Abstract: Theory of universal music learning, according to Gordon, is mostly directed at teachers. The text aims at showing the aspect of the application of E. E. Gordon's theory into early music education teacher's professional training in Kazimierz Wielki University in Bydgoszcz in Poland. The author recognises the importance of shaping research competences of future teachers as they help students use not only practical (pedagogical), but also methodological and empirical work of E.E. Gordon's theory. The text presents also the conclusion from research on the application of E.E. Gordon's Theory of Music Learning, carried out by students of early school and music education in Kazimierz Wielki University in Bydgoszcz in Poland. It is important to emphasise the fact that research has been conducted according to Gordon's procedures. Researching the Gordonian implications in Polish music education refers to its selected elements within the range of application of research problems, theoretical implications and selected diagnostics solutions in early music education (also E.E. Gordon's tools). The main idea of the text revolves around more and more popular aspect of making university and teachers training innovations and relations very practical (in Polish universal music education). Such expectations are taken into consideration in Muzopolis project - described in this text - from its begining has been the field of practical and empirical application of the elements of E.E. Gordon's theory with the use of staff and student team cooperating in the Faculty of Music Pedagogy of the Kazimierz Wielki University in Bydgoszcz environment

Key words: Theory of Music Learning by E.E. Gordon, applicability, action research, audiation, music aptitudes, informal music guidance, early music education model

Introduction

This paper covers the international implications of educational issues affecting the identity of Polish music pedagogy. They refer to the discussion in the music educators describing the need for innovation in the multilateral music education of a child. This thought is further justified by the direction of heterogeneous thinking about education, which emphasizes the need to open to the novelty in the effective recognition and use of the child's abilities. Optimization of child development activities dealing with music should encourage, as suggested by reports of research, development of key components of the research potential, creative incentive (including in the framework of the so-called flow effect) and social (Mó nks, 2008, pp.79-85; Csikszentmihalyi, 1996). Studies in the theory of education is increasingly pointing to a crucial role of socio-cultural learning as predictor of the second row after predictors resulting from congenital, but insufficient capacity of the capital of factors (Heller, Perleth, 2008, pp. 173-190). Such intensive activities in formal and informal environments of the child's education. As a result of the daily experience of music by the child: in the family home, at school, in the media, on the street, etc. (Folkestad, 2006, pp. 143-144) his "personal" resource of associations in musical achievements of culture is developed. The role of forming a cultural heritage is very important. These are primarily members of
the basic formal and informal environments, namely: the family and the school. As a result of actions of people creating the daily "community of musicians" (Schütz, 2008, pp. 233-237) are formed musical experience of children and the associated sense of intense education: at home and at school.

Such intensity, according to E.E. Gordon, ensures the implementation of the sequential model of teaching and learning music at home, kindergarten and school (Gordon, 2005: 64-66; Zwolińska, 2008, pp. 7-8). Thesis of E.E. Gordon implied in Polish realities concern the emphasis on the social aspect of music education focused on audiation. Such an approach, in Polish music education system turns out to be clearly innovative and is firmly confronted to traditional music educators137. On such basis, the environment of the Chair of Music Education at the University of Bydgoszcz for several years has been implementing proprietary music education model based on the concept of learning music theory of E.E. Gordon. It makes that Gordon's implications in the theory and practice of Polish music education are the subject of research and implementation of education as a response to the need for innovative development of Polish music pedagogy.

**Gordon's model of music education - reception of the Bydgoszcz environment**

Music education model based on assumptions of learning music theory by E.E. Gordon is an innovative model in Poland (Zwolińska, 2008, pp. 7-8). Achieving the objectives and content is described in the alternative Core Curriculum of music education (Zwolińska, Gawrylkiewicz, 2007, pp. 17-19). This model takes into account the specificity of the role of the learning ability of music as a multidimensional construct. In this adaptation of Gordon's concept are very important the implications of other well-known psychological and teaching concept, as the model of J. Renzulli, F. Mönks, Munich Model of Abilities of K. Heller and co-workers as well as the ability of R. Millgram model (Renzulli, 1986, pp. 51 -92; Heller, Perleth, 2008, pp. 173-190; Mönks, 2008, pp. 5). Gordon's idea of creating music learning ability is the subject of many years of research at the University of Bydgoszcz. They aim to develop a systematic application and create Polish conditions for implementation of E.E. Gordon theory in Poland. Bydgoszcz school model is mainly the audiation model. This means that audiation is the basis to derive innovative music education goals (Gordon, 2005, pp. 63-66, 82). Audiation requires the student to perform more complex mental activity than perception. It requires primarily the acquisition of assets competence on the following levels: differentiation and inference. We audiate only when we are able to recall and

