

Engaging Aural Skills Students with Model-Eliciting Activities

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This mixed-methods study explores how using Model-Eliciting Activities (MEAs) in an aural skills classroom can promote student motivation and engagement. MEAs require students to create models to solve progressively complex problems. As students develop and refine their models, they engage in a testing and iteration process that prioritizes learning over final outcomes, which fosters student empowerment. The specific MEA implemented was focused on music transcription skills and used the *MUSIC Inventory of Motivation* survey to assess student motivation and engagement, complemented by follow-up interviews that explain the results of the survey. Many students scored high on this survey and expressed similar results in qualitative follow-up. Additional findings included students expressing excitement for collaboration and benefits to their perceived transcription skills. Overall, the findings suggest that MEAs foster high levels of student motivation and engagement within the aural skills curriculum.



The classroom is buzzing with excitement. Groups are scattered throughout, huddled at desks and listening to different audio files. As audio plays, they talk over each other and crack jokes, seemingly oblivious to the world around them as the teacher walks by. The teacher is available only as a guide to enable students to make their own progress. One group seems particularly talkative, as they argue back and forth.

“We need to start with the rhythm,” Brennan says, staring directly across the table.

“No, we need to find if the melody starts on the first scale degree,” Micah quips back. They are at odds about their first step, as they scribble and erase music notation from the papers in front of them.

These students are transcribing a short musical excerpt written and provided by the teacher, while also documenting and refining their process, a process termed a “Model-Eliciting Activity” (MEA).

Introduction

This article will introduce MEAs, provide guidance on implementing them in an aural skills context, and present preliminary evidence of their effectiveness with student engagement. Robinson and Hullinger explain that engagement means students are motivated to expend effort, time, and energy on academic activities to provide

quality work within a learning environment.¹ In the above scenario, students engage with an MEA designed around transcribing music for an Aural Skills 2 course while writing down their process. Once they complete the transcription and write their guide for doing so, they apply their guide to a second piece of music. While applying their guide to the new piece of music, errors in their transcription process become apparent. They then apply their guide to a third piece and edit their guide as needed. Their teacher is a facilitator, acting as a “guide on the side.”² Because students engage in the content and construct knowledge themselves, they are more likely to remember what they have learned and apply it in the future. MEAs shift student focus from a polished end point to the process required to get to the end point, thereby allowing students to hone their skills while making space for enhanced engagement with both the content and their peers around them.

Model-Eliciting Activities

MEAs, which originated in mathematics education and have been implemented primarily in the STEM disciplines, are a collaborative and interdisciplinary approach designed to foster interest and motivation.³ Rather than following a pre-determined process leading to a pre-determined solution, MEAs allow students to work in collaborative groups in which the process becomes the product itself.⁴ In contrast with instructional approaches wherein students aim for a single correct answer (such as Problem-Based Learning), MEAs prioritize defining an effective process, which often results in no singular correct answer because the focus is on creating a model and outlining the method for arriving at a solution.

MEAs are structured around a realistic scenario in which a “client” provides a problem for the student to solve with their model. A “client” could be any hypothetical person or organization asking the students to accomplish the task given in the activity—for example, a family member, restaurant owner, or local band looking for help with their shows. Students work in groups to explore how to best solve the problem.

Students typically go through an iterative process: discussing approaches, adapting their ideas into a model, refining the model to fit the given problem, and

1 Robinson and Hullinger (2008).

2 King (1993).

3 Diefes-Dux et al. (2008); Lesh and Doerr (2003).

4 Lesh and Doerr (2003); Moore (2008).

then repeating the process by incorporating new input. As a model is created, it will be tested to answer the problem. If it does not solve the problem, groups will evaluate why and refine their model further. If it does work, they will apply their model to a more complex problem to see if it works with a structurally similar scenario, repeating the iterative process throughout the activity.

Designing Model-Eliciting Activities

MEAs are designed and implemented using six guiding principles; Model-Construction, Reality, Self-Assessment, Model Documentation, Model Generalization, and Simple Prototype.⁵ Each principle guides instructors in creating an MEA to help students focus on a process rather than on a product.

