becomes final by the time it ends.

(6) The views of conductor candidates and professionals participating in the training partly diverge in respect of conductor training and the role of certain contents in the process of becoming a conductor, especially regarding the emphasis on the role of conductive pedagogical contents and some issues concerning the number of lessons and proportions of academic and practical courses.

6 Proposals

(1) Considering that beliefs regarding the future profession, activity and the concept of the pedagogue may develop primarily as a result of the training and during the training, it would be essential to provide opportunities for detecting student conductors' views, reflecting on these and following changes, either integrated in the content of the training or as a starting point for new view studies.

(2) The findings of the present study should be employed for founding and supporting new surveys regarding student conductors' career orientation, identity and professional self concept.

(3) Outcomes of the study should be utilised for possible future strategic development of the training also as a compass for ideas concerning updating the training, in particular for improving practical training and rendering it more efficient.

(4) In reflection to the results a revision of the training would be reasonable, on one hand for current contents to be reviewed, for theory and practice to be built one upon the other and contents to be harmonised, on the other hand for new contents to be integrated through steps to enhance the training. Within this process a revision of the current contents of the training, an organisatory updating of academic and practical courses and a review of proportions between certain elements (numbers of lessons, study frames) would be recommended.
(5) Contents of the training should be enhanced and structured to offer new knowledge elements and to improve participation realised in activities. Goals include information on interdisciplinary competences, on areas of rehabilitation conductive education may affect, acquisition of the practice of programme design and advancement, students’ active participation in real tests concerning the conductive education process, information on the latest special aids and other innovative opportunities and therapies.

(6) A revision of the practicum parallel with revising and setting the limits of own competences, giving priority to opportunities, kindergartens, schools and institutions where integrative, inclusive education is realised for children and adults with special educational needs and CP.

(7) The opportunity to meet future candidates, applicants to the training in person prior to admission would be useful for the training as well. Therefore we would recommend a revision and renewal of the admission process for conductor training where, in addition to the general aptitude tests, preconditions for admission would include a so-called personal discussion as a more specialised criterion of suitability.
7 Reference list


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**Conference presentations**


