

The Construction of an Elementary Music Curriculum Utilizing Backward Design and
Bloom's Taxonomy

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Abstract

Based on the philosophy that the development of curriculum should provide a framework for the assessment of student learning, backward design was utilized to develop a curriculum review for an elementary music program. This design worked directly with three levels of Bloom's taxonomy (knowledge, application, and synthesis) in order to demonstrate the level of learning for three grades in a small, private mid-Atlantic elementary school. Fifteen students were assessed using the rubrics both before and after curriculum implementation, and analyses were conducted to determine what changes resulted from the focused, short-term curriculum. A plan of improvement was then developed for the rest of the music program in order to assess and continuously improve the students' learning.

The Construction of an Elementary Music Curriculum Utilizing Backward Design and Bloom's Taxonomy

In the post-No Child Left Behind (NCLB) era, many music and fine arts programs have encountered a new level of difficulty in securing funding due to budget constraints and a universal focus on mandatory assessed academic programs such as math and English. Although the vast majority of elementary school administrators reported that they recognize the need for music courses in their school curricula, they have been forced to comply with the pressure to place a primary focus on other areas of curriculum, rather than the arts. Because of the inordinate pressure that NCLB has placed on elementary schools to demonstrate student learning, it has become vital for the survival of music programs in America that their instructors do whatever is necessary to outline standard learning outcomes and demonstrate the level of student success in grasping those concepts (Abril & Gault, 2006).

The researcher implemented a short, backward designed curriculum focus program into the music classes of a small, private mid-Atlantic elementary school. The backward design model was chosen because of its unapologetic focus on specific learning outcomes and the assessment of those outcomes. Rubrics were created for each of three existing learning outcomes at three levels of Bloom's taxonomy in order to evaluate students of differing grade levels. A guide for curriculum focus was then developed according to the tenets of backward design and approved by the music instructor. Prior to the implementation of the backward designed curriculum, five students from each of the first, third, and fifth grades met with teachers from their school and were evaluated using the rubrics for each learning outcome. The curriculum was then implemented over a one-

week period, and the same students were reevaluated using the rubrics to determine what impact the curriculum had on their understanding of the material.

By implementing standard assessment, music programs across America will be able to begin the process of demonstrating their effectiveness to administrators. Furthermore, the No Child Left Behind Act provides opportunity for funds to be dedicated to fine arts programs when possible, and school boards are more likely to approve investments in programs where instructors have demonstrated that student learning is taking place. A program, therefore, that is able to prove that a legitimate assessment of student learning has been conducted, and that the program has been modified to accommodate the findings of the assessment, will be in the best position to demonstrate its worth to the school administration. Based on these results, the researcher has made recommendations for the specific program studied in order to improve student learning in the future. Among these suggestions is the implementation of a standard semiannual or annual assessment of student learning in order to provide continuous evidence of student learning. The school administration also received a recommendation to incorporate backward design into other presently non-assessed courses in order to better demonstrate student learning in a multitude of disciplines.

Assimilating New Information According to Developmental Stage

Jean Piaget's comprehensive theory of cognitive development, created after working with children to develop an intelligence test, is a natural place to begin the examination of age-appropriate assessment. Piaget proposed that children are in the *sensorimotor* stage from birth to age two, and do very little reacting beyond their reflexes until they begin to demonstrate goal-directed behavior in order to achieve whatever

results they desire. From age two until six or seven, children are in the *preoperational* stage, when they have developed the ability to give mental representation to objects and events. After this stage, children are in the *concrete operational* stage for approximately five years. During concrete operations, children acquire the ability to recognize the different perspectives of others, and are capable of thinking using adult processes when they are given concrete aids to manipulate. Finally, most individuals around the age of puberty enter the fourth stage of *formal operations*, or the ability to think logically without the use of outside aids (Berger, 2005).

