

ASSESSMENT OF MUSIC LITERACY AMONG SECONDARY STUDENTS

Foundation of development in Hungarian music education

The theoretical foundations for this development in Hungarian public education are to be found in Zoltán Kodály's system of music pedagogy according to the National Core Curriculum. The feedback coming from schools about the experiences of music education in public schools articulate problems in effectiveness. The present research intended to map all the factors that influence the effectiveness of music education, i.e. the development of music literacy in Hungary.

Kodály emphasizes the importance of music education for not only all students, all grades in compose of education systems but he also intended to distribute music into the wide audience of lay people. The compulsory education can be introduced to provide access for musical experience. Music education is compulsory from the age of 6 (at the beginning of the elementary school) to 16 (upper grammar grade). The work of developing skills can be conducted in both elementary and secondary education, from years 1 to 10, according to the descriptions of the National Core Curriculum (NCC, 2003). This is in accordance with Kodály's conception. He considered the age from 6 to 16 as the most important flexible period for enriching and developing musical skills. The importance of this system is getting communication with various music activities for example singing folksongs, practicing in a choir.

So most of the ideas expressed in Kodály's concept have been embedded into the National Core Curriculum. There is a domain called 'Arts' and the *music education* is one of the fields within this compulsory national core curriculum field. Music education intends to transmit and at the same time in order to form, enrich values attitudes and effects music education would like to provide the so-called *musical experience*.

In our research we aimed at assessing students' *musical literacy*. These various educational objectives together can be considered as the basis for so-called literacy (Csapó, 2002). We define musical literacy deriving from Kodály's educational aims and phenomenon. This term literacy is used in accordance with other fields of literacy used in national and international

surveys like mathematical science or reading literacy. We define literacy as a system of factual knowledge, skills, abilities, attitudes in a given field.

We have seen that Kodály's pedagogy has a relevant effect on the national curriculum in Hungary and this NCC expresses goals and aims expected by both music education teachers and by the wider sense of the society. This societal requirement determines the role of music education at public schools. This is a kind of mediation between the musical norm-giving function, and modulate the tendencies of youths' musical taste.

The theoretical background of this study is provided (1) by the exploration of the societal context of Hungarian education by the analysis of musical constituents, (2) which is based on the findings of cognitive psychology of music and (3) by the description of the attainable music literacy in public education, setting the standards for measurement. The pillars of these standards are provided by Kodály's system of music education and the Hungarian National Core Curriculum.

(1) In this regard, one can observe the content and direction of new value orientations that have emerged while knowledge has been acquired to an ever lesser degree in school. The line of thinking evolves from an analysis of the dichotomy found in comparing the world of school with the subcultural context of entertainment (*Mészáros, 2003*).

(2) Secondly, the domain of musical components was analysed. The work of exploration in this field was based on findings in cognitive music psychology (*Deutsch, 1999*). This approach suggests that the process of music cognition is directed by the activity of schema recognition in cortical brain functioning, hence musical activity may be related to the development of thinking skills with isomorphic structures (*Shaw, 2004*). Consequently, the development of music skills might also affect the development of operational thinking (*Barkóczi-Pléh, 1977*).

(3) Thirdly, the criteria and system of requirements for music literacy that can be attained in public education are described with the purpose of laying the foundations for measurement in the field. In this section, Zoltán Kodály's music pedagogy is summarized. The basic principles of this system of music pedagogy are manifested here, including a start in early childhood, lessons conducted as a community activity, based on singing and rooted in traditional music, and use of the tonic solfa (*Bónis, 2007*). Further in this section, the descriptions of the National Core Curriculum on music education are reviewed. It perceives music education as part of the key competency of aesthetic and artistic awareness and expression. It places the experience of music in the centre of music education and provides detailed requirements in the chapter on development tasks.

Research program

The aim of our research is making empirical investigation for assessing students' musical literacy (Dohány, 2009). The sample: N=178 (62 boys and 116 girls) consisted of upper secondary school students from grammar schools and secondary technical schools. It was a nationwide representative sample. By the gender and the level of their studies in this sample there were two subsamples, one for the special classes with advanced level of music education three (n=88) these were all grammar school classes, and the other was a quasi control group of them (n=90), who received a normal level of music education, concretely one music class per week and the advanced level classes three. Nevertheless we intended to measure the output of the compulsory music education, so what level the students can reach at the end of their compulsory music education studies. The instrument of the research is a paper-pencil test. There were two paper-pencil tests given to students; one looked like a usual socio-cultural background questionnaire containing 20 questions with 120 items but it contained special and relevant questions. The test of musical literacy contained 14 questions, 103 items. The study has several parts and the summarized results have answered all the concrete *research questions*. These were as follow:

(1) What level do the upper secondary school students reach at the end of their compulsory music education?