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137 Contemporary music education in Poland is in reality an area of multiple “contention, contradictions and controversy” (Białkowski, 2003, s. 253-256). However, these features have already become a permanent element of a process of identifying optimal solutions for contemporary music education. A search for the conceptual apparatus related to contemporary music education seems to be situated on the frontier of three currents of thinking about Polish music pedagogy, frequently defined as a result of risky simplifications as: traditional (Z. Kodaly, S. Suzuki), progressive (E. Jacques-Dalcrose, C. Orff, S.N. Coleman, E.E. Gordon), and intermediate (J. Mursell, K. Swanwick).
understand what we noticed, felt and finally distinguished earlier (Gordon, 1999, pp. 127-130). This is a prerequisite for implementation of educational purposes in this model.

Teaching music through the development of audiation should cover the longest possible period of educational interactions (Gordon, 1980). In the model of Bydgoszcz school shall be tested first three stages of the expected six stages of education, adapted to Polish realities: stage 1 - 2 (0-5), stage 3 (class 0-3 of primary school), step 4 (class 4 - 6) stage 5 (class 1 -3 of gymnasium), stage 6 (class 1 - 3 of high school) (Zwolińska, Gawryłkiewicz 2007, pp. 16-20). Chair of Music Education Centre at the Kazimierz Wielki University in Bydgoszcz implements the concept of pre-school and early childhood music education (stages I-III), but in terms of Core Curriculum entirely based on the theory of E.E. Gordon (Zwolińska, Gawryłkiewicz, 2007). This takes into account the correlation of main goals of activities in relation to the specifics of developing audiation at the early stages of child development. Hence the implemented model of music education became the basis for the development of key competences of students preparing to work with very young children. Such preparation concerns the skills of combining theory and practice in scope of key competences acquired by music educator, ie. didactic, researcher and popularizer of the theory (Kołodziejski, 2012, pp. 357-371), (Tab.1).

Table 1. Purpose and content of early music education based on Music Learning Theory by E.E. Gordon

<table>
<thead>
<tr>
<th>OBJECTIVE: To develop audiation or musical thinking</th>
<th>STAGES I - III informal and formal learning / Family education, kindergarten and early school education</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCOPE OF PRACTICAL CONTENTS</td>
<td>SCOPE OF SHAPING AND UNDERSTANDING THEORETICAL TERMS AND SYMBOLS OF MUSIC</td>
</tr>
<tr>
<td>Differentiation</td>
<td>Distinguishing between melody and rhythm structures</td>
</tr>
<tr>
<td></td>
<td>Melodic-rhythmic layer</td>
</tr>
<tr>
<td></td>
<td>Processing and performing musical themes</td>
</tr>
<tr>
<td></td>
<td>Reading music:</td>
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<tr>
<td></td>
<td>Singing with notes of sound themes based on relational solmization</td>
</tr>
<tr>
<td></td>
<td>Saving audiated music</td>
</tr>
<tr>
<td>Reproduction</td>
<td>Singing individual themes, songs and simple polyphonic forms</td>
</tr>
<tr>
<td></td>
<td>Sonic layer</td>
</tr>
<tr>
<td></td>
<td>Developing sensitivity to the sound of musical instruments (symphony orchestra)</td>
</tr>
<tr>
<td></td>
<td>Implementation of the musical movement forms</td>
</tr>
</tbody>
</table>
Playing simple themes, melodies and rhythms on school instruments | Explaining the construction of music | Knowledge of the construction AB, ABA songs, roundabouts, variations

<table>
<thead>
<tr>
<th>Creation</th>
<th>Performing the variations taking into account progression at different scales and metre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Implementation of techniques: phrasing, dynamics, agogics with knowledge of the harmonic context</td>
</tr>
<tr>
<td></td>
<td>Elements of vocal or instrumental improvisation with knowledge of musical context</td>
</tr>
</tbody>
</table>

Source: (Zwolińska, Gawrylkiewicz 2009, pp. 17-20)

The following issues are important in implementation of the program requirements (tab. 1):
- analysis of audiation skills development,
- analysis of individual differences in the level of musical ability,
- sequencing of activities by Edwin E. Gordon strategy,
- organization of musical vocabularies in contact with the child's social environment (parents, schools, the media),
- stimulating the development and educational needs in the field of development of application, intuitive, reconstructive and creative thinking in music.

