

Language Teaching and Educational Research

e-ISSN 2636-8102

Volume 4, Issue 1 | 2021

Illustrative Multiple-Choice Test Items on the Taxonomy of Cognitive Objectives in Assessing and Evaluating Musical Learning

Almighty C. Tabuena
Glinore S. Morales

To cite this article:

Tabuena, A. C., & Morales, G. S. (2021). Illustrative multiple-choice test items on the taxonomy of cognitive objectives in assessing and evaluating musical learning. *Language Teaching and Educational Research (LATER)*, 4(1), 59-75.

[View the journal website](#)



[Submit your article to LATER](#)



[Contact editor](#)



Review Article

Illustrative multiple-choice test items on the taxonomy of cognitive objectives in assessing and evaluating musical learning

Almighty C. Tabuena*  ORCID

Graduate Student, Philippine Normal University, College of Graduate Studies and Teacher Education Research, Manila, PHILIPPINES

Glinore S. Morales  ORCID

Associate Professor, Philippine Normal University, Faculty of Arts and Languages, College of Teacher Development, Manila, PHILIPPINES

Abstract

This study identified and annotated appropriate test items using the multiple-choice test item format in the cognitive domain of the taxonomy of educational objectives in assessing and evaluating musical learning through the descriptive-developmental research design. This assessment approach is one of the key skills needed of Music teachers to resolve the learning competencies, difficulties, and diversity of the current curriculum, to assist them in exploring the needs of their students and to provide them with a structure for determining the best and most suitable evaluative methodology in the assessment process. The data were analyzed using Bloom's taxonomy including knowledge, comprehension, analysis, application, synthesis, and evaluation. The annotation for each test item utilized a summary of main ideas and responses for a brief description and discussion in accordance with the cognitive domain and musical concept. Twenty-three illustrative multiple-choice test items were identified and annotated including areas in the Philippine music, Asian music, Western music, and choral works and conducting. Planning classroom tests and assessments requires determining what is to be measured and then defining it precisely so that tasks can be constructed using various relevant measures related to musical learning. This process implied that constructing an assessment requires a clear, concise, and complete direction incorporating the music rudiments and test format according to the behavioral indicators essential in constructing appropriate assessment, that is, an objective test item such as the multiple-choice test item format on the cognitive domain of the taxonomy of educational objectives in assessing and evaluating musical learning.

Received
31 March 2021

Accepted
02 May 2021

Keywords

assessment
cognitive domain
multiple-choice test items
musical learning
educational objectives

Suggested APA citation: Tabuena, A. C., & Morales, G. S. (2021). Illustrative multiple-choice test items on the taxonomy of cognitive objectives in assessing and evaluating musical learning. *Language Teaching and Educational Research (LATER)*, 4(1), 59-75.

Note(s) from the author(s)

» *Corresponding author

Author(s)' statements on ethics and conflict of interest

Ethics statement: We hereby declare that research/publication ethics and citing principles have been considered in all the stages of the study.

We take full responsibility for the content of the paper in case of dispute.

Statement of interest: We have no conflict of interest to declare.

Funding: None

Acknowledgements: None

Introduction

Constructing a satisfactory test is one of the hardest jobs a teacher has to perform. Test construction remains largely an art rather than a science, but there are well-established, valid principles of test development that are all too frequently unknown or ignored. The process of constructing a good test item is deliberate and time-consuming. This process demands an understanding of the objectives being assessed and of the examinees and their test-taking behavior. High-quality assessment can produce valid information about students' learning outcomes and provide insights into the effectiveness of teachers' instruction. Research indicates that teachers who introduce various assessments into their classroom practice can affect substantial achievement gains. In this circumstance, this study aimed to identify and annotate appropriate test items using the multiple-choice test item format on the taxonomy of cognitive objectives in assessing and evaluating musical learning. This method is one of the necessary fundamental skills of Music teachers to address the learning challenges and diverseness of the current curriculum (Tabuena, 2021; Tabuena, 2019) in terms of test development and evaluation.

As stated in the philosophy and rationale for music education in K to 12 basic education curriculum in the Philippines (Department of Education, 2016), a keen sensitivity to environmental and musical sounds needs to be developed, in which the student must learn to think, hear, and speak in the means of music. Concurrently, growth, and progress in the abilities that facilitate the application of the learner's knowledge should be strengthened, through active engagement in the different musical endeavors and processes. One good example of assessing and evaluating musical learning is the preparation and development of test items and material through an objective test item to obtain valid, reliable, and useful information concerning student learning. This suggests a means in determining what is/are to be measured and defining objectives precisely so that the test items constructed can evoke the desired performance of the learner. However, few teachers in the grand arena of teaching are aware of and knowledgeable about the important considerations in the construction of test items regardless of academic disciplines. That at times leads to confusing and conflicting views and ideas which results in a meaningless endeavor. Classroom tests and assessments can be used for a variety of instructional purposes. They can be best described in terms of their purpose and use in the instructional process parallel to the types of assessment, such as a fixed-choice test, a form of assessment that is efficient in measuring the knowledge and skills of an individual.

Stanley and Hopkins (1972) claimed that logical considerations and research have shown that skillfully prepared informal tests can be as reliable as some standardized test, and often more valid for a particular class or student. Standardized tests tend to be a focus upon broad, general objectives that cover a wide range of content. A teacher needs to evaluate frequently so he/she can identify the specific learning difficulties of individual children and the class as a whole. By this test item development process, this study will ensure the analysis and evaluation process concerning the assessment and evaluation of musical learning. This research paper is an attempt to furnish the teachers to provide background knowledge of the characteristics and proper evaluative measures through test item development regarding the cognitive domain of the taxonomy of educational objectives.