Of the four stages identified in Piaget's theory, elementary school-aged children tend to be in the concrete operational period, though those who have developed later than others may be at the end of the preoperational period. Therefore, teachers of kindergarten and first grade must be aware of the need to incorporate symbolic thinking and allow students to understand concepts from their own unique perspectives until they grow into the concrete operational stage. Because of the egocentric thinking of young elementary children, teachers must be aware of a variety of acceptable responses for every subject based on each child's unique understanding of basic principles. This does not mean that every answer is correct, but that a student who provides an incorrect answer should be given the opportunity to explain his/her reasoning so that the teachers can provide the most aid to his/her development. In contrast, all elementary teachers should be prepared to present increasingly complex logical principles to their students as they encourage the development of objective and rational thinking. Students in higher grades will naturally acquire the ability to reason on higher levels only if the basic framework for rational thought was put in place during their early years. Due to this increasing ability for

objective understanding, teachers of older students will experience less of a demand to evaluate students' work with subjective means than was required in previous years.

Another popular developmental theory was developed by Erikson, and places elementary school-aged children in the stage of industry versus inferiority (Berger, 2005). Children in this stage have a psychological need to feel accomplished and to be reassured of their abilities, Erikson proposed, or they will develop the mentality that they are incapable of success. By utilizing aspects of Vygotsky's theory of scaffolding, an instructor who takes the time to build basic skills in his students will prepare them to conquer increasingly more challenging tasks (Hardman, Drew, & Egan, 2008). When an instructor combines knowledge of his students' developmental stage according to Erikson with knowledge of these scaffolding activities, he will provide students with activities that gradually increase their learning and enable them to grasp harder concepts because of previous work done; and when the instructor expresses pride in the students' success, the students will be more likely to put forth their best effort. In this way, success in one area will lead to success in other ventures, because the students have learned that they are capable of mastering new challenges without having an irrational fear of failure. Patel and Laud (2007) specified that three separate forms of scaffolding can be used: an instructor can implement content, task, or material scaffolding as he sees fit. In certain circumstances, he can even utilize a combination of these areas in order to aid his students' learning in the most effective manner.

Berger (2005) reported that school-age children best comprehend and learn new complex ideas when those complexities build upon the framework created in previous material or present from outside knowledge. Those capabilities aside, however, the

accumulated research showed that children learn more effectively when presented with concrete information as opposed to abstract thought. Therefore, any program that has a curricular program which requires student competency in abstract ideas must incorporate multiple levels of learning activities in order to prepare the students for the work that will be expected of them in later years. Utilizing multiple levels of understanding, such as Bloom's taxonomy, across grade levels enables younger students to experience success in understanding basic concepts, which encourages them and increases their ability to understand the more complex and abstract ideas that will be presented in future years.

Assessing Student Learning

Schaefer and Panchal (2009) studied undergraduate engineering courses and the effects of designing those courses specifically to train the students in the designated learning outcomes. They reported the necessity of understanding what the students view as learning, leading the reader to assume that assessments should be designed specifically with the needs of the students in mind. Based on the statement that "learning itself is a process that is expected to produce an outcome" (p. 99), the researchers concluded that assessments which encourage surface learning were not sufficient to demonstrate the learning outcome desired. In order to assess that the desired learning had occurred by the most effective means, the researchers outlined an assessment process which begins with the learning outcome, progresses to the creation of an assessment tool, and forms the curriculum with the intent of communicating the necessary information for students to be able to succeed with the given assessment. Finally, Schaefer and Panchal stressed the importance of using standard rubrics in order to assess student learning; this method

allows students to know what will be required of them, enables objective assessment, and gives the instructor specific feedback on areas to improve in his/her instruction.

Schrodt et al. (2009) sought to determine the specific impact of instructor credibility on the ability of students to achieve understanding of course learning outcomes. One of the most crucial points of instructor credibility reported by Thweatt and McCroskey (1998) is the conclusion that “the higher the [teacher] credibility, the higher the learning” (p. 349). When students feel that they can trust their instructor, they are more able to interact with him/her and ask questions to clarify unclear material, leading to increased levels of comprehension and learning. This research team identified the importance of utilizing learning indicators, or behaviors done by students when they are actively learning. By monitoring student success with learning indicators and maintaining a strong relationship between the students and the instructor, the researchers concluded that student understanding of the learning outcomes could be accurately observed and measured.