Music Learning Theory of E.E. Gordon is aimed primarily at teachers. Therefore, the model is expected to support the activities of innovative thinking music (audiation) of students as future teachers. It was noted that in achieving results in this area, in addition are important the personal experiences shaping their students colloquial knowledge in the field of teaching and learning music. This often proves the role that is attributed to a common and whole-life thinking about music education (Polkinghorne, 1988; Gordon, 1999, pp. 329; Lamont, 2011, pp. 370-381). Various approaches of students to think about early education suggests the importance of different solutions based on the application of common sense knowledge and intuition of a student, reconstructive and creative production of new quality in the education of the child (Fish, 1996). This leads to questions about the development of musical thinking compounds (audiation) with development of application, common sense, reconstructive and creative thinking. Using such suggestions was developed a model in which the development of musical thinking (audiation) accounts the types of approaches to thinking about education indicated by Delly Fish (Figure 1). It was decided that the approach of students to a holistic music education of a child can reveal their natural propensity to innovate in working with children.
The point is not to consider any of the types of thinking about music education (Fig. 1) as a major area of development of audiation and on this basis shape the main thinking of students on music education of the child (Fish, 1996, pp. 21-26), but it consists in the possible recognition of specific applications pragmatic elements of E.E. Gordon theory and its concepts, theorems, methodologies, measurement tools (application thinking) in Polish educational practice in order to bring about changes with the creative, innovative nature (creative thinking), but often rejecting the traditional organization of activities (critical-reconstruction thinking). The role of experience and current knowledge of students in this field is also important, because it shapes their intuitive thinking and colloquial pedagogies (Bruner, 2010, pp. 74-76).

Studies of E. Zwolińska indicated that the applicability of this model is also important as a specific reference - next to generativeness and verifiability - for the scientific study of the cognitive components of the status of the theory of E.E. Gordon (Zwolińska, 2011, p. 83). Such use of Gordon's implications in the audiation model of music education, so called Bydgoszcz school, became the basis of research and development conducted in the Department of Music Education at the Kazimierz Wielki University in Bydgoszcz. Innovation of implementation of the Bydgoszcz model of music education based on the development of audiation takes into account three variants: research, teaching and popularizing variant.

Research variant

One of the areas of research activity is to encourage employees of the Chair focused on scientific movement of students of Pedagogy and Early Music Education by Edwin E. Gordon. Studies on the effectiveness of specific applications of E.E. Gordon theory are conducted with the participation of students in the educational and research project Muzopolis. This project is an area of implementations, analyzes and diagnoses in the framework of graduate seminars at the department. Scientific movement of students, who, under the specialized academic areas analyze E.E. Gordon theory, makes such analysis are
also enriched by the research "topic". The purpose of diagnosis was to learn the parents' opinions on different aspects of teaching and learning music during the time children and adults spend together, in particular:

1. absorbing, understanding and processing elements of everyday knowledge about the musical development of a child,
2. applying selected practices of developing musicality in children independently (such as teaching by experiencing tonality, rhythm, knowledge about music (concepts), human relationships (encouraging soloists, organising group activities, group dances, free music making sessions with adults, etc.) and
3. self-evaluation of musical guidance in the field of tonality and rhythm referred to the practice of teaching music to children through the experience of tonal and rhythmical structure: research aspects: ability to develop the sense of melody and rhythm (in fragments or as a whole); ability to develop the sense of tonality (e.g. in the major/minor categories) and rhythmical structure (metrum, tempo); ability to develop the sense of a central note (tonic, macrobeats); quality and frequency of singing with children and for children; imitating and modelling tonal and rhythmical motifs (simple, consisting of two or three notes); ability to choose songs in different keys and tonalities; rhythmical capabilities; developing preferences for melodies in children (forming the skills of comparison and choice).