Literature Review

Theoretical framework

The Department of Education (DepEd) Order No. 8 (2015) on policy guidelines on classroom assessment for the K-12 basic education program stated that at the heart of an assessment framework, especially for a typical type of test, is the recognition and deliberate consideration of the learners' zone of proximal development (Vygotsky, 1978). Appropriate assessment is employed to secure learners' progress in advancing from guided to an independent array of knowledge, understanding, and skills, and to empower them to carry this successfully in future circumstances. From this point of view, assessment promotes the advancement of learners' higher-order thinking and 21st-century skills. The prospect of assessment, accordingly, recognizes the integration of instruction and assessment. The assessment is part of daily lessons and extends the everyday classroom ventures that are already in place in the K-12 curriculum. In addition, the Department of Education had released DepEd Order No. 79 (2003), in which assessment and evaluation of learning and reporting of students progress in public elementary and secondary schools were promulgated in giving an emphasis in the process of assessment and evaluation of learning in all of the general subjects taken in a primary and secondary level. In this light, appropriate assessment is employed to assure learners' achievement in leading from guided to an individualistic representation of knowledge, understanding, and skills (Tabuena, 2019). This viewpoint also acknowledges the diversity of students inside the classroom, the necessity for varied ways of assessing their diverse abilities and learning potentials, and the purpose of the students as co-participants in the evaluation process (Tabuena, 2020b).

Taxonomy of educational objectives

There are three taxonomies utilized for a given measurable learner outcome depending upon the fundamental goal to which the measurable learner outcome is connected. There are knowledge-based goals (cognitive domain), skills-based goals (psychomotor domain), and affective goals (affective domain: attitudes, interests, and values); subsequently, there is a taxonomy separately. Levels of expertise are classified within each taxonomy in a specific order of increasing complexity. Assessable student results that demand higher levels of expertise will require more advanced classroom assessments. Most teachers are quite familiar with Bloom's Taxonomy of Educational Objectives (Bloom et al., 1956; Shabatura, 2013). The six cognitive processes in the revised taxonomy are the following: remember, understand, apply, analyze, evaluate, and create. These are just slightly different from the original six levels of Bloom's Taxonomy: knowledge, comprehension, analysis, application, synthesis, and evaluation.

Cognitive domain of the taxonomy of educational objectives

In the knowledge cognitive domain, it involves the recall of specifics, universals, methods or processes, pattern, setting, or structure. The knowledge objectives indicate most of the subconscious processes of recognizing, relating or reorganizing a problem. In this cognitive domain, there are three sub-domains such as knowledge of specifics, knowledge of ways and means of dealing with specifics, and knowledge of the universals and abstractions in a field. In the comprehension cognitive domain, this depicts the weakest level of understanding or comprehension that the learner grasps what is being taught without significantly associating it

to other matters or recognizing its fullest meanings or implications. There are three sub-domains in this cognitive domain such as translation, interpretation, and extrapolation. The application cognitive domain is the management of abstractions in appropriate and actual situations. These abstractions may be in the sort of general ideas, generalized methods, rules, or procedures; ideas, technical principles, and theories that must be recognized and employed. The analysis cognitive domain is the division of a communication into its integral parts or elements such that the corresponding hierarchy of concepts is made clear and/or the connections between the concepts expressed are made specific and explicit meant to arrange, clarify, manage, or organize the communication. There are three sub-domains in this cognitive domain such as analysis of elements, analysis of relationships, and analysis of organizational principles. The synthesis cognitive domain is the manner of placing together the parts and elements to form or create a whole; combining and arranging them in such a way as to establish a structure or pattern not there before. There are three sub-domains in this cognitive domain such as production of a unique communication, production of a plan, or proposed set of operations, and derivation of a set of abstract relations. In the evaluation cognitive domain, it is a judgment regarding the value of methods and material for given directions. Qualitative and quantitative judgments concerning the extent to which methods and material satisfy the criteria or standards of an appraisal or assessment. There are two sub-domains in this cognitive domain such as judgments in terms of internal and external evidence or criteria.

Multiple-choice test item

Multiple-choice test items were constructed as the main instrument for the test items in musical learning. It can effectively measure many of the simple learning outcomes measured by the short-answer item, the true-false item, and the matching exercise (Linn & Gronlund, 2000). In addition, it can measure a variety of complex outcomes in the knowledge, understanding, and application areas. This flexibility, plus the higher quality items usually found in the multiple-choice form, has led to its extensive use in achievement testing. A multiple-choice item consists of a problem and a list of suggested solutions. In this case, the researchers stated the problem as a direct question or an incomplete statement, which is called the stem of the item. The list of recommended solutions may include numbers, phrases, symbols, or words called the alternatives which are also known as choices or options. The correct alternative in each item is called the answer, and the remaining alternatives are called distracters. Multiple-choice test items are less responsive to selecting than true-or-false questions, giving them a more reliable and substantial means of assessment (Sinha, 2017).

From these reviews, the researchers drew much of methodology and processes, that is, from the guidelines, stages, and methods of test construction and test item annotation using the cognitive domain of the taxonomy of educational objectives and the multiple-choice test item format on the taxonomy of cognitive objectives in assessing and evaluating musical learning. Thus, this study aimed to identify and annotate appropriate test items using the multiple-choice test item format on the taxonomy of cognitive objectives in assessing and evaluating musical learning as an attempt to furnish the teachers in providing background knowledge of the characteristics and proper evaluative measures through test item development regarding the cognitive domain of the taxonomy of educational objectives. This assessment method is one

of the needed primary skills of Music teachers to address the learning challenges, competencies, and diverseness of the existing curriculum, help them to explore the needs of the students, and give them a framework (Tabuena, 2021) of what could be the best and appropriate evaluative technique or strategy in the assessment process.

Methodology

Research design

This study employed the descriptive method research design through the library method (Sappe, 2020) and literature review (Tabuena, 2020a) in gathering and synthesizing the articles and scientific papers related to the cognitive domain of the taxonomy of educational objectives and the use of the descriptive-developmental design in the development of the illustrative multiple-choice test items for each taxonomy of cognitive objectives. Descriptive-developmental studies are valuable for providing facts on which scientific judgments may be based, providing essential knowledge for closer observation into practices, behaviors, methods, and procedures, in playing a large part in the development of instruments for the measurement of instruments that would be employed in all types of descriptive-developmental research such as data-gathering instruments, and in the formulation of policies in the local, national, or international level (Calmorin, 2010; Creswell, 2009).