Baik and Greig (2009) worked to improve a program for English as a Second Language (ESL) students by incorporating discipline-specific activities. By integrating material from a secondary discipline, the researchers were able to observe an increased level of interest among the students, as well as a higher level of student learning. Since the ESL students were able to integrate their learning among multiple subject areas, they evidenced improvements in both their language skills and the discipline-specific learning aspects of the program. The one recommendation made by the researchers for future study was that students who are being instructed in cross-disciplinary areas should be made aware of their multiple areas of learning, because the ESL students who were aware

of the multiple opportunities for improvement in their program evidenced greater improvements than the students who were not aware of the interdisciplinary connections.

Finally, as a response to the argument that students should be expected to adapt to whatever form of assessment their instructors choose, Rader (2010) cited a quote from the International Reading Association that states that “all students ‘have the right to instruction designed with their specific needs in mind’” (p. 126), thereby implying that teachers have the responsibility to design instruction to best show the progress of their students. Based on this declaration, along with the summation of other research conducted on student learning, educators must keep the needs of their students in mind when designing assessments and the curriculum by which information will be delivered. Curriculum cannot be arbitrarily developed in a program where the instructor expects his/her students to demonstrate understanding of the learning outcomes. Rather, the curriculum must be designed around the needs of the students; learning activities must be created in such a way that the students will be given every opportunity to learn and apply each concept that they are taught in the classroom.

Music Education

Abril and Gault (2006) surveyed 350 elementary school principals to determine the level of importance that they placed on music education, as well as to gather information regarding their desires to improve the music program of America. Many principals have reported increasing difficulties in expanding fine arts programs due to recent legislative acts, but they still believe that improvements can be made within the music curriculum and programs. Of those surveyed, over 97% of elementary principals desired that their students be exposed to music education. The majority of principals

surveyed also expressed a desire for improvements among their school's music education programs, though they also related a great sense of difficulty with improving these programs because of budget constraints and the government-mandated focus on assessments for standardized subjects such as math. Due to the difficulty of securing funding to improve fine arts programs in elementary schools, principals must recognize the need to create improvements within their schools using the resources they have available. One way to create these improvements is to complete the cycle of assessment by developing appropriate assessments of learning outcomes and implementing program improvements based on assessment results.

Beveridge (2010) assessed the impact of NCLB on fine arts programs across America since its inception in 2002. Because of the government-mandated program assessments required through NCLB, the only rationale that allows for the testing of arts courses is to do so when funding is available; fine arts assessment is not prioritized at any stage of the program. Furthermore, instructors of fine arts courses find that they are encouraged and occasionally required to integrate other disciplines into their instructional methods in order to justify the program—a practice which is rarely encouraged and never required of more standardized disciplines. Despite the best intentions of instructors and administrators, school boards and administrators are forced to make decisions based on funding availability. Beveridge recognized, however, that the idealistic result of NCLB requires that schools not focus solely on standardized testing in order to determine the success of their students; therefore, it follows the spirit of NCLB for fine arts instructors to develop their own methods of assessing student success in order to demonstrate the need for additional funding. NCLB maintained at its inception that funding would be

made available even to elective programs that demonstrated student learning and achievement. Unfortunately, the situation facing schools in the meantime forces them to devote available resources to the programs that are assessed before placing any focus or investment on programs that will not be assessed.

Gipson (2009) summarized multiple benefits for students who are given the opportunity to participate in music classes. Even without excessive time investments or a large amount of natural ability, a student who is exposed to music education will be given a unique exposure to opportunities for creating and appreciating beauty. The music student is encouraged to think creatively, a process which utilizes a different type of thought than the mechanical functions necessary in math and science. This creativity, once fostered, can also be applied to other academic pursuits in order to develop more well-rounded students. When a student is given the opportunity to interact with musical scores or more complex musical recordings, he is shown how to detect patterns and how to integrate smaller pieces into a whole. The capability to integrate concepts with the use of patterns helps to scaffold the student's mental development to the highest forms of Bloom's taxonomy—synthesis and evaluation. These advantages and others, Gipson maintained, lead to a capable, prepared student who will be better equipped to work in a variety of settings at the conclusion of his academic career.

