

Dimensions, Observation Object, and Process of Assessment of 2013 Curriculum-Based Musical Ensemble Teaching and Learning at Junior High Schools

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Abstract—Accuracy in the process of observing performance is an important part in achieving objectivity in learning assessment. Furthermore, this study aims to analyze dimensions, objects of observation, and assessment process in Music Ensemble teaching and learning at junior high schools. This research is conducted using mix-method research design. The combination of qualitative and quantitative methods is needed since both methods can complement each other during the process of preparing the assessment instrument and when conducting trials. The results show that: (1) the dimensions of object observation in the assessment include melody accuracy, rhythmic accompaniment, harmonic accompaniment, dynamism, and expression, and (2) based on the results, the assessment instrument for music ensemble teaching and learning are developed based on those dimensions, object of observation, and the assessment process in accordance with the required criteria.

Keywords—*aspects, object of observation, assessment, music ensemble*

I. INTRODUCTION

Music arts teaching and learning as a part of arts and culture course is a culture-based arts education. Thus, the 2013 Curriculum-based music arts teaching and learning at Junior High Schools or *Sekolah Menengah Pertama* (SMP) include all competence domains, be it the attitude (affect), knowledge (cognitive), and skills (psychomotor). The accomplishment of these three domains are summarized within the teaching and learning process which provide students with arts experience through such activities as appreciating, expressing, and creating music [1].

In relation to the three competence domains in music arts teaching and learning, assessment as one of teaching and learning components plays an important role. As a set of activities to collect, analyze, and interpret the data on student's learning output, the implementation of a systematic and continuous assessment would be meaningful for making decisions to attempt for improving the teaching and learning and determining the learning output [2] [3].

The implementation of the new 2013 curriculum at junior high schools which lasts even until recently has resulted in the change to teaching and learning process along with its assessment system. Therefore, the varied

conditions of schools and their existing resources have significant effect on the school's readiness in implementing this curriculum. Even until recently, many music arts teachers still find it hard to implement the teaching and learning and assessment practice they are expected to do. This is relevant with what Russell and Austin [4] who find that when the curriculum is changed not every teacher can necessarily receive technical guidance regarding the applicable curriculum standards. As a result, the assessment they are practicing is highly influenced by the teaching level and specialization they have previously practiced.

There are some priorities in this renewed education, such as: (1) scientific inquiry; (2) teaching and learning content and approach; (3) technology's role in curriculum; (4) assessment to refine teaching and learning process; (5) selection and identification of effective learning materials which complies with the established standards; and (6) development of a coherent educational program for all levels of education. Therefore, the application of authentic assessment as an alternative is expected to give a significant contribution to the improvement of the teaching and learning process in classrooms [5].

The performance assessment as a form of authentic assessment developed in this research grows after the influence of constructivism theory in learning begins to spread extensively. In the context of this theory, the interactions it deems as important in teaching and learning activities are those in the process, rather than the end product. Thus, all teaching and learning activities should pay attention to the process, including the assessment of learning output. The assessment in teaching and learning should be able to: (1) provide a meaningful learning experience to students; (2) be an integral part of student's learning process [5] [6].

Based on the researcher's personal experience when serving as an instructor in Teacher Professional Education and Training Program or *Program Pendidikan dan Latihan Profesi Guru* (PLPG), it is found that many teachers still find it hard in developing the assessment instrument for music arts teaching and learning based on what the 2013 Curriculum demands. Meanwhile, in reality, the number of music arts teachers who have gotten the chance to attend the

training on 2013 Curriculum implementation has not been proportional to the existing number of music arts teachers.

These varied conditions of teachers are also revealed in the research we have previously conducted. Among music arts teacher at junior high schools, there are still priority differences in setting goals and learning outputs for their students. 20% of them still think that students' skills in playing musical instruments or singing a song shall be the main priority in music arts teaching and learning. 30% of them argue that the knowledge of music arts and its relation to many cultural dimensions shall be the main priority. Nevertheless, most teachers (50%) believe that the goals and output of music arts learning should be the mastery of music concepts and symbols which are obtained from various musical experiences [7].