Data gathering procedure

The stages used in the annotation process of illustrative multiple-choice test items was based on the first two stages developed by Sevilla et al. (1984), and the instructional design developed by Aguirre, Jr. and de Cadiz (2013): Stage I, Planning Stage, and Stage II, Test Construction Stage. In the planning stage, multiple-choice test items were constructed as the main format for the test items as it is generally recognized as the most widely applicable and useful type of objective test item (Linn & Gronlund, 2000). In this case, to determine the level of expertise required for each measurable student outcome, first decide which of these three broad domains (cognitive, psychomotor, and affective) the corresponding course goal belongs to. Then, using the appropriate Bloom's taxonomy, the researchers looked over the descriptions of the various levels of expertise. In this research design, the library method (Sappe, 2020) and literature review (Tabuena, 2020a) were utilized in gathering and synthesizing concepts related to the cognitive domain of the taxonomy of educational objectives. References used in the test item construction were adapted from various K-12-based learning materials and other music-related resources in the present curriculum in the book of Abijan et al. (1997), Casilang et al. (2014), Evangelista, et al. (2014), Forney and Machlis (2007), Gonzales et al. (2008), Kelly (2013), Lacia et al. (2008), Perez et al. (2004), and Santiago et al. (2014).

In the test construction stage, Bloom's taxonomy of cognitive objectives was used to see the importance of the categories into which the various aspects of cognition have been placed. Bloom and his co-authors believe that the taxonomy does progress from simple to complex so that examination of the order in which the categories of learning have been placed can be very helpful for planning learning experiences (Colwell, 1970). On the other hand, one of the structured response types of tests is the multiple-choice item test (Tabuena, 2020b). Multiple-choice item test is one of the objective types of tests, among others include recall test items, completion test items, true-false test items, recognition test items, matching test items,

rearrangement test items, and analogy (Asaad & Hailaya, 2004; Calmorin, 2010). In choosing an objective type of test, one should be careful if it is appropriate to deliver to a particular grade level and the subject matter. In this case, the researchers employed selected responses, items consisting of a stem, often a question or incomplete sentence that introduces the problem. The student selects the response from a set of options, such as (A), (B), (C), and (D), that follow the stem. Normally, one option is correct, and the remaining options are referred to as distractors. In this type of test, an objective test is less time-consuming since the responses are composed of single words, short phrases, or options are provided from which selection of the answer is to be made. An objective test is fair to students since the slow writers can accomplish the test as fast as the fast writers.

Data analysis

The primary goal of the analysis is to identify appropriate illustrative multiple-choice test items on the taxonomy of cognitive objectives and annotate each test item in accordance with the students' musical learning. The classification of the taxonomy of educational objectives in the cognitive domain was based on Bloom's Taxonomy of Educational Objectives (1956). Bloom's taxonomy (Shabatura, 2013) uses a multi-tiered scale to express the level of expertise required to achieve each measurable student outcome. Organizing measurable student outcomes in this way will allow the researchers to select appropriate classroom assessment and test items for musical learning. In this process, test items were annotated to identify the relevance of a particular taxonomy of cognitive objectives on the constructed illustrative multiple-choice test item and students' musical learning. The data, the illustrative test items, and annotations were analyzed through synthesis information (Tabuena & Hilario, 2021; Murray, 2006) known as explanatory synthesis, a written discussion that draws on one or more sources then divide the subject into its components parts through the use of six criteria in analyzing the reviews of the taxonomy of cognitive objectives such as the knowledge, comprehension, analysis, application, synthesis, and evaluation. This process also describes and explains previously reported significant results that examine the same phenomenon, known as a meta-analysis, the evaluation of the outcome of different data components and methodologies on the described results. (Stanly, 2001; Zeng et al., 2014; Aburayya et al., 2020). On the other hand, the annotation for each test item utilized two ways of annotating a text through paraphrase/summary of main ideas and comments/responses for a brief description and discussion (Hunter College, 2020).

Results and Discussion

Knowledge

Knowledge of specifics

This domain is the recall of isolated and specific bits of information. The importance is on symbols with precise referents. This component, which is at a very low level of abstraction, may be thought of as the factors from which more intricate and abstract methods of knowledge are formed.

Knowledge of terminology. This domain is under the knowledge of specifics regarding the knowledge of terms for specific symbols or representational processes (non-verbal and verbal). The following is a test item in the area of Asian music (unit from the music of East Asia, a topic from the music of China) for the knowledge of terminology: *Ruan* is known as: (A) The long flute instrument in China and used to play classical music. (B) The kind of violin (fiddle) with two strings. (C) The moon guitar, and comes in a variety of different sizes and pitches. (D) The mouth organ with 17 pipes. In this test item, the answer is letter (C) The moon guitar and comes in a variety of different sizes and pitches. This question involves Chinese musical instruments, and the student must identify which of the following letter is suited in the description of the object, that is, *Ruan* is known as the moon guitar, and comes in a variety of different sizes and pitches.

Knowledge of specific facts. The domain is also under the knowledge of specifics regarding the knowledge of dates such as places, persons, events, persons, and other related matters. The following is a test item in the area of Philippine music (unit from the traditional music forms of the Philippines, a topic from the Filipino composers) for the knowledge of specific facts: Which of the following compositions of Nicanor Abelardo was his first work and dedicated to his grandmother? (A) *Himutok*. (B) *Ang Unang Buko*. (C) *Pahimkas*. (D) *Mutya ng Pasig*. In this test item, the answer is letter (B) *Ang Unang Buko*. The question is simple, yet if we observed the following set of choices, it must be directly imparted to the information above. Secondly, if the student grasps the clues in the question, it is easy to answer. Thirdly, if we consider the set of choices, *Himutok* and *Mutya ng Pasig* are kinds of *Kundiman* which Abelardo worked on in his later time, as well as *Pahimkas*, even if it is a song for a dying person. Therefore, *Ang Unang Buko* was the first work of Abelardo dedicated to his grandmother.

