Effect of the teaching piano sight reading program developed in accordance with the systematic learning on the sight reading skills of the music teacher candidates

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Abstract

The aim of this research is to test the effectiveness of the teaching piano sight reading program developed in accordance with the systematic learning on music teacher candidates’ sight reading skills at the piano. Teaching piano sight reading program which is based on systematic learning is prepared for this research. This program comprises ten units to be applied in ten weeks. The experimental method has been used for this research. Participants (N=12) in this research are third-year and fourth-year college students in piano performance majors during the 2010-2011 calendar year at the Department of Music education at Marmara University. The experimental method is modeled on the Pre-Test-Post-Test Control Group Design; students are assigned to two categories: the experimental group (n=6) and the control group (n=6). Groups are randomly divided into two categories with equivalent skill levels. The developed program which was prepared for this research is applied to the students in the experimental group whereas students in the control group keep following the regular curriculum. Moreover, pretests and posttests are applied to both groups. During the assessment process Observation Form was used as the research tool. As a result, students in the experimental group demonstrated considerable improvement in term of sight reading skills at the piano. In sum, it showed that the program, which is prepared for this research, outstandingly enhances music teacher candidates’ sight reading skills at the piano towards to the piano lesson compared to the music teacher candidates who are educated with traditional methods.

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1. Introduction

Music education is defined as a process of creating terminal changes in individual’s overall and musical behaviors deliberately and through one’s own musical experiences and (Uçan, 2005). Musical behavior is an extremely complicated product of cognitive, behavioral and psychomotor behaviors at different levels which react to stimulants related to the phenomena of music (Tarman, 2006). Playing the piano is a complicated activity where cognitive, psychomotor and affective processes are employed and requires a high level of skill. Piano is the most important factor in acquiring such skill (Gasmova, 2010).

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Piano education is offered to all music teacher candidates at every institution training music teachers. Owing to piano education, music teacher candidates are able to acquire piano playing skills required for music knowledge they will acquire for their musical education and for music teaching at pre-school education institutions and high school classrooms (Kasap, 2004). At the end of piano education process, music teacher candidates are expected to acquire basic pre-set behaviors and techniques for playing the piano and use the piano education they received at their active duty to the extent required (G. Otacıoğlu, 2005).

Music teachers who graduate from school with skills such as sight playing, accompanying, transposing, polyphonic playing, cadence playing, analyzing, improvising, playing together, and playing the choir and orchestra parts at the piano will be able to use the piano more effectively while teaching music to the students, accompanying them and accompanying choir, instrument or groups of instruments at the schools they will be appointed to (Kasap, 2005).

Sight reading that is defined as reading and playing a music writing which one sees for the first time without prior notice is a basic skill which student should acquire from the start of piano education (Çimen, 2001) and comprises a basis for acquiring the other functional piano skills.

When examining various researches concerning piano education of the music teacher candidates, it has been observed that the most important skill that needs to be acquired during piano education is sight playing, yet sight reading has been avoided during classes and students are having a hard time at sight playing (Buchanan, 1964; Coşkun, 2001; Çevik, 2007; Gün, 2007; Kasap, 1999; Kasap, 2005; Türkmen, 2008).

When looking into researches related to piano education, sight playing skills may be improved through education. However, no research which has been conducted in connection with development and application of sight playing within framework of a certain program during piano education has been encountered. By taking this as a starting point, it has been deemed necessary to develop an alternative piano education for music teacher candidates.