Flick (2009) emphasized the importance of interrater reliability when utilizing assessment tools, but noted the difficulty of such a method when assessing learning outcomes related to the arts and humanities. In order to assess student learning effectively in subjects such as music while requiring more than one rater, the raters must have attended a norming session and learned to use the same rubric successfully. Such a

session would ordinarily include a discussion of the definitions found on the rubric, as well as possible examples of expectations that should be assigned to each assessed level in order to aid multiple raters in valid assessment. While this will have enabled the accurate assessment of a single music program and its outcomes, it will not have enabled comparative assessment between different schools or programs with individualized outcomes. To appropriately measure these programs against each other, Flick recommended that groups of music programs agree on common outcomes, as well as some examples of responses from students who would have ideally achieved those outcomes. Even within a single music program, when an instructor can describe the capabilities of a student who has achieved the course learning outcomes and has developed a rubric to demonstrate the students' capabilities, he/she will have successfully developed the framework for further assessment of the program outcomes. Having a comprehensive description of the expectations for student learning enables the instructor to compare test results between years, providing opportunity for longitudinal assessment within learning outcomes.

Bloom's Taxonomy

Lord and Baviskar (2007) sought to improve the understanding of undergraduate biology students by creating test and assessment questions that forced students to respond based on higher levels of Bloom's taxonomy than mere knowledge—specifically, the level of understanding. The researchers briefly outlined the six levels of Bloom's taxonomy as follows: *knowledge*, when students merely have to recall facts that have been taught; *comprehension*, when students must translate learned knowledge into their own words or a new situation; *application*, when students are asked to consider topics as

larger wholes and apply their concepts to new situations; *analysis*, when students are required to deduce answers to new questions by dividing concepts already known and applying portions of those concepts to the questions; *synthesis*, when students creatively interact with known concepts and ideas in order to reach new conclusions; and *evaluation*, when students are asked to utilize criteria in order to form a judgment about content learned. By using the higher levels of this system to create questions and prompt deeper thought, the researchers concluded that instructors will be able to assess student learning beyond mere knowledge of facts. Any form of assessment that allows for more comprehensive results than knowledge retention provides greater opportunity for improvements based on assessment.

Barker and Hapkiewicz (2001) worked with 64 undergraduate students divided into two groups—the first group was given objectives dealing with knowledge, while their counterparts were given objectives based on evaluation, and a third group acted as a control that received no objectives. When tested, the researchers reported no significant finding related to the groups' performance regarding the subject material. All three groups performed comparably on the assessments as a whole, but those who were primed to learn on a knowledge level had more difficulty succeeding in evaluation, while those primed to evaluate had more difficulty focusing on the knowledge needed to answer the questions. Based on these findings, it is important that instructors either do not relate any specific objectives to their students, or that they relate objectives on all levels of learning that will be assessed. Students should be aware of the subject matter for which they will be assessed, but instructors risk limiting their students' abilities to learn on multiple levels by emphasizing one area of development over all others.

Hanna (2007) adapted and implemented a form of Bloom's taxonomy modified specifically for music education. Because of the difficulty presented by the need for standard assessment in a relatively subjective field such as music, Hanna's modification enabled the creation of objective learning outcomes for music to aid in assessment. This revision focused its attention on the application of specific verbs to the unique levels of learning based on Bloom's taxonomy in order to facilitate the development of standard assessments for learning outcomes. The framework of this revision freed the researcher to associate related concepts to each level of Bloom's taxonomy and assess those, rather than attempting to force a more subjective assessment into the specific vernacular of the original taxonomy. Based on the conclusion of Hanna's study, it is both possible and acceptable to take the framework of Bloom's taxonomy and apply it to what is typically viewed as a less standard discipline such as music in order to assess the level of student learning.