Knowledge of ways and means of dealing with specifics

This domain is a knowledge of the ways of criticizing, judging, organizing, and studying. The following is a test item in the area of Western music (unit from contemporary music, a topic from the composers) for the knowledge of ways and means of dealing with specifics: Who is regarded as a prominent Post-modernist musician? (A) Sergei Rachmaninoff. (B) Igor Stravinsky. (C) Bela Bartok. (D) John Cage. In this test item, the answer is letter (D) John Cage. The relation of each composer is, they are all prominent contemporary composers, yet the relation of each in terms of their music is, John Cage is a prominent figure in the 20th century whose influence steadily grew and is regarded by many as the founder of post-modernist music. The facts of each composer can be reflected easily by understanding beyond simple factual knowledge in the relationship of other facts by the other composers, such as Rachmaninoff (late romantic style), Stravinsky (neoclassicism), and Debussy (impressionism).

Knowledge of conventions. This domain is under the knowledge of ways and means of dealing with specifics regarding the knowledge of distinctive ways of presenting and treating phenomena and ideas. The following is a test item in the area of Western music (unit from the music of the Baroque Period, a topic from the historical background) for the knowledge of conventions: Which of the following generally characterize the Baroque music? (A) Elaborate musical ornamentations were incorporated. (B) Dynamics tend to stay constant; however, when there is a tense shift, the change in dynamics is sudden. (C) Both A and B. (D) None of

the above. In this test item, the answer is letter (C) Both A and B. Based on the general characteristics of Baroque music, letters (A) and (B) are dominantly flourished by the style and practices in this period; and it is significantly established by its composers.

Knowledge of trends and sequences. This domain is also under the knowledge of ways and means of dealing with specifics regarding the knowledge of the directions, movements, and processes of phenomena concerning time. The following is a test item in the area of the Philippine music (unit from the music of Luzon, a topic from the *Tingguian*) for the knowledge of trends and sequence: The word “*Tingguian*” may have been derived from the Malay word “*tinggi*” which have been coined during what period? (A) Early Spanish Period. (B) Late Japanese Period. (C) Early American Period. (D) Late American Period. In this test item, the answer is letter (A) Early Spanish Period. *Tingguians* of Luzon were descendants of the Chinese who settled in the northern part of the island centuries ago, yet the word “*Tingguian*” may have been derived from the Malay word “*tinggi*”, which means mountain or highlands, and may have been coined during the early Spanish period. This question evaluates the knowledge of the student in terms of their understanding of events and processes.

Knowledge of classifications and categories. This domain is also under the knowledge of ways and means of dealing with specifics regarding the knowledge of the arrangements, classes, divisions, and sets that are regarded as rudimentary for a given subject argument, field, problem, or purpose. The following is a test item in the area of Asian music (unit from the music of Southeast Asia, a topic from the music of Thailand) for the knowledge of classifications and categories: In Thailand music, instruments are classified according to a system and to use. What ensemble is mostly composed of stringed instruments to accompany singing, dancing, and on holidays? (A) *Gamelan* Ensemble. (B) *Pi Phat* Ensemble. (C) *Mahori* Ensemble. (D) *Khruang Sai* Ensemble. In this test item, the answer is letter (D) *Khruang Sai* Ensemble. *Gamelan* is just a distraction among the choices, for it is in Indonesian music. *Piphat*, *Mahori*, and *Khruang Sai* are ensembles established in Thai music, yet the *Khruang Sai* ensemble is mostly composed of stringed instruments to accompany singing, dancing, and on holidays. *Piphat* ensemble is made up of percussion and wind instruments, which are played at court ceremonies and theatrical presentations; and *Mahori* is composed of stringed and percussion instruments but not as the same use of *Khruang Sai*.

Knowledge of criteria. This domain is also under the knowledge of ways and means of dealing with specifics regarding the knowledge of the criteria by which conduct, facts, opinions, and principles are judged or tested. The following is a test item in the area of Philippine music (unit from the traditional music forms of the Philippines, a topic from the composers) for the knowledge of criteria: A *Balitao* is one of a Spanish influence which: (A) Written in triple time with many versions, the most popular is the *Ilocano* version. (B) Written in a minor key in duple time. The rhythmical accompaniment is in a slow tempo, habanera style. (C) Written in triple time and the movement is similar to the Spanish Jota or bolero. (D) Written in a minor key, a dance time, and the traditional name is Philippine Serenade or *Panapatan*. In this test item, the answer is letter (C) Written in triple time and the movement is similar to the Spanish Jota or bolero. In order to answer this question, the student must know what *Balitao* is, the elements of a *Balitao* in terms of its characteristics to figure out accurate information, and the basis to consider this thing. In order to distinguish a *Balitao*, it must be in

triple meter time, consider letters (A) and (C). Yet, a *Balitao's* movement is similar to the Spanish Jota or bolero, therefore it is letter (C). The knowledge of criteria must be established in students' learning habits for a basis of judgments in line with musical learning.

Knowledge of methodology. This domain is also under the knowledge of ways and means of dealing with specifics regarding the knowledge of the methods or manners of inquiry, procedures, and techniques made use of in a particular subject field and those utilized in examining particular phenomena and problems. The following is a test item in the area of the Philippine music (unit from the music of Luzon, a topic from the ethnic musical instruments) for the knowledge of methodology: Which of the following is the proper way of playing a *Gangsa toppaya*? (A) Played with a padded stick. The players are standing and slightly bending forward in step with the dancers. (B) Played with a padded stick. The players are in sitting positions. (C) Played with palms of the hand followed by a strong slap and slide from the center to the outer edge. The players are standing and slightly bending forward in step with the dancers. (D) Played with palms of the hand followed by a strong slap and slide from the center to the outer edge. The players are in sitting positions. In this test item, the answer is letter (D) Played with palms of the hand followed by a strong slap and slide from the center to the outer edge. The players are in sitting positions. *Gangsa toppaya* is played with palms of the hand followed by a strong slap and slide from the center to the outer edge. The players are in sitting positions. This question is just a matter of how to use a *Gangsa*. Yet, it is only played in two different ways: *Gangsa toppaya* and *Gangsa pattung*. *Gangsa pattung* is played with a padded stick. The players are standing and slightly bending forward in step with the dancers. Then, letters (B) and (C) are just distractions. Students should establish such kinds of processes in which things in relation to music should be manipulated. In this particular question, one should be also acquainted with the existing methods in different genres and fields of music.