According to the Model-Construction principle, the end result of an MEA should rely on students constructing a conceptual model to fully solve the problem. A model is a system of relationships among elements that are then used to describe another system. An MEA may ask for a simple model comprising a set of rules or procedures for students to determine and explain. In music theory, some examples of models may be designing effective ways to use notation, a set of instructions for transcription, or a guide for categorizing different styles of music. A model provides a procedure that can answer the problem and be extrapolated to different and more complex problems.

The Reality principle means that a problem in an MEA should be rooted in reality rather than an abstraction or surface-level reality. This is not to say that a student will have experienced the problem, but rather that a student could realistically expect to come across such a problem at some point. In mathematics, this is known as the “watermelon problem.” Students would be unlikely to ever need to purchase 100 watermelons at a time, and therefore a problem asking students to abstractly determine the price of 100 watermelons is not rooted in reality. Students may, however, need to purchase various amounts and kinds of fruit to make drinks for a pool party. In an aural skills classroom, students may be asked to determine an interval to fill in a missing part for a jam session. Intervals may be presented in a textbook and illustrated with examples from a piece a student has performed, but without additional context, this approach makes the concept feel abstract rather than concrete, leaving students unsure of how to apply their understanding of intervals in practical situations.

The Self-Assessment principle means that MEAs typically involve iteration on the

5 Lesh et al. (2000).

model. Students must be able to detect errors in their thinking, compare different ways of thinking within their group, adapt ways of thinking, and assess whether those adaptations were beneficial. A well-designed MEA should provide ways for students to test their models and ideas against multiple similar questions. Often this is done by providing a simple question alongside a more complex version of the same question, in which a simple answer cannot answer both, but a completed model can. As students test their models, they reflect critically on whether the model is generally applicable or requires further refinement.

The fourth principle, Model Documentation, requires students to face a problem in which they refine and iterate their thought process so that the teacher can see the thought process develop, which is why MEAs are often referred to as “thought-revealing activities.”⁶ Learning at this stage is the crux of an MEA, where critical thinking and iteration meet, allowing students to engage in metacognitive practices. In a transcription-based MEA, for example, groups may realize that determining rhythm before meter is more difficult than determining meter first. Their group would then refine their process for transcription and articulate why the change occurred.

Documentation can occur at multiple stages. During the MEA, students can be tasked with planning their process, monitoring the group, or assessing whether the process works. At each stage, the group assesses their model, which reveals their thought processes, resulting in a form of Documentation. After the MEA, groups may present their findings, including why their process was chosen and pitfalls they encountered. Being explicit about their decisions will also reveal thought processes, thus providing another kind of Documentation. Depending on the MEA, different methods for Documentation will be appropriate.

The fifth principle, Generalizability, is important in any model. For a model to be considered generalizable, it should be reusable and work when new information is added. MEAs accomplish this by explicitly asking students to focus on the process they are using rather than the end product or answer. By focusing on process, students understand that the focus is not on getting the correct answer, but rather on understanding *how* to get to that answer. Students may be asked to explain why their answer works, revealing the process behind the answer.

Simple Prototype is the final design principle. For a model to be considered a prototype, it should be as simple as possible but still significant enough to work. If the model is as simple as possible, it will easily adapt to other scenarios, feeding back into the Generalizability principle. If students are given an MEA to create a guide for

6 Stillman et al. (2013).

transcription, that guide should outline the necessary steps so that students will be prepared to tackle similar tasks in the future. Although processes vary, a common framework should illustrate how these skills function. To facilitate this principle, teachers should make sure that an MEA enables students to comprehend overarching concepts. Students then will create models that are as simple as possible.

Motivation and Engagement

Whereas students are typically extrinsically motivated through external validation, such as grades, MEAs' focus on process over product makes them an ideal vehicle for intrinsic motivation.⁷ Just as process is the precursor to product, motivation is the precursor to engagement.⁸ Group work strengthens social bonds and decreases the likelihood of disengagement, while also encouraging creative problem-solving and deeper involvement in the activity. When the focus is on the learning process, extrinsic motivation becomes less significant, allowing intrinsic motivation to flourish.⁹ Chenette argues that aural skills texts focus on content goals rather than learning goals.¹⁰ When content goals are the only basis for assessing students, students are motivated only to fit within that end goal. For example, while students should utilize error detection during a dictation exam, they are graded on the end product, and may not prioritize the error-detection process during the exam in favor of completing the dictation.¹¹

Within the classroom, motivation can be measured through five constructs: eMpowerment, Usefulness, Success, Interest, and Caring (MUSIC).¹² eMpowerment is related to autonomy and measures whether a student is in control of their learning.¹³ Classrooms that provide freedom to explore foster eMpowerment, which has been shown to have positive effects not only on motivation but also on academic outcomes such as test scores.¹⁴ Kirk et al. identified benefits in group work where peers are

⁷ Clark et al. (2008).

