

CHAPTER II

METHODS



Subjects

The subjects are 12 persons who have been qualified in Grade 6 of Electone Yamaha Grade Examination. They are the volunteers from 2 different locations of Siam Kolkarn Music Schools. They are willing to join the program and able to participate throughout the research study.

During the basic-knowledge/techniques of improvisation session, two subjects have dropped out. The rest are matched on the music improvisation performance scores gained from the test at the end of the improvisation session, then they are randomly assigned to either the experimental group or the control group, each of which consists of 5 subjects.

The reason in selecting qualified subjects in Grade 6 of Electone Yamaha Grade Examination are (1) They have enough musical knowledge and performing skills which are trainable to perform various factors of Electone improvisation. Normally, they have experiences in playing the electone for more than 4 years, (2) The improvisation in Grade 6 of Electone Yamaha Grade Examination requires at least 2 choruses of performance. A person has to make an arrangement of a given piece (16-32 bars). The qualified Grade 6 persons could bring and imitate the arrangement ideas of the well known piece to perform for the improvisation. For the improvisation in Grade 7, it requires 2 choruses arrangement from a given piece (about 16 bars). The improvisation needs some arrangement ideas, for example, changing the accompaniment patterns, registration, and some variation of the melody. But for Grade 8 and Grade 9 the improvisation requires only playing a given melody with an appropriate accompaniment as indicated by the chord names.

The length of a given melody is about 16 bars for Grade 8 and 8 bars for Grade 9.

The reason in studying the music improvisation with electone is that this musical instrument is becoming widely recognized by the people, and numbers of electone students are markedly increasing each year. All of this comes from its marvelous attractiveness. The instrument offers an incredibly wide range and depth of expressiveness. Using this single instrument, which is a recent creation of the electronic age, a wealth of musical expressiveness can be achieved.

Materials

Testing materials

Three testing materials (8 beat, 2 beat, and Latin style) were selected from Grade 5 improvisation of past Electone Yamaha Grade Examination (1986-1988). These tests were used throughout the studies.

Improvisation exercises

Sixteen improvisation exercises of Grade 5 were selected from Electone Improvisation Workbook Grade 5-4-3, and used in the treatment sessions.

Basic-knowledge/techniques of improvisation

This was adopted for teaching subjects about the basic knowledge and techniques of improvisation. The contents had been arranged in sequence of order starting respectively from (1) understanding the mood of the piece to play : tempo, rhythm, tone color, etc. (2) playing techniques : bass progression, counter melody, double notes, fill-in, fake; and (3) structure of the piece : introduction, chorus (1,2,3), ending. Examples and exercises were provided.

Marking sheet

The marking sheet is a checklist for the judge to assign score and give comments for each of music improvisation performance aspects. The evaluation of music improvisation performance consists of 4 dimensions : expression and dynamics, playing techniques, creativity in developing of the piece, and registration. Each dimension has equal weight of importance for the music improvisation performance. The total score of each dimension is 10, and the sum of all dimensions is 40. The evaluation criterion has been described in Appendix 2, and the marking sheet is shown in Appendix 3.

Self-regulating form

This self-regulating form is used for subjects in the experimental group during the treatment session. The subject has to set his/her target score of music improvisation performance before doing the improvisation performance and evaluate by him/her-self after the performance. The self-regulating form is shown in Appendix 4.

Feedback information form

This feedback information is used for subjects in the experimental group to record his/her achieved music improvisation performance score in each period of the treatment session. The feedback information form is shown in Appendix 5.

Music instrument

Yamaha Electone model HS-8 is used for music improvisation performance.

Microfloppy disk

The subject's music improvisation performance is recorded with 3.5 inch double-sided double-density (2DD) microfloppy disk. The recording has been done through Yamaha Music Disk Recorder model MDR-3 which is connected with Yamaha Electone model HS-8.

Stop watch

It is used for a preview session which allows 5 minutes for subject to look at the score given before starting the music improvisation performance.

Research design

This study uses the pretest-posttest control group design. The tests are conducted at the end of basic-knowledge/techniques of improvisation session (pretest), at the end of the treatment session (posttest 1), and at 4 weeks after finishing the treatment session (posttest 2).

Procedure

The procedure of this research study had been conducted in 2 major parts : (1) the basic-knowledge/techniques of improvisation session and (2) the treatment session. The teaching and learning situations of these 2 major parts were classified in group lessons. All of the lessons had been conducted by the researcher.

The basic-knowledge/techniques of improvisation session was carried on in order to let all the subjects acquire the contents requirement in doing improvisation. All of the subjects focused on basic elements, playing techniques, and structure of the piece. After this session, subjects were

tested (pretest). They were matched on the music improvisation performance score gained from the test, and then randomly assigned to either the experimental group or the control one.

For the treatment session, subjects in the experimental group were trained to develop metacognitive skills for use in music improvisation. This training was apart from the exercise training which was regarded as the conventional teaching way used in the control group. After the treatment session, all of the subjects were tested (posttest 1). The follow-up was carried out at 4 weeks after finishing the treatment session (posttest 2).

Music improvisation performance had been undertaken on Yamaha Electone model HS-8 being recorded with 3.5 inch double-sided double-density microfloppy disk through Yamaha Music Disk Recorder model MDR-3. The evaluation of music improvisation performance was scored on the marking sheet by a professional examiner of Yamaha Music Foundation, Japan. The only one examiner was required for this research study because the number of improvisation performance to be evaluated had quite a large amount (about 200 performances) and it took approximately 6 months for the examiner to work along with the researcher. The reliability in assigning scores of the examiner was checked before the pretest and after the posttest 2. Seventeen performances from the same improvisation piece played by electone students and teachers were used for the reliability check prior to the pretest by the examiner. For the reliability check after the posttest 2, its improvisation performances would be used. The inter-observers' correlation showed at 0.92 and 0.99 respectively.



