

# SIGNIFICANCE AND EFFECT OF EXTERNAL FACTORS ON THE FORMATION AND SHAPING OF INDIVIDUAL/SUBJECTIVE MUSICAL THOUGHT IN THE SPHERE OF ELEMENTARY MUSIC THEORY

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**Abstract:** In his research, the author investigates the extent/ratio of abstraction or visualization in affecting the formation of musical thought, which may lead to the question as to what extent the theoretical knowledge helps the performing practice, and vice versa: does the perception of the selected instrument, and if so - to what extent, can help to more confident knowledge of elementary theory of music? The research is based on the author's personal experience in the years-long teaching practice.

**Key words:** elementary theory of music; graphic and auditory perception; elementary solfeggio teaching methods.

Avenues of the formation and shaping of musical and music-related thought, which is a prerequisite for music-related and musical expression, are complex and – just as any other kind of thought, susceptible to various internal and external effects. Although many systems of teaching methods and procedures of group acquisition and mastering of the educational tasks given have been established in the course of history, and having that the fundamental disposition of music art is in the sphere of abstraction, creativity and inventiveness, it is evident that any result achieved is individual, and thus a subjective one. These considerations brought forth the issue of the significance and the effect of some external factors to the divergence of performance in the area of elementary theory of music within the same population. The research was conducted by means of an anonymous survey questionnaire. The survey comprised of questions on the most elementary theory of music pertaining to:

1. Determining the key and mode,
2. Theoretical approach to intervals and chords,
3. Analytical singing of scales, intervals and chords,
4. View on enharmonics, and
5. Support in the selected instrument or another mnemotechnical aid.

The basic research hypothesis was that the formation and shaping of musical thought in the area of elementary education could be affected by:

- Technical performing characteristics of the instrument selected by the candidate,
- Visual component in terms of graphic / notation symbols or the visualization of “keys”,
- Another mnemotechnical aid.

Respondents were required to explain the way of solving differently set tasks, and therefore the target sample includes students, since they could give the most mature and most specific responses. Respondents included are students of the Academy of Music of University of Sarajevo, and of Academy of Music of University of Montenegro in Cetinje. A significant and interesting question was how all these things are manifested in players of different instruments: keyboard/tempered, strings, winds, etc. A question that could also be interesting is whether the selection of solmization in solfeggio classes affects, and if so – how, the formation of musical thought, since students in Bosnia and Herzegovina are mostly educated on the “Movable Do” solmization system, while students in Montenegro were typically taught according to “Fixed Do” solmization system. At the Academy of Music of University of Sarajevo, a total of 113 students were surveyed. As the main instrument, students reported a keyboard instrument (piano and accordion) 50 (44%), stringed instrument 20 (18%), wind 24 (21%), guitar 14 (12%), and voice 5 (4%). Out of the total number, 30 students (25%) report that they are naturally good at solfeggio and theory, 40 (33%) report that they have no problems with these courses because they practice enough, while 48 (42%) were not satisfied with their performance in these areas. As many as 102 (90%) respondents believe that solfeggio is very important for a musician, and 58 (51%) would like this course to be available in all years of study.

At the Academy of Music of University of Montenegro in Cetinje, a total of 41 students were surveyed. As their main instrument, students reported a keyboard instrument (piano and accordion) 23 (55%), string instrument 6 (15%), wind 8 (20%), and guitar 4 (9%). Out of the total number, 14 students (35%) report that they are naturally good at solfeggio and theory, 7 (17.5%) report that they have no problems with these courses because they practice enough, while 19 (47.5%) were not satisfied with their performance in these areas. As many as 37 (90%) students believe that solfeggio is very important for a musician, and 21 (51%) would like this course to be available in all years of study.

Thus, the entire sample of 154 respondents is representative in any respect. Although the questionnaire was anonymous, it is known that it was filled in by students of all years of studies and of all departments of both academies. Since the respondent groups are not the same by number, the percentages indicating

the representation by instrument that are approximately the same were excluded. Interestingly, both groups of students provided similar answers in terms of percentages, and the concordance of students' views on solfeggio throughout the studies at academy is significant, as well as the fact that students' self-evaluations on their performance in this course would probably match the instructor's assessment of the given students' achievements.

The question of the reliability of the responses obtained is always open, due to the respondents' interests and the anonymity of the survey. The modulus of providing explanations gives the impression that most respondents took the survey seriously, while only few responses reveal that the respondents had not been interested in the survey and have given incomplete or indefinite responses. Not everybody responded to all the questions set, and some gave a few responses to one question; therefore the numbers of responses per individual question do not match the total number of respondents.