(2) To what extent they have their knowledge from school and to what extent from out-of-school sources (tv, music clubs, mass media)?

(3) Is there any difference between the advanced-level and regular level students with respect to musical taste and values?

(4) Is there any difference - in students' attitude - among different fields of music making experience?

As example some general questions of the test are presented (Item 1) in which the students' attitude to music and their abilities to cultural knowledge were studied.

Item 1

In percentage write in the presence of pop and classical music in your own „consumption!

Pop music	%	Classical music	%
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(Pop music: 81%; Classical music. 19%)

The relation of the two parts of this result confirms our hypothetical guess about Hungarian youth's musical taste and the inefficiency of norm-giving function at school.

The next sample item (Item 2) is about grouping authors from various fields of arts.

Item 2

Group the following authors and composers according to the fact that who lived in the 19th century.	
a) W. Shakespeare b) J. S. Bach c) Béla Bartók d) Ferenc Liszt e) Leonardo da Vinci f) Mihály Munkácsy g) Puskin h) Eiffel i) Voltaire j) Darwin	a
The grouped letters:.....	

(Shakespeare: 90.4%; J. S. Bach: 60.7%; Bartók: 39.3%; Liszt: 73%; Leonardo da Vinci: 91%; Munkácsy: 62.9%; Puskin: 39.3%; Eiffel: 52.2%; Voltaire 80.3%; Darwin: 51.1%)

The question was: Who of the fames lived in the 19th century? So this question measures purely, merely factual knowledge about different actors. The further the names are from the current historical time, the higher level the factual knowledge is. The results contain the percentage of students' correct answers.

The distribution of the sum scores of the musical literacy test

The assessment of the music literacy test is represented by these sum scores. Mean=39.16; standard deviation=14.58; and the Cronbach-alpha=.93 a reliability coefficient is more than sufficient.

All the items of the paper-pencil music literacy tests contained items based on the National Core Curriculum objectives. There were various kinds of items. Some asked factual knowledge, others about notation skills and there were although practical listening skill tasks.

According to the first research question the mean of scores expresses the answer. The maximum score available is 103, and the mean of students' final score is 39.16. The expectation of the test contains the minimal requirements of the NCC in the fields of music education. Students are far from reaching the minimal requirements.

Some data about the subsamples and their results on the musical literacy test represent the structure of the sample chosen. There are two obvious factors by which subsamples can be created: the first is the gender of the students. There are some stereotypes about the gender differences and contrarily to the expectations there was no significant difference between boys' and girls' achievement on the musical literacy test. The second obvious factor is whether someone learns music at an advanced level in special classes in grammar schools or at a normal or regular level and in accordance with previous expectations those who learn at advanced level have significantly higher points. All the items of the paper-pencil music literacy tests contained items based on the National Core Curriculum objectives. There were various kinds of items. Some asked factual knowledge, others about notation skills and there were although practical listening skill tasks.

And now some results from the background-questionnaire which gives us the answer for the second research question. The previous scores represented the measurement of Hungarian students' music literacy – it was the first research question. After that we observed the components of it following the second research question. Moving to the next one (Item 3) the students were asked about the extent of their knowledge.

Item 3

Mark the importance of where your music knowledge comes from. (Put a circle around the appropriate number: 1 - the least, 5 – the most)

from your friends	1	2	3	4	5
from media	1	2	3	4	5
from school	1	2	3	4	5
from your family	1	2	3	4	5
from your studies at School of Music	1	2	3	4	5
from live events like concerts	1	2	3	4	5
other musical activities	1	2	3	4	5

(*media: 3.77; friends: 3.51, school: 3.11, family: 2.63, school of music: 2.20*)

The sources of musical literacy how the students consider the importance of different sources they considered mass media as a very important source of musical literacy and their studies at school of music as the least source. On the contrary, the Kodály system, where school and family play important roles in forming values and literacy, in students' opinion school

and family and the non-compulsory musical school education play a little role as source of their musical literacy. The numbers show us the means of each and every item. After correlating them with the students' final scores we got that students' mentioning media and friends as most important source performed worst. So media don't fill the role of music literacy transmitter.

Attitude to school subject (Item 4) is the next relevant part of the research.

Item 4

How much do you like the following subjects? (Put a circle around the appropriate number: 1 - the least, 5 - the most)

English as foreign language	1	2	3	4	5
Biology	1	2	3	4	5
Music	1	2	3	4	5
Physics	1	2	3	4	5
Informatics	1	2	3	4	5
Hungarian Literature and Grammar	1	2	3	4	5
Mathematics	1	2	3	4	5
Visual Culture	1	2	3	4	5
Physical Education	1	2	3	4	5
History	1	2	3	4	5

(English: 41.6%, History: 32.6%; Visual Culture: 29.8%; Literature: 28.7%; Physical Education: 24.7%; Informatics: 24.2%; Music: 23.0%; Biology: 18.0%, Mathematics: 16.9%, Physics: 6.2%)

The results contain the percentage of students choosing the school subject as their favorite.