When the researchers are conducting the need analysis in the development of concentration course materials for music arts study program within the context of action-learning-based teaching and learning [8], the obstacles that teachers encounter in implementing the music arts teaching and learning at junior high school are successfully found. The obstacles in general deal with such dimensions as curriculum, school policy, facility availability, media, and learning sources. In the curriculum dimension, it is found that even among music arts teachers themselves some different perceptions exist regarding the standard competences (SK) and basic competences (KD). This results in the varied sequence and depth of teaching and learning materials developed by these teachers.

In relation to the implementation of authentic assessment, a survey on teacher's ability in performing assessment based on classes at State Senior High School in Jakarta which includes written, oral and behavioral tests, attitude observation, portfolio, and interview finds that they are not so good with it. The accomplishment score in planning PBK, on average, is only 54.46% of the maximum score, the ability in performing PBK is 53.82%, and the ability to manage PBK result is only 43.78% [9].

In a wider context, the results of Jien Tirta Raharja's (2013) research indicate that there is a gap between the implementation of planning, actuating, assessing, and monitoring components under the minimum standards of teaching and learning process performance as referred to in Ministerial Regulation of National Education No. 41 the Year 2007. In performing the assessment, particularly in terms of determining the assessment technique and instrument of teaching and learning process of Arts and Culture at SMAs in Lombok Regency, teachers ability can only be classified as fairly good. Based on the data, from the eight schools sampled in this research, three schools still have not achieved the criteria.

Guntur et al.'s [10] research find that in performance assessment as one form of authentic assessment in a volleyball game at senior high schools, the instrument consists of such components as an indicator, indicator description, rubric, and assessment procedure. Its validity test process can be done using expert judgement procedure, and its reliability test can be analyzed using inter-rater coefficient. This research which involves physical education teachers in DIY reveals that the developed assessment technique can be used in teaching and learning practice.

Bowles' research [11] finds that the most generally preferred interesting topics in the teacher's professionalism improvement program among Wisconsin music teachers are technology, assessment, choral instrument/literature, creativity, and writing skills. Based on the foregoing, it is safe to say that teacher's competence related to assessment is still an important issue which needs some attention.

Music arts teaching and learning at schools as one sub-course of arts and culture subject has specific characteristics. This can be seen from the fact that in each teaching and learning process, musical activities should be involved. The aim is to prevent theoretical knowledge on musical elements such as melody, rhythm, harmony, timbre, song structure, and expression from being delivered separately, rather it can be taught as a unity in musical practice. Theories on these musical basic elements in music arts teaching and learning are the concepts to be understood, interpreted, and applied in the effort of constructing student's knowledge in such dimensions as musical appreciation, expression, and creation [12] [13].

If teachers separate the theoretical materials and musical activities in their teaching and learning process, it will result in the lost essence of music arts teaching and learning. The learning output obtained by students is merely a collection of musical theoretical knowledge which is usually measured using objective test form, or conversely a set of musical skills acquired through drills which are not the application of the existing musical knowledge.

As an attempt to improve the quality of the student's learning process and output in music arts teaching and learning, an authentic assessment system is surely needed. The aim is to assess attitude, knowledge, and skilllll competences in such dimensions as musical appreciation, expression, and creation as demanded by the 2013 curriculum. Such an assessment system can only be realized if its development process considers the characteristics of subjects and the existing varieties of assessment techniques. This way, the development of assessment model made should be capable of integrating the alignment of curriculum, content, assessment, and instruction which leads students to a learning process *to know, to do, and to be* (personality and behavior) as suggested by Susan Drake. S.M. [14].