Knowledge of the universals and abstraction in a field

This domain is a knowledge of the major schemes and patterns by which phenomena and ideas are organized. The following is a test item in the area of Asian music (unit from the music of East Asia, a topic from the music of Japan) for the knowledge of the universals and abstraction in a field: In Asian music, pentatonic scale or the five-tone scale generally influenced the court music in their nature. Which of the following countries in Asia used *Yo-sen* and *In-sen* as their basic type of scales? (A) Japan. (B) India. (C) China. (D) Thailand. In this test item, the answer is letter (A) Japan. The following choices are in the part of Asian countries, and all of them use the five-tone scale except for Indian music. In order to answer this kind of question, this broad concept about the scale configures one commonality in the style given in the question, and that is *Yo-sen* and *In-sen*. Therefore, among the three (Japan, China, and Thailand), Japan is the only country in Asia in which these two kinds of scale were dominantly used.

Knowledge of principles and generalizations. This domain is under the knowledge of the universals and abstraction in a field regarding the knowledge of specific abstractions that summarize or reiterate observations of a particular element or phenomena. The following is a test item in the area of Western music (unit from the contemporary music, a topic from the musical styles) for the knowledge of principles and generalizations: In Contemporary music, minimalist sounds features: (A) Ordered group of musical elements to organize rhythm,

dynamics, pitch, and tone color. (B) Some elements of the composition are left to chance or some primary element of a composed work's realization is left to the determination of its performer/s. (C) Repetition, stasis, emphasis on consonant harmony, a steady pulse, and can sometimes sound similar to different forms of electronic music. (D) The sound and color of the Orient often use a pentatonic scale. In this test item, the answer is letter (C) Repetition, stasis, emphasis on consonant harmony, a steady pulse, and can sometimes sound similar to different forms of electronic music. Minimalism in general features repetition, stasis, emphasis on consonant harmony, a steady pulse, and can sometimes sound similar to different forms of electronic music. Letter (A) is Serialism, (B) is Aleatory music, and (D) is just an extraction of a different kind of music in the Contemporary period. Principles and generalizations about the movement help the student to describe each choice in their mind or help the student to extract the set of facts according to the principle imparted in the movement. In this process, one field of music, its history, explains the appropriate course about the facts involved.

Knowledge of theories and structures. This domain is also under the knowledge of the universals and abstraction in a field regarding the knowledge of the body of principles and generalizations together with their interrelations which present a rounded, clear, and systematic view of a complex field, phenomenon, or problem. The following is a test item in the area of the Philippine music (unit from the traditional music forms of the Philippines, a topic from the Spanish and American regime) for the knowledge of theories and structures: The development of music in the Philippines was generally influenced by the Spanish and the American communities who established the musical forms that included: I. Liturgical music. II. Extraliturgical music. III. Oriental music. IV. Secular music. (A) I and IV. (B) I, II, and IV. (C) I only. (D) All of the above. In this test item, the answer is letter (B) I, II, and IV. In this regime, they produced liturgical music for the Catholic Church, the extraliturgical music is extended outside the confines of the church liturgy, and the secular music is the ritual music of the native religion mixed with the music of the new faith. Therefore the answer is (B) I, II, and IV. Oriental music is more particular and related in the part of eastern Asia, that's why it is not included in the musical form that is influenced by the Spanish and the American communities. Letters (A) and (C) are also correct answers. In this kind of question, there is still the best answer which is letter (B).

Comprehension

Translation

The translation is comprehension as evidenced by the accuracy and care with which the communication is rendered or paraphrased from one form or language of communication to another. The following is a test item in the area of Philippine music (unit from the music of Luzon, a topic from Pampanga) for the translation: The song "*Atin Cu Pung Singsing*" is one of the famous ballad or narrative songs in Pampanga. Which of the following compositions is closely the same melody as the song – *Atin Cu Pung Singsing*? (A) *Tatlong Bibe*. (B) *Maliliit na Gagamba*. (C) *Ako ay may Lobo*. (D) *Sampung mga Daliri*. In this test item, the answer is letter (C) *Ako ay may Lobo*. Adequate knowledge about the song can figure each of the following compositions in the choices employing its melodic structure, or simply the melody of the given song itself – *Atin Cu Pung Singsing*. Additionally, other elements of music can be a kind of a

clue to answer this question, for example, *Atin Cu Pung Singsing* is in triple meter, then which of the following compositions is in triple meter, and it's no other than letter (C) because all of them are in duple/quadruple meter except letter (C).

Interpretation

The interpretation is a summarization or explanation of communication. Whereas translation includes an objective part-for-part rendering of information or communication; rearrangement, reordering, or a new representation of the element or material. The following is a test item in the area of Western music (unit from the music of the Classical Period, a topic from historical background) for the interpretation: During the Classical Period, music was viewed as art with permanent rather than short-lived value. Guided by this view, music in this period gave an impression characterized by which following attributes? I - greater stability or repose, clarity, traditionalism. II - emotional subjectivity, fantasy, individualism. III - traditionalism, individualism, conceptualism. IV - self-reliance, objectiveness, balance. V - neo-classicism. clarity of form, experimentalism. (A) II and V. (B) I, II, and III. (C) IV only. (D) I and IV. In this test item, the answer is letter (D) I and IV. The relationship between the columns is merely important to distinguish the impression characterized by the Classical period. If the student observed keenly each column, all of those have an impression characterized by the Classical period except in column II, which is characterized by pure Romantic music. Therefore, letters (A) and (B) were removed in the choices of the correct answers. Column V, is out of choices even though there is a characteristic of Classical music (clarity of form), and the other two are in the Contemporary period. Since column IV is correct, letter (C), the best answer is letter (D), I and IV – the total attributes which the Classical period characterized.