One possible reason why school plays only a limited role from their musical literacy can be the rather negative attitude to school music education. As you can see from the next table there are some quite popular subjects in the school, these are English (as foreign language), History, Visual Culture, and as you might have expected Physics, Mathematics, Biology which considered as difficult subjects in the upper secondary school are among the least popular subjects, but unfortunately music as a school subject belongs to this second group, namely to the least popular subjects in school. And there are several possible reasons for it. For example due to the limited hours per week that are dedicated to music education teachers often insists

on transmitting the factual knowledge into theoretical analysis of the curriculum. And there is a little or no connection between the students out of school experiences. Again we divided the sample into two groups according to two factors, first according to students gender girls prefer music lessons significantly at a higher level at school. On the other hand, comparing the advanced level and regular students the similar pattern will appear. When aiming at making students more attracted by music as a school subject we tried to reveal the structure of classroom activities (Janurik, 2007). According to the fourth research question most of students haven't got musical experiences at school. Experiences making music - *Flow* - according to Csíkszentmihályi (2001), flow is considered to be an optimal state in which skill and perceived level of challenge match.

Students were asked also about their music making experience, how do they like the different parts of music lessons - singing folksongs; learning new songs; learning theory and history of music; reading music (use of tonic solfa) -.

According to the cluster analysis we found that different parts of music lessons have different potential. Solmisation is the least preferable activity in the lessons and listening to music is the most preferable. Among the high level activities are the folk songs, learning new songs and the content knowledge about music. What is more interesting suggested by classic analysis and it is shown that there are three clusters of these five activities. Singing folk songs and learning new songs are connected very closely and then the theoretical knowledge and listening to music are connected in the second cluster and solmisation which is the least preferable activity belongs to the first cluster. For me it means that listening to music is inevitably the most popular activity but the theoretical musical knowledge is in a cross connection with these preferable activities why ideas from assessment that based on the preferences towards listening to music in theoretical content knowledge can be carefully attached to this practical activity. Students find them similar in their preferences.

Finally (Item 5) we observed the tendencies of youths' musical taste. Since we have revealed that listening to music is a very popular activity in music classes but it's a new research question: what kinds of music they would equally listen to.

Item 5

What kind of music do you like? (Put a circle around the appropriate number: 1 - the least, 5 – the most)

folksong-like	1	2	3	4	5
artificial folksong-like	1	2	3	4	5
operett	1	2	3	4	5
musical	1	2	3	4	5
folk music	1	2	3	4	5
opera	1	2	3	4	5
classical concerts	1	2	3	4	5
retro-hits	1	2	3	4	5
pop	1	2	3	4	5
dance	1	2	3	4	5
rock	1	2	3	4	5
hip-hop	1	2	3	4	5
RnB	1	2	3	4	5

(Opera: 1.8, operett: 1.9, artificial folksong: 2.1; folksong-like: 2.2; classical concerts: 2.3; folk music: 2.4; musical: 4.0; dance: 4.2; r'n'b: 4.2, hip-hop: 4.3; retro: 4.5, pop: 4.7, rock: 4.9)

Correlating the means of the items with the students' final scores on the music literacy test *pop, dance hip-hop and r'n'b* show significant negative correlation with the scores but rock music (only which has positive correlation with them) tends to be the one among light music styles which could transmit music literacy to young people. So as the third research question expresses the advanced level students' score show significant positive correlation with musical taste.

Summary of the fragments of our research

The observed fields of musical literacy have minimal level requirements in the NCC but students' level of literacy is far from being sufficient in these fields. The research represents that students' average achievement level is far from reaching the curricular minimal level. Our research is an empirical investigation to bring evidence about and to support teachers' work. All our statements show the students' negative attitude. Due to the time limit the teachers face the fact that they are challenged by this obstacle. Enriching the objectives teachers still insist on providing strong academic

theory-based approach but as we can see from the results students would much prefer listening to music and we know that they usually would like to listen to popular music. It is a possible reason of students' minimal level in music education. Making conclusion our current challenge is how to match these two needs, how to merge providing theoretical background and developing skills and at the same time maintain students interest in music.

The special situation of teaching music in public education is best expressed by a quotation: "*Music is Cinderella among school subjects. On the other hand, she is the one who is taken by the Prince and the shoe fits only her foot.*" Zoltán Kodály.

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