Curriculum Design and Backward Design

Van de Watering, Gijbels, Dochy, and van der Rijt (2008) stressed that assessment is a necessary counterpart to learning, for it is impossible to know without assessment if learning has taken place. These researchers sought to discover what preferences a group of students held regarding the form of assessments used by their instructors, and the relationship between these preferences and the students' performances on them. While the students surveyed preferred closed-ended forms of assessment such as written responses and closed questions, their scores on multiple forms of assessment did not show a reliable connection between their preferences and positive performances. The students, however, reported a strong preference for assessments that

focused on understanding of the material and its concepts, as opposed to recitation of memorized facts. Drawing from this study as well as previous research, one can conclude that students tend to prefer assessments that allow them the opportunity to explain their knowledge over forms of assessment that force them to recall specific facts and risk failure for an oversight during the study period.

Kelting-Gibson (2005) compared the backward design method of curriculum development against the traditional method by evaluating 153 lesson and unit plans made by education students. She stressed the importance of such a study because of the need to aid teachers in the learning and implementation of proper assessment techniques. This specific study sought to establish the validity of using the backward design method of assessment. This form of assessment begins with the selection of learning outcomes, progresses to the determination of an assessment method for those outcomes, and builds the curriculum and lessons around the assessments and outcomes so that the student will have received the necessary information. At the conclusion of Kelting-Gibson's study, the curricula formed using the backward design produced students who demonstrated higher levels of content knowledge, knowledge integration, and use of recent research methods. The results of this study clearly indicated an advantage to using backward design to develop program curricula.

Shumway and Berrett (2004) reported further detail regarding backward design of curriculum, extending the aforementioned method to the *modified* backward design. In this form of backward design, the instructor still begins with the desired result in mind and determines the assessment which will indicate its achievement; after this, he/she plans the teaching curriculum in order to convey the knowledge necessary to succeed on

the assessments. The modification phase then guides the instructor to improve his/her developed curriculum using additional helpful standards, after which he/she will better know the desired results of the assessments, and the instructor finally evaluates his/her standing curriculum and continues to improve it as needed. The researchers determined that the use of modified backward design can aid instructors in further improving their assessment strategies, particularly in situations where new outside standards are developed after an existing backward design curriculum is in place.

Childre, Sands, and Pope (2009) further praised backward design as a form of curriculum development due to its strong focus on student learning outcomes and the learning activities necessary to achieve those outcomes. The researchers also concluded that ongoing assessment would be necessary in order to scaffold the students' learning and aid them in comprehending more complex topics; by aiding students in the mastering of foundational areas of curriculum, instructors will be able to guide them through more difficult topics in the future. Backward design was also recommended specifically for classes that involve students who have learning disabilities or trouble focusing, because the design emphasizes a specific area of knowledge and understanding that must be grasped. This detail is necessary for students who might otherwise not be able to sift through large amounts of information to recall the areas necessary for assessment.

In conclusion, Hornbacher (2008) applied the concept of backward design to fine arts courses such as music. Although the teachers trained in backward design reported that the planning was difficult and sometimes felt tedious, the extensive exposure to theories of student learning as well as the disciplinary standards of learning resulted in a far greater confidence to defend both their programs and their students. Hornbacher also

noted an increase in the teachers' confidence to seek administrative support for their programs when they had thoroughly considered all aspects of the assessment within their programs. Based on this conclusion as well as the other research conducted, the implementation of backward design benefits not only the students, but also the instructor and overall program.

Backward Design and Bloom's Taxonomy

Based upon research reviewed, it is a logical step to combine the concepts of backward design with the tenets of Bloom's taxonomy in order to lay the foundation for future assessment of student learning at multiple levels of development. This study will serve as a pilot to determine if the combination of this form of assessment with differing levels of Bloom's taxonomy can be expanded to the wider field of curriculum development in the future. The results will indicate areas for future study and curriculum development in order to continue the cycle of improving the assessment of student learning.

Method

Participants

The first, third, and fifth grade classes from a small, private school in the mid-Atlantic United States were selected because of the ability to access full curriculum guides from the instructor, as well as historical familiarity with the instructor's teaching methods. In order to minimize the risk of negatively impacting students' assessment scores by changing the classroom routine, a familiar classroom setting was used. This enabled the design of curriculum and assessments in such a way that the instructor could naturally implement them and ensure that the students would remain comfortable with the

routine. The first, third, and fifth grade classes were selected in order to assess a diverse range of ages without inadvertently enabling students to become overly familiar with or weary of the assessments by administering a form of assessment each consecutive year.