Extrapolation

The extrapolation is an extension of tendencies or trends beyond the given data to determine consequences, effects, implications, corollaries, and other related matters; which are in accordance with the circumstances specified in the original communication. The following is a test item in the area of the Philippine music (unit from the traditional music forms of the Philippines, a topic from traditional music) for the extrapolation: Unlike folk music in Ireland, Hungary, the Czech Republic, and neighboring Malaysia, traditional music in the Philippines never reached national popularity. Which of the following might be the cause of this situation? (A) Through the contribution and a mixture of Spaniards, Americans, and Japanese influences. (B) The fact that every region of the Philippines has its own language. (C) A mentality that traditional songs are children's songs. (D) Traditional music is always at risk of being left in oblivion. In this test item, the answer is letter (B) The fact that every region of the Philippines has its language. In this particular question, information is important to understand the whole statement, and in order to come up with a certain possible solution. Also, the clue of objects can figure out what is the existing information among the clues inside the statement. For example, what is the main commonality between Ireland, Hungary, Czech Republic, and neighboring Malaysia that is not in existence in the Philippines to reach its national popularity. The student must be aware of his capabilities to answer the question and to judge a particular situation or subject. In the passage, "Unlike folk music in Ireland, Hungary, the Czech

Republic, and neighboring Malaysia, traditional music in the Philippines never reached national popularity”. Perhaps, it is partly due to the fact every region of the Philippines has its language, letter (B). Although letter (A) can be an answer to the question, it has different communication in terms of popularity and not by influences. Letters (C) and (D) are the results in which traditional music has not succeeded in making it part of the national identity, much more a national symbol.

Application

The application is the use of abstractions in particular and concrete situations. The following is a test item in the area of Choral Works and Conducting (a topic from singing) for the application: What is the ideal order of warm-up skills for singing? (A) Vowels, support, posture, breathing, choral skills, range, resonance. (B) Breathing, posture, support, vowels, resonance, range, choral skills. (C) Posture, breathing, support, range, resonance, vowels, choral skills. (D) Choral skills, posture, range, breathing, support, resonance, vowels. In this test item, the answer is letter (C) Posture, breathing, support, range, resonance, vowels, choral skills. Factual knowledge is significant in order to help students, applying his knowledge for certain applied skills and understanding in performance such as singing, therefore, letter (C) is the correct answer – posture, breathing, support, range, resonance, vowels, and choral skills.

Analysis

Analysis of elements

The analysis of elements is the association and identification of the elements involved in communication. The following is a test item in the area of Western music (unit from the music of the Baroque Period, a topic from the vocal and instrumental form) for the analysis of elements: In Baroque music, it is a polyphonic composition based on one theme, called a subject. Throughout, different melodies imitate the subject or the theme. Its texture usually includes three, four, or five voices. (A) Motet. (B) Fugue. (C) Aria. (D) Sonata. In this test item, the answer is letter (B) Fugue. The elements that make up a motet, aria, and sonata are not described by the statement above, and the word “subject” is merely associated with a fugue. In this question, the following choices are all Baroque music forms except for motet that flourished in the Renaissance period. Another thing, the aria is not a polyphonic composition, as well as the sonata which doesn’t fit any of the descriptions above. Therefore, the fugue is the correct answer, if the student analyzes each of the given information about its existing musical elements.

Analysis of relationship

The analysis of a relationship is the interactions and connections between parts and elements of communication. The following is a test item in the area of Western music (unit from the music of the Baroque Period, a topic from the composition) for the analysis of relationship: In the composition of Handel, the Water Music, Suite in D major, Alla hornpipe (second movement), what is the distinction of A section compare to the B section of the composition? (A) A section – Strings and woodwinds with brass; fast-moving string part; in B minor. (B) A section – Strings and woodwinds only (no brass); fast-moving string part with

syncopated winds; in B minor. (C) A section – Answered by trumpets and French horns, later disjunct theme in strings and double reeds, with thrills; in D major, at a moderate, spritely tempo. (D) A section – Disjunct theme in strings and double reeds, with thrills, later answered by trumpets and French horns; in D major, at a moderate, spritely tempo. In this test item, the answer is letter (D) A section – Disjunct theme in strings and double reeds, with thrills, later answered by trumpets and French horns; in D major, at a moderate, spritely tempo. The connection between sections in the composition is different in the way the composer defined it, as it is presented in a 3-part structure A-B-A. Therefore, it has only two sections, A and B. Based on the composition by Handel, A section–Disjunct theme in strings and double reeds, with thrills, later answered by trumpets and French horns; in D major, at a moderate, spritely tempo. As it continued alternation of motives between brass and strings. Letter (B), is the B section, and letters (A) and (C) are just distractions in the choices.

Analysis of organizational principles

The analysis of organizational principles is the systematic arrangement, and structure that keeps the communication concurrently. The following is a test item in the area of Western music (unit from the music of the Baroque Period, a topic from the structure) for the analysis of organizational principles: The theme of the work by Handel's Water Music has which of the following formal structures: (A) three-part form, A-B-A. (B) two-part form, A-A-B-B. (C) three-phase group, A-B-C. (D) None of the above. In this test item, the answer is letter (A) three-part form, A-B-A. The student should understand how the total structure is put together in order to analyze organizational principles (refer to the analysis of relationship).

Synthesis

Production of a unique communication

This synthesis is the construction or development of communication in which the speaker or writer ventures to convey or communicate experiences, feelings, and/or ideas to others. The following is a test item in the area of the Philippine music (unit from the music of Luzon, a topic from the Tagalog folk song) for the production of a unique communication: The line "... *alibangbang, salaguinto, salagubang ...*" comes from the folk song: (A) *Leron, Leron, Sinta*. (B) *Bahay Kubo*. (C) *Sitsiritsit*. (D) *Atin Cu Pung Singsing*. In this test item, the answer is letter (C) *Sitsiritsit*. An appropriate conclusion for a composition is distinguished through a set of elements –or other facts, samples, music lines, that would fit the given statement; in addition, the student should be aware and construct his mind for a specific music phrase in apt for the correct composition. This simple question imparts the cognitive ability of the student by means of a problem in certain musical compositions that involve certain part/s into a whole thing (song).