Developing research competence of students (Kołodziejski, 2012, pp. 357-371) includes currently reported in Poland demands of employers to create a platform for cooperation of students with environment of education practitioners to generate and promote innovative implementations. It can be assumed that the research activities undertaken by students for the benefit of Gordon's applications of musical development strategy actually meet these expectations. The research activity of the staff and students in this field is to have the importance of innovative "audiation development lab" and to be a specific response to the needs of the key mission "of the university in practice".

**Teaching variant**

Author's specialty of the academic education of future teachers created in the Department of Music Education in Bydgoszcz is the only such project in Poland. Model of organization of the curriculum of learning and subjects consists in the full adaptation of the theory of E.E. Gordon in the field of: definition of learning outcomes at a university, implementation of the forms and structures of subjects, the selection of literature, taking into account current research results in the area of audiation theory. Thus, students can earn degrees in the only center in Poland.

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138 A self-evaluation survey was carried out among parents, teachers and students regarding their understanding and ability to incorporate different practices of musical guidance for children aged 0-7. Focus was on understanding and incorporating different practices that help children learn music by experiencing tonality, rhythm, knowledge about music and social relationships. Respondents were recruited from three groups: 1. Parents of children aged 0-7 (recruited randomly from a group of parents of children from a municipal nursery school and a group of parents participating in the Muzopolis educational-research project), and 2. Nursery school teachers (from the municipal nursery school) and teachers participating in the Muzopolis educational-research project in UKW in Bydgoszcz.
which conducts statutory research in the field of theory of E.E. Gordon. The implementation of this model requires the definition of teaching practice program that will use the knowledge, skills and competences of students in the Gordon's range (Tab. 1, Fig.1). It is worth noting that the appearance in 1994, of the specialty of study and its implementation in the structures of the university in Poland is proof of positive implementation of two key processes shaping the identity of Polish music pedagogy: i.e. the process of institutionalization of disciplinarization and knowledge. This is an important prerequisite for the analysis of the development of Polish science of music education.

**Popularizing variant**

Bydgoszcz model of music education by E.E. Gordon theory also includes a variant of popularizing the theory, research, and development of own educational solutions. Therefore, a very important matter in this model, are the training programs and educational concerts as an alternative module of music popularization classes for amateurs, parents, children, music fans, music school teachers. Such training and programs are implemented in a formal education and research project MUZOPOLIS whose assumptions refer to the popularization of practical music learning theory of E.E. Gordon in the environment of educators interested in music. MUZOPOLIS project includes practical alternative forms of training programs and a program of intensive music classes of children at nurseries kindergarten and primary school. Muzopolis project programs serve primarily children and parents who participated in the classes together, shape and implement the optimal conditions of music popularization among children through activities in the field of active perception of melody and rhythm. Students take part in the project as assistants and volunteers. They complement their academic preparation through observation and design of teaching situations with the use of strategies, methods, objectives and theoretical base derived from the theory of learning music.

**Conclusion**

Parents and teachers of small children are responsible for developing children's ability to make music. The adults should work with the children to achieve full understanding of music and its tonal and rhythmical context. This context is very important for natural development of musicality in children, as emphasised by E.E. Gordon in his progressive analysis of teaching music to children. This has also important implications for teacher training practices, so that they understand the process of learning music and are able to stimulate it, making use of the possibilities provided by the natural, social environment of the child. This environment consists of adults, who have their musical competences, musical knowledge (Crişciuc 2014, pp. 46-53), personal theories on education and relevant strategies (Lamont 2011: 370-381). Knowledge about the educational resources supplied by the community, its musical competence, heritage and language, as well as the role of human relationships, become essential to optimising social teaching of music.
Researching the Gordonian implications in Polish music education refers to its selected elements within the range of application of research problems, theoretical implications and selected diagnostics solutions in early music education (also E.E. Gordon's tools) (Bonna and all., 2014, pp. 7-19). The main idea of the research revolves around more and more popular aspect of making university and teachers training innovations and relations very practical. Such expectations are taken into consideration in Bydgoszcz School Model described in this text - from its begining has been the field of practical and empirical application of the elements of E.E. Gordon's theory with the use of staff and student team cooperating in the Faculty of Music Pedagogy of the Kazimierz Wielki University in Bydgoszcz environment

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