While the entire class received instruction throughout the year, a sample of five students was selected from each class to meet with teacher volunteers from the elementary school in order to discuss their understanding of each learning outcome. The teachers were given rubrics and instructed in the expected levels of comprehension for each grade level. In this way, it was expected that there would not be a detrimental difference in the scoring techniques of each teacher. The students met with the same teachers before and after the week-long curriculum review in order to demonstrate what impact on their knowledge was made by the lessons.

Apparatus

The rubrics were developed based on the instructor's desired level of Bloom's taxonomy for the learning outcomes of each grade level. Rubrics here are considered to be standard methods of measurement that can be used by instructors from outside the individual discipline for assessment. For each learning outcome, the students were expected to be competent (a score of 3) at the level of *knowledge* while in first grade, *application* in third grade, and *synthesis* in fifth grade. Based upon the expected levels of comprehension, a separate category of assessment was developed for each grade level. For example, since the students in first grade were expected to show competency at the level of knowledge, they were asked to define or describe their understanding of each learning outcome; students in third grade (application) were asked to explain the concepts of each learning outcome as though they were instructing the teachers; and students in

fifth grade (synthesis) were asked to explain how they learned about and experienced each learning outcome throughout the course. Since the rubric for each learning outcome lists all three levels of Bloom's taxonomy, the teachers were instructed to note whichever level of understanding most appropriately matched the student's response to the prompts. A score of one through four was established on each rubric for the student's degree of learning based on the assigned level of Bloom's taxonomy. Every student would then have received a final score between two and eight for both the pre-test and the post-test using the rubrics developed.

Procedure

The music instructor was given the rubrics for her approval (see Chart A). Following consent of the instructor, curriculum reviews were developed for each grade level based specifically on the rubrics (see Chart B), at which point the music instructor implemented the curriculum based on backward design. Because of the focus during curriculum construction on the desired student capabilities, it was expected that the students' understanding of the three selected learning outcomes would increase proportionally based on their grade levels. The curriculum was reviewed over a one-week period, with a total of two class periods of thirty minutes each devoted to the learning outcomes. Prior to the curriculum review implementation, five students were randomly selected from each class to meet with teachers from the school. In order to gather consistent data, the five teachers were required to attend a meeting where the rubrics were explained and example responses given for each level. Every teacher met with one student from each grade level on an individual basis to determine his/her level of understanding for each learning outcome based on the rubrics. The students then met

once more with the same teachers at the conclusion of the curriculum review, and were scored with the same rubrics.

Chart A

God and Music Rubric

	Knowledge (1st)	Application (3rd)	Synthesis (5th)	Overall Understanding
4 Clear and Consistent Competence	The student can clearly describe the many voices of music that God has created.	The student can clearly relate key facts connecting God and music, showing mastery of the knowledge.	The student can clearly integrate the primary concepts related to God's creation of music with other aspects of life and academia.	The student demonstrates thorough understanding of God's role in music and His creation of music.
3 Adequate Competence	The student shows relative knowledge of God's role in the creation of music.	The student shows the ability to convey some connections between God and music.	The student shows the ability to integrate some outside areas of knowledge to the concepts of God and music.	The student demonstrates moderate understanding of God's role in music and His creation of music.
2 Developing Competence	The student has difficulty describing any connection between God and music, but clearly knows that a connection exists.	The student has difficulty explaining God's role in the creation of music, but clearly understands that there is a connection present.	The student has difficulty explaining how the major concepts of this unit can be applied to other areas of knowledge, but clearly recognizes that the concepts can be externalized.	The student demonstrates basic understanding of God's role in music and His creation of music.
1 Inadequate Competence	The student does not express any knowledge of a connection between God and music.	The student is not able to explain anything about God's role in the creation of music.	The student is not able to integrate the major concepts of God and music with any other subject matter.	The student demonstrates no understanding of God's role in music and His creation of music.