Production of a plan or proposed set of operations

This synthesis is the expansion or development of a plan of operations or work. The following is a test item in the area of the Philippine music (unit from the traditional music forms of the Philippines, a topic from the Rondalla) for the production of a plan or proposed set of operations: If you are the one who will organize a Rondalla, for example in your respective school, what are the expected instruments that might use by your students to build and form a

Rondalla? (A) Guitar, Banduria, Octavina, Double Bass. (B) *Bumbong, Angklung*, Marimba. (C) Electric Guitar, Lead Guitar, Drum Set, Keyboard. (D) Trumpet, Trombone, French Horn, Tuba. In this test item, the answer is letter (A) Guitar, Banduria, Octavina, Double Bass. By means of a plan, the process is one of the consideration in this kind of output, in which how will a student answer this kind of question particular in setting a kind of Rondalla if he in his own can't know what actual instruments combine the whole ensemble, or be part of the group (Rondalla). In this question, to put together the elements to form a whole, one should be capable and know the parts of a kind of music, before it justifies and configures the said concept.

Derivation of a set of abstract relations

This synthesis is the development of a set of abstract connections either to explain or classify distinct phenomena or data, or the reduction of relations and propositions from a set of symbolic representations or basic propositions or premises. The following is a test item in the area of Asian music (unit from the music of South Asia, Central Asia, and Near East Country, a topic from the music of Israel) for the derivation of a set of abstract relations: In this passage, answer the following questions below: What kind of meter is the song? What is the key of the song? Where does the song originate? What is the title of the song? In this test item, the answers are Quadruple, G minor, Israel, and *Zum Gali Gali*, respectively. This task involved such a kind of inductive method, particular to a discovery-inductive method, in which students develop a concept by looking for common features to arrive at a fact, principle, truth, or generalization, depending on the musical concept involved in order to derive, formulate, predict or compile certain kind of concepts and designs. The relationship between those sets of information, that have not been fully described, is the subject in which may identify and through other existing significant pointers and pieces of evidence. Therefore, the student may come up with a good idea using all of those previous answers, and by all of those sets of abstract relations to the derived definite concept.

Evaluation

Judgment in terms of external criteria

This judgment is an evaluation of the correctness and efficiency of communication from such data or evidence as consistency, logical accuracy, and other internal criteria. The following is a test item in the area of Western music (unit from the music of the Romantic Period, a topic from the composition) for the judgment in terms of external criteria: In Romantic music, how will you justify that certain music (composition) is an art song? I. An art song is a composition written for the piano, such as etudes, nocturnes, preludes, concertos, ballads, polonaises, waltzes, and mazurkas. For example, Chopin's Etude No. 3 in E, in which it's a piece that develops technical skill and sometimes composed for public performances. II. An art song is a declamatory piece in free form using different melodies that vary in mood and tempo. For example, Liszt's Les Preludes, which these works are also called symphonic poems or tone poems. III. An art song is a composition for a solo voice that combines melody, poetry, and accompaniment into an integrated form. For example, Schubert's Erlking (Erlkonig), in which different music for each stanza of the poem in order to follow the changing ideas or

moods of the text. IV. An art song is a large-scale genre of choral music, such as the Mass, the Requiem Mass, and the Oratorio. For example, Brahms' A German Requiem, Fourth Movement, in which lyrical choral melody unifies 5-part rondo structure, use of word-painting, and emotional expressions of loss and acceptance of death. V. An art song is a composition with piano accompaniment to a song translated its poetic images into music. For example, Schumann's "In the lovely month of May," from A Poet's Love (Dichterliebe), No. 1, in which each stanza of the poem is set to the same music. (A) I, III, and IV. (B) I, III, and V. (C) III and V. (D) II and IV. In this test item, the answer is letter (C) III and V. In this question, the appropriateness in musical works especially in Romantic music should be to know the characteristics of an art song and its sample composition by the composer.

Additionally, in terms of external criteria, judgment has been processed in condition to justify the given object (art song), hence, it is directly stated what the elements are, and which compositions will be suitable to the given definite meaning which is seen in the given options. However, this question might be easy in terms of music theory and Romantic music, yet, the distinction of each option has different aspects of how the student will evaluate this type of question. Also, the student must know first both the characteristics of the thing involved which he examined and the criteria required by this particular question. In this process, all of the previous behaviors can be used to find out what the answer is; using the knowledge, comprehension, analysis, application, and synthesis. The knowledge about an art song can help to have the background to judge each option; therefore, based on definition, options III and V corresponded to the characteristics, where letters (A), (B), and (C) had it. Then, analyzing the other options, option I is not an art song rather a composition for piano (only), option II, its definition doesn't fit in the sample given (because the definition is a Rhapsody), option IV is a piece of Romantic choral music. To justify the question, there are two main structural forms in art song which are strophic – evident in option V, and through-composed – evident in option III. So, the correct answer is both options III and V, which is letter (C).

Judgment in terms of internal evidence

This judgment is an evaluation of an element or material regarding remembered or selected criteria. It is the comparison of major facts, generalizations, and theories concerning distinct cultures and practices. The following is a test item in the area of Asian music (unit from the music of Southeast Asia, a topic from the music of Indonesia) for the judgment in terms of internal evidence: Given the music (*Naik Naik Ke Puncak Gunung*), while listening, interpret the song in one to two words in terms of: Rhythm, Melody, Harmony, Texture, Form, Timbre. In this test item, the answers are Moderate Tempo/Triple Meter, Narrow Range, Major Tonality, Monophonic, Unitary, and Natural Tone, respectively. The decision is based upon identifiable items that are perceptible through the given statement and sample music. Therefore, an accurate judgment of this item by the student is one of the fundamental goals of education, especially in this kind of field. In terms of internal evidence, judgment is also based on the student engagement within the process, and he might use all of these elements involved to support his judgments.