1. To the question about determining the key, two thirds of the total number of students report that they determine minor accidentals through the parallel major. It could be the inertia from early days of education since everybody seems to have learned the circle of fifths/fourths in this way. However, in this way a minor "sticks" in perception as a derivative of a major, which it is certainly not? A few incorrect responses were also recorded, which can be due to a lack of gravity in approaching the survey. A few descriptions of mathematical association of types G major 1, G-flat major  $1 - 7 = -6$ ; D major 2, D-flat major  $2 - 7 = -5$ ; F major 1, f minor  $1 + 3 = 4$ , etc. At the academic level, these calculations are indeed unnecessary. The remaining responses pertain to imagining playing (keyboard) 5, visualization of the keyboard 4, using accordion basses 2, visualization of the positions on the guitar 1, and by ear 1.

With respect to determining the mode, most respondents (58%) do it through the major or minor scale of the same name, and it is the optimum solution. A smaller percentage (18%) determines the mode only through the corresponding major, and a few mistakes were recorded in this respect. However, 14% respondents report that they do not know or understand this subject matter. Besides, a smaller number of respondents (10%) consider tetrachords and semitones in the scale. Responses in this area are somewhat more heterogeneous compared to the previous question, which may be understood as due to a different approach and treatment of modality. Only the few responses that consider modes as altered major or minor scales are unacceptable.

2. With respect to the theoretical approach to intervals and chords, the survey reveals that for respondents the ascending and descending direction of an interval is not "the same". Keyboard visualization is less used compared to finding one's

way in the notation system. Most respondents (73%) reported that they count ascending intervals according to a position in the scale, and that they mostly look for descending intervals by means of inverted intervals. Only few students (17%) calculate intervals by counting degrees, which is also unacceptable. Interestingly, only one response reporting that intervals are viewed in the context of the functionality of harmony has been recorded. The remaining responses are as follows: I know them by heart (9), I imagine the keyboard (4), "I hear them" (1), I know it from literature (1), through violin (1).

With respect to the approach to chords and inversions, most responses pertain to counting constituent intervals (58%), while 32% focus on the position of the chord in the scale. Only four solutions imply the context of harmony, while three rely on the sense of hearing.

3. The question that pertained to singing scales and other analytical structures (intervals and chords) revealed different methodological approaches. Most Sarajevo students (46%), who were educated according to the movable solmization, would sing scales using the solmization unburdened with the absolute pitch. A total of 12% of them would also use the sense of hearing in terms of tone functionality, though not absolute pitch as well. A total of 6% would use alphabet, 17% neutral syllable, and 17% solmization with obligatory interval control. Students from Cetinje, who were educated according to fixed solmization, would certainly sing scales with solmization (83%); nonetheless, since this system would require an additional backing, 55% of them would rely upon hearing, 12% would control intervals, and 5% would use standard pitch. In case of Sarajevo respondents, analytical interval singing also indicates reliance on "tonic do" solmization, where an interval is placed in the context of the corresponding key (40%). A total of 19% of them rely on hearing or associations. Still, 37% rely on calculating intervals or on inverted intervals. Only one response views intervals in the context of a harmonic function, e.g. sixth as the framework for a 6/4, seventh as the framework for septachord, etc. A similar ratio is true of various chord structures.

Cetinje students mostly (45%) rely on calculating intervals or inverted intervals, 29% on hearing or associations, while 14% view intervals in the context of a harmonic function. In singing various chord structures, over 85% respondents rely upon the constituent intervals.

4. A very interesting question is about enharmonics (C-sharp major  $\neq$  or  $=$  D-flat major) and it resulted in many different responses. Both respondent groups provided fairly similar and uniform responses, and in this case they could be compared according to the selected instrument. Out of a total of 71 keyboard instrumentalists, 73% resolutely report that they are the same, 13% that they are

and are not the same - depending on the kind of instrument (i.e. it is the same on keys but not on string), while 14% believe that it is certainly not the same - referring to intonation, timbre, psychological effect, etc.

A surprising percentage of string players (36%) also believe that it is the same, although 64% argues that it is not. Wind players are also divided: 57% believe that C-sharp and D-flat major are the same, while 43% claim that they are not. Among guitarists, 57% responded 'yes' and 43% 'no', while the percentages are inverted among solo singers. Since it is really a complex question which requires informed discussion, it can be claimed that students are still aware of the issue of enharmonics, particularly given the facts of the instruments they play.

5. To the question as to whether in some segment of analogous solfeggio (theory, listening, singing) the link with the instrument can be of help, 86% respondents answered affirmatively. As expected, all keyboard instrument players visualize the keyboard, which is also true of several other instrumentalists, which is also expected since all of them underwent the minimum education in the piano before reaching the academic level. All accordionists imagine standard basses on the accordion, since they are aligned according to the circle of fifths/fourths, which is always a convenient memory aid. Stringed instrument players also rely on the instrument by string tuning, or some positions. In any case, there are associations, fairly strong ones.