Roles and Parts of Instruments Rubric

	Knowledge (1st)	Application (3rd)	Synthesis (5th)	Overall Understanding
4 Clear and Consistent Competence	The student can clearly describe the different roles of instruments (violins play melody, drums keep beat, etc.)	The student can clearly relate key facts about the roles of instruments and how they are used together in larger groups.	The student can clearly integrate the primary concepts of a wide variety of unique instruments with the sounds needed in a large orchestral setting.	The student demonstrates thorough understanding of individual instrument sounds and their interaction within a larger musical setting.

	Knowledge (1st)	Application (3rd)	Synthesis (5th)	Overall Understanding
3 Adequate Competence	The student shows relative knowledge of the roles of instruments.	The student shows the ability to relate some key facts about individual instruments and their interaction in larger groups.	The student shows the ability to integrate some knowledge of instruments to the sounds needed in a large orchestral setting.	The student demonstrates moderate understanding of individual instruments sounds and their interaction within a larger musical setting.
2 Developing Competence	The student has difficulty describing the different roles of instruments.	The student has difficulty explaining the roles of unique instruments and their interaction in larger groups, but recognizes that instruments are unique.	The student has difficulty explaining how the major differences of instruments can be integrated to form the whole spectrum of orchestral sounds, but recognizes that the instruments work together.	The student demonstrates basic understanding of individual instrument sounds and their interaction within a larger musical setting.
1 Inadequate Competence	The student does not express any knowledge of the different roles of instruments.	The student is not able to explain anything about the roles or parts of instruments.	The student is not able to integrate knowledge of individual instruments with the need for a wide orchestral sound.	The student demonstrates no understanding of individual instrument sounds and their interaction within a larger musical setting.

Note and Rest Values Rubric

	Knowledge (1st)	Application (3rd)	Synthesis (5th)	Overall Understanding
4 Clear and Consistent Competence	The student can clearly describe that different notes and rests in written music have unique values.	The student can clearly relate key facts about different notes and rests and their unique values in written music.	The student can clearly describe the primary concepts related to different notes and rests and their unique values in written music and accurately describe how those concepts are used in producing music.	The student demonstrates thorough understanding of note and rest values.
3 Adequate Competence	The student shows relative knowledge of the different note and rest values in written music.	The student shows the ability to convey some knowledge of key facts regarding note and rest values in written music.	The student shows the ability to describe the primary concepts of note and rest values in written music, and can adequately describe how those concepts are used in producing music.	The student demonstrates moderate understanding of note and rest values.

	Knowledge (1st)	Application (3rd)	Synthesis (5th)	Overall Understanding
2 Developing Competence	The student has difficulty describing the different values assigned to notes and rests in written music.	The student has difficulty explaining the different values assigned to notes and rests in written music, but can express that different values exist.	The student has difficulty explaining the different values assigned to notes and rests in written music, and recognizes that those concepts are used in producing music.	The student demonstrates basic understanding of note and rest values.
1 Inadequate Competence	The student does not express any knowledge of the different note and rest values in written music.	The student is not able to explain anything about the different note and rest values in written music.	The student is not able to describe how the concepts of note and rest values are used in producing music.	The student demonstrates no understanding of note and rest values.

Chart B

Music and God Curriculum Focus

Describe (1st)	Apply (3rd)	Synthesize (5th)
- many voices of music that God created	- describe the connection between God and music	- explain that God has created everything, including music
- God's role in the creation of music	- explain how God as Creator is involved in the creation of music	- describe how God's creativity is seen in creation and in music
- that God has given music to His creation as a way for them to express themselves	- select examples of music that are used as praises to God	- demonstrate that people can share in God's creative ability through music and in other areas of life

Roles and Parts of Instruments Curriculum Focus

Describe (1st)	Apply (3rd)	Synthesize (5th)
- violins, trumpets, and flutes play melody	- instruments that play melody work together with instruments that play harmony	- instruments that play melody, harmony, and keep the beat are all necessary
- drums keep beat	- instruments must have different roles in order to create music	- one instrument by itself can play only one part, but together they can make complex music