It is believed that acquisition of conceptual and applied knowledge and skills required to play a piano work at the first sight in the process of program of teaching sight-reading at piano to be developed based on systematic learning model will contribute to skills of music teacher candidates to sight playing at the piano, thereby, increasing psychomotor behavior levels. Systematic learning is a synthesis; this is a model where how all education strategies, methods and techniques will be used at the classes and are structured and presented (Sönmez, 2004; Sönmez, 2009). Principles on which systematic learning model is based are explained below (Sönmez, 2004):

1. No theory is able to explain learning and teaching completely on its own.
2. Each behavior, that is, cognitive, affective, psychomotor and intuitive characteristics may not be taught to an individual through a single theory, method and technique.
3. Each person is not able to learn the same behavior through the same strategy, theory, method, technique and tactic.
4. The human is unable to learn through a single method. Behaviors become more permanent when several activities are used together.
5. When level and quality of behavior changes, different strategies, theories, methods, techniques and tactics and ways of reasoning should be employed.
6. Unit may be taken as basis, not the course, in teaching. Target behaviors of the other courses may be caused to be acquired around a single unit.
7. It is possible to make the student acquire skills to find and uncover, understand, use and re-produce and create the knowledge.
Objective of this research is identification of effect of program of the teaching piano sight reading developed according to systematic learning on sight playing skills of music teacher candidates at piano. This research is important in terms of establishing a sight playing teaching model programmed for the piano education field.

Problem sentence of the research comprises “what is the effect of program of the teaching piano sight reading developed according to systematic learning on sight playing skills of music teacher candidates at piano?”.

The following hypotheses have been tested in line with the objective of the research:

1. There is no significant difference between experiment group's observation form pre-test scores and control group's observation form pre-test scores.

2. There is a significant difference between experiment group’s observation form pre-test scores and post-test scores.

3. There is no significant difference between control group’s observation form pre-test scores and post-test scores.

4. There is a significant difference in favor of experiment group between experiment group's observation form post-test scores and control group's observation form post-test scores.

2. Method

An experimental method was employed in the research. The experimental method is modeled on the Pre-Test-Post-Test Control Group Design. Participants (N=12) of research are composed of students who studied piano at the 3rd and 4th classes during the 2010-2011 academic year at University of Marmara, Atatürk Faculty of Education, Fine Arts Education Department, Music Education Section. After examining equivalence of students, experiment (n=6) and control (n=6) groups have been formed by way of random assignment method. Within scope of this teaching piano sight reading program been applied to experiment group for the 3rd and 4th class piano classes of the fall season of 2010-2011 academic year, usual teacher-centered, conventional education continued at the control group.

3. Data Collection Tool

Within scope of this research, “Observation Form” developed by the researcher with regards to measurement of target and behaviors established for psychomotor field within framework of teaching piano sight reading program has been employed. Observation Form composed of 24 items is composed of five sub-dimensions:

A. General Principles
B. Sound
C. Rhythm
D. Technique
E. Musical.

Expert opinions have been used in formation of Observation Form. Assistance has been received from a jury composed of lecturers specializing at both pretest and posttest in order to establish sight playing skills of participants (N=12). Each observer has made scoring independently according to the items included in the observation form by observing and listening to sight playing skills of students. Three piano works composed in different eras and with different styles have been determined in order to evaluate sight playing skills of the participants. Respective lecturers have confirmed that these pieces have not been performed by study group before. Observers have scored
each one of the three pieces separately. Expert opinions have been scored based on Likert type scale. Items have been arranged in the form of Likert scale of 5 and rating from 1 to 5 has been made (1-Not adequate at all, 2- Barely adequate, 3-A little adequate, 4-Quite adequate, 5-Completely adequate). Scores of experts have been evaluated individually and it has been determined whether or not there are differences between observers based on Spearman Brown Rank Differences correlation coefficient.

| Observers  | 1st Observer | 2nd Observer | 3rd Observer | 4th Observer |
|------------|--------------|--------------|--------------|--------------|
| 1st Observer | .889         |              |              |              |
| 2nd Observer | .860         | .914         |              |              |
| 3rd Observer | .936         | .821         | .967         |              |
| 4th Observer | .929         | .983         | .757         | .798         |

A significant correlation has been found in terms of scores given by the observers for the Observation Form (p<.01). There seems to be no significant differences among the observers in terms of scores given by them.