### **Conclusion**

Having in mind the overall findings obtained through the survey questionnaire, the relevance of surveyed population, and the reliability of the obtained responses, we can draw the following conclusions:

1. It is evident that there is an effect of external factors (in this case the selected instrument and notational graphic symbols) on the formation and shaping of individual musical thought in the sphere of elementary music theory, although it is not the decisive one.
2. By their informed responses, respondents (students) have revealed a fairly good understanding of the elementary music theory. What students did not show (at least in the survey) is a possibility of a more comprehensive view of elementary components, e.g. intervals as part of harmonic thought, chords as determinants of the key - which they do not have to be; although in elementary education one always starts from the sphere of tonality-based thinking. It was disturbing to find views such as: that modes include altered major and minor, that minor is actually a major though from the "sixth tone", or that some phenomena are categorized only because "it says so".

3. In analytics, the “ascending” and “descending” motion of the same interval is definitely not the same. In most cases, it is experienced as a completely new reasoning activity, which is perhaps closer to the musical truth.
4. Although the tendency to orient oneself by keys is an omnipresent one, respondents’ reactions and perceptions can still be grouped as in relation to the instrument they play, which makes sense. We can confirm a partly different approach to the subject matter among players of different groups of instruments. Other non-tempered groups orient themselves according to the tuning of strings on the instrument, some specific positions, etc. Besides, visualization of notational system was also observed. There are no other mnemotechnical aids except that a few separate cases reported phonomime; however, these are exceptions that, in this case, cannot be considered as the confirmation of a rule.
5. Orientation by means of solmization is evident, since this procedure is significant for shaping reasoning in the early education. However, regardless of the significance of solmization for the formation of musical personality, in later education one should still focus on the global auditory perception and neutral syllable in singing, because educational tasks are different. A certain number of respondents who were educated on the “Movable Do” solmization system revealed an over-dependence on solmization, which is unnecessary at the academic level. When using the “Movable Do” in the sphere of imagination, respondents seem intuitively/musically more confident, while when using counting of intervals or other more specific procedures they seem to be more confident in relying on notational graphic symbols, which makes sense. On the other hand, in respondents educated on the “Fixed Do” solmization system the opposite was observed – solmization does not imbue confidence in expression, but they rather require an additional mental support. This also makes sense because the “Fixed Do” solmization provides different information from the “Movable Do” solmization. These are two completely opposite approaches, which is the most evident in analytical singing. In both cases, musical associations, ranging from well-known melodies and musical phenomenon to a wide array of various other forms of applicability, are an important support.
6. Given that the respondent groups were inadvertently equal in terms of percentages, the concordance of responses and views for the most of the survey questions is indeed above any expectation.
7. Out of the three hypotheses set in the beginning of the research, two can be confirmed: the effect of technical-performing characteristics of the instrument that a respondent plays and the visual component in terms of graphic/notational symbols, or even more frequently visualization of the keyboard affect the formation and shaping of musical thought.

8. It should be noted again that the research is based on the author's experience; over his years-long teaching practice and continuous communication with students, the author has strived to point to the complex issue of the perception and shaping of musical thought, where the auditory sphere is at least as important as the visual one. The paper is not intended to prove the advantage of either of solmization systems, since this issue is too complex and would require comprehensive and longer study. Therefore, the paper avoids references to possible similar studies in the psychology of music, or achievements of didactics in music education.
9. The survey results could be interesting primarily for teachers who are in authority for music-theory literacy and mastering basic concepts and phenomena in early music education.
10. For the end, we singled out a few interesting questionnaire entries that have aroused the pedagogue's attention:
  - "While I sing a major with an open vocal, I feel happy. While I sing the parallel minor, I hear it as a chord." (a solo singer)
  - "G – A is the biggest whole tone of the keyboard..." (a pianist)
  - "Harmony on the guitar is far simpler for the eye than harmony on the piano." (a guitarist)
  - D-flat = C-sharp: "They are the same, pianists know it best." (a violinist)
  - D-flat ≠ C-sharp: "Psychologically, I distinguish between them by sound and timbre." (a pianist)
  - D-flat ≠ C-sharp: "I 'see' C sharp minor as dark blue, D flat major as red." (a guitarist)
  - D-flat ≠ C-sharp: "D flat major is calmer, more stable; C sharp major is restless, it is not balanced." (a pianist)
  - D-flat ≠ C-sharp: "When I sing, I perceive the augmented prime differently from minor second." (a pianist)
  - D-flat ≠ C-sharp: "I, for instance, he needs to sing a diminished fifth chord g-b-d flat, he will sing g-b-c sharp since he hears better this way." (a pianist)

Having in mind that the research was based on the author's personal experience, as well as on the overall information obtained through the survey questionnaires, relevance of surveyed population, and reliability of obtained responses, it can be claimed that out of the three hypotheses set in the beginning of research, two were confirmed: effect of technical-performing characteristics of instrument played by the respondent, and the visual component in terms of graphic/notational symbols, or even more frequently, keyboard visualization affect the formation and shaping of musical thought. Besides the teachers involved in this subject matter, the paper could also be interesting for writers of future textbooks in terms of possible innovations and new contents.