Describe (1 st)	Apply (3 rd)	Synthesize (5 th)
- instruments have different voice ranges (piccolos vs. flutes)	- without the different voice ranges of instruments, music would not be as creative	- in all areas of life, individuals accomplish more when they work together

Note and Rest Values Curriculum Focus

Describe (1 st)	Apply (3 rd)	Synthesize (5 th)
- that different values are assigned to notes and rests	- because of the unique values of notes and rests, unique rhythms are created	- different notes and rests show musicians when to play so that the group stays together
- that the listener can hear and identify notes and rests in music	- the notes and rests used work together to make coherent measures and rhythms	- rests are as necessary as notes in order to create music
- that different combinations of notes and rests create different feelings to music	- different pieces of music use unique rhythms to create different feelings (ex., “The Planets”)	- music has the ability to encourage specific emotions in the listener based on the use of rhythms

Results

A descriptive analysis revealed that the students’ initial scores ranged from a mean of 2.33 for Notes and Rests Values (*SD* = 0.9) to 2.53 for Roles and Parts of Instruments (*SD* = 0.64), with an overall mean score of 2.42. The scores achieved after curriculum review implementation ranged from 3.33 for Notes and Rests Values (*SD* = 0.62) to 3.67 for Roles and Parts of Instruments (*SD* = 0.49), with a mean score of 3.49. A paired t-test was then conducted to determine the statistical significance of the improvements in student scores. Every learning outcome (God and Music, Roles and Parts of Instruments, and Notes and Rests Values) evidenced improvement that was statistically significant at $p < .001$. Additionally, the average score for each student

improved at the same level. This overall improvement indicates that the curriculum focus aided in the increase of understanding for every student evaluated at each level.

Discussion

It comes as no surprise that students will demonstrate greater understanding of subject material that has been reviewed in the classroom. What may be surprising, however, is the extent to which students' understanding improved between assessments. Every student improved in his/her understanding after the review (with the exception of two students whose initial understanding was at the highest level) despite the review of multiple learning outcomes. This is evidence for the long-held belief in education that it is easier to review a previously known concept than to learn it for the first time, and suggests that the review does not even have to be an intense, long-lasting activity in order to produce results.

In order to complete the cycle of assessment, the results of the assessment were presented to the course instructor and elementary school principal. Recommendations were made for the incorporation of additional teaching techniques appropriate to students' development—beginning with a desired level of learning based on students' ages, and from that basis developing a curriculum or review. Since the curriculum focus guides were created with the goal of first introducing concrete concepts to students and then encouraging them to think abstractly in order to apply the concepts to larger situations, younger students should demonstrate little difficulty in progressing to higher levels of understanding in future years.

Future research should be conducted with music courses in larger private schools as well as in public school programs, and should extend to upper-level learning

outcomes. A study should also be conducted to determine the extent to which younger students can learn at higher levels of Bloom's taxonomy. Since the rubrics appeared useful to assess the learning outcomes covered in this limited curriculum design, they should be used as a model for the creation of rubrics for other outcomes. Furthermore, given that the analysis evidenced a significant improvement in the students' competency in the chosen learning outcomes, the backward design method should be used to create learning activities for additional program outcomes in order to extend the scope of a successful method. Due to the difficulty that many music programs are experiencing in securing funding due to budget restraints on non-assessed programs, any opportunity to implement a useful assessment strategy that demonstrates student learning will bolster the program's worth to the school administration.

Similarly, this method of assessment should be incorporated into other non-standardized classes such as art and studied for effectiveness. Because of its focus on the instructor's predetermined learning outcomes, the backward design method can be applied for a multitude of course settings and instructional styles. This design lends itself easily to incorporation both in more unconventional subjects and in traditional classroom settings. If the backward design has been successful in the music course, future studies should focus on its implementation in other courses. Additionally, the backward design model enables instructors to customize expectations for children of all ages and developmental levels; this individual focus will allow instructors of students with diverse abilities and backgrounds to measure the success of each cohort without penalizing them for their differences.

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