4. Experimental Treatment

Based on the method of research, teaching piano sight reading program covering 10 weeks and composed of 10 units has been prepared for the music teacher candidates based on systematic learning. In preparing the program, first of all, selection of subject for ten weeks has been made;

1. Concepts and Principles Related to Sight Reading
2. Interval Studies
3. Harmony Studies
4. Rhythm Studies
5. Technical Studies
6. Musical Studies
7. Musical Structure Studies
8. Studies of Solo Piano Works
9. Concepts and Principles Related to Accompaniment
10. Studies of Works with Piano Accompaniment.

Afterwards, targets and behaviors in line with the related topics have been established and content of classes has been prepared based on “systematic learning”. In this scope, daily course plans have been shaped in five steps such as A. Formal Part, B. Introduction Part, C. Development Part, D. Closing Part, E. Evaluation. These steps are described below:

A. Formal Part: This part indicates, first, name of course, class, name of unit, duration, learning-teaching strategy and method, reference books and tools. Unit or subject pattern, main point, supportive points, and cognitive, psychomotor and affective targets and behaviors are discussed in this part.

B. Introduction Part: This part is made of different steps such as drawing attention, motivation, reviewing and transition to course.

C. Development Part: This part discusses interim summary and interim transitions. Behaviors that students taking piano classes will acquire may be acquired through use of appropriate strategy, method and techniques (G. Otacioğlu, 2005).
D. Closing Part: Final summary is made of re-motivation and closing steps.

E. Evaluation: This is the part made of questions related to target behaviors which course aims to make students acquire.

Expert opinion has been obtained in formation of units connected with 10-weekly syllabus of teaching program for piano sight reading based on systematic learning and target behaviors. Units cover one-hourly courses per week. Targets and behaviors contained in every unit have been prepared in a manner that will cover cognitive, psychomotor and affective field. Program so developed has been applied in the piano class process of the students who were at the experiment group. Researcher worked with each student included in the experiment group individually for one hour per week. Students of control group, however, continued their education with relative piano lecturers of the existing normal process.

Activities related to piano sight reading education are covered in the program. With regards to theoretical dimension of activities, a comprehensive reference scanning has been conducted in terms of music education in general and piano education in particular. With regards to applied dimension of the activities, a major part of piano literature has been scanned during the phase of determination of pieces and exercises, pieces written in different eras with different styles have been examined, opinions of experts have been obtained, and care was taken to make sure these musical pieces are suitable for level of the 3rd and 4th grade piano students. Also, respective lecturers have confirmed that study group has not performed the pieces and exercises so established.

5. Findings

In order to analyze pre-test and post-test data gained from experiment and control groups pertaining to each variable during the research, affiliated group Wilcoxon test has been applied. Also, in terms of independent variables established in the research, “Non-Affiliated Group Mann Whitney U test” has been used on pre-tests and post-tests in order to realize one way testing so that pre-experiment equivalences of the experiment and control groups and final levels they have reached following the experiment can be established. In this part, data derived from Observation Form of research have been listed in accordance with the hypothesis order of research, tables have been created and they have been interpreted.

5.1. Findings related to hypothesis 1 and interpretation

Hypothesis 1. There is no significant difference between experiment group’s observation form pre-test scores and control group’s observation form pre-test scores.

Table 2. Results of Non-Affiliated Group Mann Whitney U Test of Groups According to Observation Form Total Pre-Test Scores

| Groups   | n   | x  | U   | p   |
|----------|-----|----|-----|-----|
| Experiment | 6   | 14,50 | 97,50 | .275 |
| Control   | 6   | 16,50 |     |     |
According to Mann Whitney U test results of the groups conducted according to observation form pre-test scores, it is observed that there is no significant difference between groups (p>.05); and experiment and control groups are equal in terms of observation form total pre-test scores.