(1) Basic-knowledge/techniques of improvisation session

The basic-knowledge/techniques of improvisation was taught once a week by the researcher for 8 periods. Each period included 2-hour group lessons. While in learning session, the factors in improvisation were taught to the subjects. After teaching each content, they were assigned to do the exercises corresponding to the content being learned. This was to assess understanding of the subjects in each content of the improvisation. The week after, having finished the eighth period, the subjects were finally tested.

The followings were the contents being taught in each period.

Period

- 1 understanding the mood of the piece to play - tempo, rhythm, tone colors, etc.
- 2 bass progression
- 3 counter melody
- 4 double notes
- 5 fill-in
- 6 fake
- 7 introduction and ending
- 8 structure of the piece

(2) Treatment session

The treatment session was conducted for both the experimental and control groups within the same period of time span.

1. Control group

The control group received only an exercise training which consisted of 8 periods. Each period involved 2-hour group lessons taught once a week by the researcher.

Two improvisation exercises were provided during each lesson, one for training the improvisation for all the subjects, and the other for the individual improvisation performance. They were tested the week after having finished the eighth period.

The lesson procedures of the control group were as follows :

1. The researcher passed out the first improvisation exercise at the beginning of a lesson.

2. Subjects were asked to look at the score for a moment, to sing the melody, and then to listen to the researcher's improvisation performance.

3. Subjects took turns playing one by one using the same techniques as performed by the researcher. When one subject played, the others listened and played only the accompaniments. The subjects played the first chorus one by one, then continued the second chorus individually again, and ended up at third chorus. The researcher played the introduction and ending, and conducted the group so as to control the steady tempo and the continuity of performance.

4. At the beginning of the second hour, the researcher passed out the second improvisation exercise.

5. Subjects were asked to prepare for the improvisation performance individually for 20 minutes.

6. Each subject performed the improvisation one after another (2-3 choruses with introduction and ending), using the second improvisation exercise. This performance was also recorded.

2. Experimental group

The experimental group received metacognitive plus exercise training. The purpose of metacognitive training was to inform subjects of the awareness and regulation of their cognitive processes in doing music improvisation. The training was provided for 8 periods. Each period involved 2-hour group lessons, taught once a week by the researcher. Two improvisation exercises, same as used in the control group, were employed for the training in the experimental group during each lesson and the subjects were tested the week after having finished the eighth period.

The training procedures in the experimental group were as follows :

(a) Introduce metacognitive training to subjects

The researcher informed the subjects to realize the significance and usefulness of metacognitive training. The researcher discussed problems in doing music improvisation and its evaluation criterion, and thereafter introduced training procedures to be used for improving one's music improvisation ability : identifying teacher modelling and group practising to train how to use 3 strategies for analyzing the piece (question-generating, clarifying, and summarizing), to give ideas for developing a piece, to perform improvisation and to evaluate the outcome. The subjects also learned to monitor, judge, and reward themselves. They were trained to use self-regulating form. This would be done within 2 weeks (3 times x $\frac{1}{2}$ hour) before starting the lesson. (Subjects in the control group were assigned to practise repertoire songs).

(b) Lesson procedures

1. The researcher passed out the first improvisation exercise at the beginning of a lesson.

2. Subjects were asked to observe and think while at the same time the researcher modelled the use of analyzing a piece (question-generating, clarifying, and summarizing), giving ideas for its developing, performing improvisation, and evaluating the outcome. The researcher used the think-aloud method to enhance explicit thinking processes. (Appendix 6 shows an example of the modelling procedures in details.)

3. Subjects performed the first improvisation exercise using the same ideas for developing a piece as modelled by the researcher. The performances were undertaken in the same way as already done in the control group.

4. At the beginning of the second hour, the researcher passed out the second improvisation exercise along with the self-regulating form to each subject and let each one of them set one's target score.

5. All the subjects practised the instructional procedures that had been modelled by the researcher, excluding for the improvisation performance and the evaluation of the outcome. The subjects were advised and encouraged to think, give ideas, make comments and discuss through training procedures.

6. Each subject performed the improvisation individually (2-3 choruses with introduction and ending, using the second improvisation exercise. This performance was also recorded. After the performance, the subject evaluated the outcome, then the researcher announced the achieved score to each of them. The subject judged comparatively the target score with the achieved one, then afterwards rewarded oneself.

Data analysis

1. Test for mean differences of music improvisation performance score in the experimental group and the control group for the pretest by using t-independent test.
2. Test for mean differences of music improvisation performance score in the experimental group and the control group for the test at the end of the treatment session (posttest 1) by using t-independent test.
3. Test for mean differences of music improvisation performance score in the experimental group and the control group for the test at 4 weeks after finishing the treatment session (posttest 2) by using t-independent test.
4. Test for mean differences of music improvisation performance score in the experimental group for the pretest, at the end of the treatment session (posttest 1) and at 4 weeks after finishing the treatment session (posttest 2) by using one-way analysis of variance with repeated measure. When differences between means occurred, test on differences between pairs of means by using Newman-Keuls method would be applied.
5. Test for mean differences of music improvisation performance score in the control group for the pretest, at the end of the treatment session (posttest 1), and at 4 weeks after finishing the treatment session (posttest 2) by using one-way analysis of variance with repeated measure. When differences between means occurred, test on differences between pairs of means by using Newman-Keuls method would be applied.

All the data analysis, utilized Statistical Package for Social Science : SPSS-X ; except the test on differences between pairs of means which had been separately calculated.