Assessment in education context is, in essence, a procedure to collect information which is done systematically to draw conclusions on the characteristics of behavior, competence, and or certain objects produced in teaching and learning. Initially, the assessment activity is identical to the test. Nevertheless, in its further development, this activity is also done using several techniques such as a review on historical records, interview, observation, and more detailed performance tasks. Based on the foregoing, Reynolds [15] suggests that assessment is a more comprehensive process than just testing.

As an important component in organizing education, the development of an assessment in various teaching and learning contexts will have some impacts on the efforts of refining the teaching strategy. According to Cronbach [16] assessment has three main characteristics, namely: (1) it uses many techniques, (2) it relies on observation, and (3) it integrates information. As for its differences from psychometric measurement, assessment activities emphasize

more on clinical analysis and performance prediction in which the data analysis for making decisions is based more on quasi-artistic synthesis than on statistic combination.

To discover student's accomplishment in music arts teaching and learning at schools based on the 2013 Curriculum, the right form of assessment needs to be developed. Therefore, based on the basic concepts, technique, and goals of assessment which match the various dimensions of music arts teaching and learning at schools, this research will study the dimensions, observation object, and the process of assessment of Musical Ensemble teaching and learning at Junior High Schools based on 2013 Curriculum.

II. METHODOLOGY

This research is conducted using mix-method approach. The combination of qualitative and quantitative methods is needed since both methods can complement each other both during the process of preparing an assessment instrument and when a trial is done. This trial of assessment instrument of music ensemble teaching and learning is performed at Senior High School Hj Isriati and State Senior High School 40 Semarang. The trial subjects are determined purposively, i.e. students of grade VII. The data are collected from a focus group discussion (FGD), observation, interview, task items, an assessment rubric, and documents. The data are analyzed by combining qualitative and quantitative methods [17] [18]. The qualitative technique is performed when analyzing and describing the data obtained from FGD, observation, interview, and documents. Meanwhile, the quantitative analysis technique is done by the researchers when analyzing the data from the trial of the developed assessment instrument for music ensemble teaching and learning. The quantitative analysis used is the Intraclass Correlation Coefficient (ICC) test using the SPSS program

III. RESULT AND DISCUSSION

A. Dimension of melody accuracy, rhythmic accompaniment, harmonic accompaniment, dynamic, and expression in music ensemble teaching and learning

The basic competences of music arts teaching and learning for grade VII of Junior High Schools based on 2013 Curriculum are: (1) to understand the technique of simple music play individually and collectively; and (2) to understand the technique of simple music ensemble play. As an implementation of these basic competences, this research is focused on the mixed ensemble topic in which the subtopic of using a musical instrument which serves as a melody (melodica), rhythmic accompaniment (percussion), and harmonic accompaniment/chord (melodica and guitar).

In the mixed music ensemble play teaching and learning wherein three groups of musical instrument types are used, based on the Focus Group Discussion held together with music arts teachers in Semarang Municipality, five dimensions of assessment are determined, including: (1) melody accuracy; (3) rhythmic accompaniment accuracy; (2) harmonic accompaniment accuracy; (4) dynamic accuracy; and (5) expression. These assessment dimensions in the comprehensive mixed music ensemble practice is an embodiment of application which combines conceptual

knowledge and procedural types and skills of playing music [19] [2].

In different context, Brian E. Russell [4] [20] and [21] research which studies the performance in playing musical instruments, overall can be measured through such dimensions as technique, musical expression, tone, intonation, rhythmic accuracy, articulation, tempo, dynamic, tone character, interpretation, and vibrato. Meanwhile, [22] in the context of music arts teaching and learning at public schools suggests that an authentic musical and artistic experience for the purpose of assessment involves musical elements, creativity, and expression.

Based on these findings, it is then evident that in music performance there are some main dimensions which are always intersecting. In this research, this can be seen in the tone accuracy (intonation), rhythmic accompaniment accuracy, dynamic, and expression dimensions.