Conclusion

There were 23 illustrative multiple-choice test items identified and annotated for each cognitive domain of the taxonomy of educational objectives including musical areas in the Philippine music, Asian music, Western music, and Choral Works and Conducting in the assessment and evaluation of musical learning. Assessment and evaluation are intended to quantify the intellectual ability in the pace of academic growth of the students in musical learning. Classroom tests and assessments can be used for a variety of instructional purposes. Appropriate assessment is perpetrated to assure learners' achievement and progress from guided (scaffolding method) to an independent demonstration of knowledge, understanding (comprehension), and skills, and to allow them to carry this successfully in future circumstances (Tabuena, 2020a). Planning classroom tests and assessments requires determining what is to be measured and then defining it precisely so that tasks can be formed that need the intended knowledge, understanding, and skills as it reflects various relevant measures in learning outcomes related to musical learning. This implied that constructing an assessment requires a clear, concise, and complete direction incorporating the basic elements of music and test format according to behavioral indicators essential in constructing appropriate assessment, that is, an objective test item such as the multiple-choice test item format on the cognitive domain of the taxonomy of educational objectives in assessing and evaluating musical learning.

References

- Abijan, R. N. et al. (1997). *Physical education, health and music II*. Sampaloc, Manila: St. Augustine Publications, Inc.
- Aburayya, A., Marzouqi, A. Al, Ayadeh, I. Al, Albqaen, A., & Mubarak, S. (2020). Evolving a hybrid appointment system for patient scheduling in primary healthcare centres in Dubai: Perceptions of patients and healthcare provider. *International Journal on Emerging Technologies, 11*(2), 251-260.
- Aguirre, Jr. D. O., & de Cadiz, G. B. (2013). *Instructional materials development manual*. Eastern Visayas State University, Tacloban City.
- Asaad, A. S., & Hailaya, W. M. (2004). *Measurement and evaluation: Concepts and principles*. Manila: Rex Book Store, Inc.
- Bloom, B. S., Englehart, M. D., Furst, E. J., Hill, W. H., & Krathwohl, D. R. (1956). *The taxonomy of educational objectives, handbook I: The cognitive domain*. New York: David McKay Co., Inc.
- Calmorin, L. P. (2010). *Research and statistics with computer*. Mandaluyong City: National Books Store.
- Casilang, G. F. et al. (2014). *NCBTS specialization – MAPEH*. Quezon City: Lorimar Publishing, Inc.
- Colwell, R. (1970). *The evaluation of music teaching and learning*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed). SAGE Publications, Inc.
- Department of Education (2003). DepEd Order No. 79, s. 2003, "Assessment and Evaluation of Learning and Reporting of Students' Progress in Public Elementary and Secondary Schools". Pasig City: Department of Education.
- Department of Education (2015). DepEd Order No. 8, s. 2015, "Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program". Pasig City: Department of Education.

- Department of Education (2016). "K to 12 Music Curriculum Guide". Pasig City: Department of Education.
- Evangelista, T. T., et al. (2014). *Active MAPEH 7*. Sampaloc, Manila: Magallanes Publishing House.
- Forney, K., & Machlis, J. (2007). *The enjoyment of music*. USA: W. W. Norton & Company, Inc.
- Gonzales, C. T., et al. (2008). *MAPEH in action III*. Sampaloc, Manila: REX Book Store, Inc.
- Hunter College (2020). *The writing process: Annotating a text*. New York: Dr. Murray and Anna C. Rockowitz Writing Center, Hunter College.
- Kelly, T. F. (2013). *Music then and now*. USA: W. W. Norton & Company, Inc.
- Lacia, G. C., et al. (2008). *MAPEH in action IV*. Sampaloc, Manila: REX Book Store, Inc.
- Linn, R. L., & Gronlund, N. E. (2000). *Measurement and assessment in teaching*. Upper Saddle River, New Jersey: Prentice-Hall, Inc.
- Murray, M. C. (2006). Communicating explanatory synthesis. *Perspectives: Teaching Legal Research and Writing, 14*(3), 136-138.
- Perez, V. V., et al. (2004). *MAPEH-CAT IV*. Quezon City: Saint Bernadette Publications, Inc.
- Santiago, N. B., et al. (2014). *Active MAPEH 8*. Sampaloc, Manila: Magallanes Publishing House.
- Sappe, S. (2020). Differences in knowledge science in Islamic education philosophy perspective. *International Journal of Asian Education, 1*(1), 1-8.
- Sevilla, C., et al. (1984). *An introduction to research methods*. Manila, Philippines: Rex Book Store.
- Shabatura, J. (2013). Using Bloom's taxonomy to write effective learning objectives. *Assignments & Measuring Student Learning*. University of Kansas.
- Sinha, M. (2017). *Framing multiple choice questions*. Business Communication, Institute of Management Technology.
- Stanley, T. D. (2001). Wheat from chaff: Meta-analysis as quantitative literature review. *Journal of Economic Perspectives, 15*(3), 131-150.
- Stanley, J. C., & Hopkins, K. D. (1972). *Educational and psychological measurement and evaluation*. New Jersey: Prentice-Hall, Inc.
- Tabuena, A. C. (2019). Effectiveness of classroom assessment techniques in improving performance of students in music and piano. *Global Researchers Journal, 6*(1), 68-78.
- Tabuena, A. C. (2020a). A literature review on the construction of a teacher-made assessment tool in music listening response competency for junior high school K to 12 music curriculum. *The International Journal of Humanities & Social Studies, 8*(4), 157-163.
- Tabuena, A. C. (2020b). Development and validation of a Philippine music achievement test in addressing the K to 12 music curriculum learning competencies. *International Journal of Innovative Research and Development, 9*(4), 16-25.
- Tabuena, A. C. (2021). Carabo-Cone, Dalcroze, Kodály, and Orff Schulwerk methods: An explanatory synthesis of teaching strategies in music education. *International Journal of Asian Education, 2*(1), 9-16.
- Tabuena, A. C., & Hilario, Y. M. C. (2021). Research data analysis methods in addressing the K-12 Learning competency on data analysis procedures among senior high school research courses. *International Journal of Recent Research and Applied Studies, 8*(3), 1-7.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge: Harvard University Press.
- Zeng, J., Pang, X., Zhang, L., Medina, A., & Rozelle, S. (2014). Gender inequality in education in China: A meta-regression analysis. *Contemporary Economic Policy, 32*(2), 474-491.