5.2. Findings related to hypothesis 2 and interpretation

Hypothesis 2. There is a significant difference between experiment group’s observation form pre-test scores and post-test scores.
Table 3: Wilcoxon Marked Ranks Test Results of Experiment Group’s Observation Form Total Pre-Test-Post-Test Scores

| Experiment group pre-test-post-test | Rankings | n | x   | p   |
|------------------------------------|----------|---|-----|-----|
| Negative                           | 0        |   | .00 |     |
| Positive                           | 13       | 6 | 8.00| .003|
| Correlation                        | 2        |   |     |     |

There is a significant difference according to Wilcoxon test results conducted between experiment group’s observation form total pre-test and post-test scores. These results indicate that teaching program for piano sight reading applied at piano classes is effective in increasing skills of students for sight playing at the piano.

5.3. Findings related to hypothesis 3 and interpretation

Hypothesis 3. There is no significant difference between control group’s observation form pre-test scores and post-test scores.

Table 4: Wilcoxon Marked Ranks Test Results of Control Group’s Observation Form Total Pre-Test-Post-Test Scores

| Control group pre-test-post-test | Rankings | n | x        | p   |
|---------------------------------|----------|---|----------|-----|
| Negative                        | 6        |   | 3.50     |     |
| Positive                        | 0        | 6 | .00      | .745|
| Correlation                     | 2        |   |          |     |

There is no significant difference according to Wilcoxon test results conducted between control group’s observation form total pre-test and post-test scores. These results indicate that control group educated according to usual process has not showed a significant increase in their sight playing skills before and after the training.

5.4. Findings related to hypothesis 4 and interpretation

Hypothesis 4. There is a significant difference in favor of experiment group between experiment group's observation form post-test scores and control group's observation form post-test scores.

Table 5: Results of Non-Affiliated Group Mann Whitney U Test of Groups According to Observation Form Total Post-Test Scores

| Groups | n | x | U    | p   |
|--------|---|---|------|-----|
|        | 6 | 19.43 | 53.50 | .000|
|        | 6 | 11.57 |      |     |

According to Mann Whitney U test results of the groups conducted according to observation form total post-test scores, there is a significant difference in favor of experiment group (p<.001). According to this result, it is observed that sight playing at piano skills of experiment group who received education program for sight playing the piano have increased in comparison to the control group who did not receive such an education program. This finding indicates that program for sight playing at the piano is effective in increasing students’ sight playing at the piano.
6. Conclusions and Suggestions

According to this research results, it is seen that program for sight playing at the piano is effective in increasing students’ level of sight playing skills at the piano. Following suggestions were put forward based on the positive and improving results derived from this research:

When looking into content of piano class content of Music Education Undergraduate Program (YÖK, 2006), sight playing dimension is offered room only at the 1st grade, however, sight playing dimension is neglected at the piano course of the other classes. “Teaching Piano Sight Reading Program” developed with this research was given to the students from the 3rd and the 4th grade for 10 weeks during the fall season and it has been proven that program is successful. Sight playing may be taken into consideration as target at the 3rd and the 4th class piano education. It is recommended that program developed be employed at piano education of the music teacher candidates. This program may be included in piano course. The program developed may be applied in the Music Education Undergraduate Program as a separate course or elective course. Program developed may be applied to the music teacher candidates by adapting to the 1st and 2nd grade levels, and its efficacy may be tested through experimental studies. Development of functional skills as well as technical and musical development of students should be considered. In this context, development of sight playing at piano skills of music teacher candidates may be considered. Likewise, piano exams may cover sight playing phase suitable for respective levels as well as technical studies and pieces. Experimental sight playing practices covering a longer process aimed at the music teacher candidates may be carried out. The program developed may be tried over a larger sample. The program developed may be adapted to the other instruments and its efficacy with individual instrument education may be tested. Effects of systematic sight reading studies on the other piano skills (accompanying, transposing, polyphonic playing, playing cadence, analyzing, improvising, playing together and playing parties of choir and orchestra pieces at the piano) may be researched.

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