B. Observation object and scoring range in the assessment of music ensemble teaching and learning at SMPs based on 2013 Curriculum

The observation objects are the observation targets to be measured and assessed in the teaching and learning process on music ensemble play skills. The mixed music ensemble teaching and learning in VII graders of SMPs based on 2013 Curriculum studied in this research includes: (1) student's skills in playing melodic, rhythmic, and harmonic musical instruments in groups; and (2) student's skills in playing the ensemble arrangement of *Indonesia Pusaka* (G=do) song by paying attention to the melody accuracy, rhythmic accompaniment, harmonic accompaniment, dynamic, and expression dimension. The skills to play melodic, rhythmic, and harmonic musical instruments in groups in the trial process can be achieved in three meetings (3 X 120 minutes). Meanwhile, the skills to play ensemble arrangement of *Indonesia Pusaka* (G=do) song, can be achieved in two meetings (2 X 120 minute).

The smallest unit of observation used as the basis in determining the score range in the competence of playing melodic and rhythmic musical instruments is the number of the beat segment. In the competence of playing harmonic musical instruments, it is the number of chord shifts in all parts of *Indonesia Pusaka* song arrangement. In the dynamic accuracy competence, it is a number of dynamic signs in all parts of song arrangement. And in the expression competence, it is the percentage of a number of students in the groups capable of playing the music ensemble with an expression which matches the song characteristics. The *Indonesia Pusaka* song arrangement played in the ensemble, the number of beat segments is 16. Thus, based on the predetermined observation object, the scoring range for each dimension of assessment is explained in the following table (Table 1).

Table 1. Dimensions of assessment, observation object, and scoring range of skills to play mixed musical instruments

No.	Assessment Dimensions	Observation Object	Scoring Range
1.	Melody accuracy	Number of beat segment	0 - 16
2.	Rhythmic accompaniment	Number of beat segment	0 - 16

No.	Assessment Dimensions	Observation Object	Scoring Range
3.	Harmonic accompaniment accuracy	Number of chord shifts	0 - 19
4.	Dynamic accuracy	Number of dynamic signs	0 - 4
5.	Expression	Percentage of students in the group	0 - 4

The score range of melody accuracy (melodica) and rhythmic accompaniment accuracy (percussion) is 0-16. This means the lowest score for student's skills in both assessment dimensions is 0 and the highest is 16. Score 0 in melody accuracy and rhythmic accompaniment accuracy dimensions is obtained when no beat segment is played correctly in terms of its melody and rhythmic accompaniment. On the contrary, score 16 is obtained if 16 (all) song beats are played using the correct melody and rhythmic accompaniment. Meanwhile, in the harmonic accompaniment accuracy (melodica and guitar) dimension, the scoring range is made by referring to the number of chord shifts in the song arrangement being played. Score 0 in this dimension is obtained if the chord shift is played incorrectly. And score 19 is achieved if all chord shifts in the song are played correctly.

The scoring in the dynamic accuracy dimension is 0-4. This means the lowest score for student's skills in this dimension is 0 and the highest score is 4. Score 0 is obtained if no dynamic signs are played correctly. On the other hand, score 4 is obtained if all dynamic signs are played correctly. The score range in expression dimension is 0-4. In the expression dimension, the score range is 0-4. Score 0 is obtained if the number of students in a group capable of playing ensemble music with the right expression is less than 25%. On the contrary, score 4 is obtained if 100% (all) students in the group can play the ensemble music with the right expression.

In assessing musical performance, it is quite often to encounter difficulties which causes the inter-rater reliability to be low (Person & Thomson, 1998; Gynnild, 2014). Hence, the preparation of rubric assessment in detail in musical performance assessment is highly necessary. In the practice, the selection of rubric type will be a determinant in the assessment process and its accuracy [23]. Three rubric types are available for use in musical performance assessment, namely: (1) a discrete-component rubric, (2) an integrated-component rubric, and (3) a self-reflection rubric [24].

C. Assessment process of music ensemble teaching and learning at SMPs based on 2013 Curriculum

One determinant of performance assessment result objectivity is rater's accuracy and thoroughness in observing the performance process. Therefore, the assessment process to these five dimensions takes quite some time. Based on the trial results, the process of assessment of mixed music ensemble play skills is effective if it is done in two stages. When the students play Indonesia Pusaka song arrangement of the first cycle, the assessment process should be focused on the melody accuracy, rhythmic accompaniment, and

harmonic accompaniment dimensions. And in the second cycle, the observation is directed towards dynamic accuracy and expression dimensions.

In its implementation, the process of assessment to these five ensemble music dimensions requires a complete, practical and adequate observation sheet. Thus, in the observation sheets for melody accuracy, rhythmic accompaniment, harmonic accompaniment, and dynamic accuracy dimensions should each have a column for error and score. The column for a number of errors in this observation sheet is needed to allow the raters to easily identify every error that students make when playing the ensemble music.

In the melody accuracy and rhythmic accompaniment dimensions, the maximum number of errors is 16, established according to the number of beat segments in Indonesia Pusaka song. The number of errors in harmonic accuracy dimension is 19 at most, as established based on the number of chord shifts in this song arrangement. The maximum number of errors in the dynamic accuracy dimension is 4, established according to the number of dynamic signs in the four phrases of Indonesia Pusaka song. The score obtained by each student group in these four assessment dimensions is the result of a reduction of maximum score maksimal by the number of errors made by each ensemble music group. The calculation can be done using the following formula.

$$Score = Maximum\ Score - Number\ of\ errors$$

Meanwhile, in the expression dimension, the column for a number of errors is replaced by a column for a percentage. This column is used to record the percentage of a number of students in each ensemble music group capable of expressing correctly. The scoring process is done using the following criteria (Table 2).

Table 2. Score and criteria of assessment for expression dimension in music ensemble teaching and learning

Score	Criteria
4	100% of students in a group can express correctly.
3	A minimum of 75% of students in a group can express correctly.
2	A minimum of 50% of students in a group can express correctly.
1	A minimum of 25% of students in a group can express correctly.
0	< 25% of students in a group can express correctly

Based on the trial results, the developed assessment instrument for ensemble music teaching and learning at SMPs based on 2013 Curriculum has met the predetermined criteria. The results of the assessment made by three raters, upon an analysis using a confidence interval of 95%, show that the intraclass correlation coefficients (ICC) are 0.99. This number has exceeded the required minimum value at ≥ 0.70 .

In musical performance assessment as suggested by Bergee (2007), the source of errors in the assessment process is the raters themselves. Through his research, he states that in performance assessment music the number of raters should never be just one. He proves this by involving

5 raters. The assessment instrument which is developed and analyzed using generalization coefficient can reach a benchmark of 0.80. Brian E. Russell's (2015) research which is conducted to four solo instrumental recordings (brass, woodwind, voice, and string), finds that the alpha reliability of 44-item Likert scale and Aural Musical Performance Quality (AMPQ) measurement can be up to 0.977. This indicates that in various musical performance assessments, if the dimensions, observation object, rubric assessment, and assessment process are done using the right procedures, it will ensure the accuracy and consistency of assessment results. This is also shown by Hash's research who analyzes rating and inter-rater reliability in Band contest at Senior High Schools [25].

IV. CONCLUSION

The assessment dimensions in ensemble music teaching and learning are different from the solo instrumental practice. Therefore, in the ensemble music teaching and learning context at Junior High School based on 2013 Curriculum, the melody accuracy, rhythmic accompaniment, harmonic accompaniment, dynamic, and expression dimensions can be established to be the most important components in the teaching and learning.

The different characteristics of observation object and teaching and learning goal criteria of the five assessment dimensions for ensemble music teaching and learning can be a basis in preparing an assessment rubric. Therefore, the application of the right rubric type and assessment procedure can improve the rater's accuracy and, thus, can produce an accurate musical performance assessment.

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