⁸ Jones (2019).

⁹ Deci and Ryan (2014).

¹⁰ Chenette (2021).

¹¹ Davis (2010).

¹² Jones (2009).

¹³ Deci and Ryan (1991).

¹⁴ Jong (2017).

empowered in their work, as well as the importance of having a teacher dedicated to empowering students, leading to higher motivation.¹⁵

Usefulness means that a student perceives that what they are learning will have utility in their lives.¹⁶ Students are not likely to engage meaningfully in work that they feel has no bearing on their future lives. Instructors must ensure that students understand the Usefulness of the work they are doing, whether this references life after school or their education.

Success is defined by a student's perception that they can be successful, and expect to be successful, in their coursework if they put in the required amount of effort.¹⁷ If a student does not feel as though they can be successful in their work, they will treat it similarly to work not perceived to be useful. In the context of motivation, Success is defined as the *expectation* of success, rather than the actual *achievement* of success, where expectation is directly tied to academic performance.¹⁸ A feeling of Success in the classroom is fostered by demonstrating to students that they will be guided to success if they struggle.

There are two types of Interest, situational and individual.¹⁹ Situational interest is extrinsic, and occurs when a student experiences increased engagement at a specific moment. Engaging methods of structuring learning, such as MEAs, are likely to contribute to situational interest. By contrast, individual interest is intrinsic, and is defined as increased engagement and re-engagement over time. Individual interest occurs when subject matter is intrinsically interesting to the student, outside of factors like visual aids or instructor presentations.

The final aspect of student motivation is Caring, in which students perceive that the instructor cares about student success and well-being.²⁰ Elliot et al. have called for mutual Caring between teachers and students.²¹ As such, they argue that good teaching involves creating a caring community in the classroom, which has benefits

15 Kirk et al. (2016).

16 Wigfield and Eccles (2000).

17 Ibid.

18 Ibid.

19 Harackiewicz, Smith, and Priniski (2016).

20 Noddings (1992).

21 Elliott et al. (2016).

such as student success and teacher dedication.²² Important factors in increasing a sense of Caring include teacher flexibility, encouraging students to explore and ask questions, and continuous communication.

Methodology

This study employed an explanatory sequential mixed methods design to determine whether MEAs induce high levels of engagement in undergraduate aural skills students. Results from both quantitative and qualitative data address the question: How do students perceive classroom engagement when Model-Eliciting Activities are used in an aural skills classroom?

Research participants were chosen through non-probability convenience sampling, based on enrollment in an Aural Skills 2 course at a large public university in the United States. 18 students were enrolled in the course, and on the day that the MEA was implemented, 15 were present. The researcher was not the instructor of record for the class. Prior to the MEA, they conducted virtual curiosity journals. During the MEA, the researcher guided students through the activity.

Curiosity Journals

Before implementing a complete MEA, students were given a preparatory assignment called a “curiosity journal,” which asked students to practice transcription independently on three separate occasions using their own chosen music. These journals provided a safe space for students to work without fear of being “wrong,” because their answers were never shared with other students. These journals were also graded on completion rather than accuracy. Each student answered five questions about their chosen pieces:

1. What piece of music am I listening to?
2. Why did I choose this piece?
3. Can I tell the meter(s)? What about the key(s)? What are they? What chord progression do I hear? What are some characteristics of the harmony? Do I recognize any rhythmic segments?
4. Transcribe a short (2-8 measure) section from the piece.
5. How can this piece of music help me to understand pieces that I play in ensembles/applied lessons?

22 Ibarra (2022); Louis, Murphy, and Smylie (2016).

Questions 1 and 2 solicit the name of the piece and ask students to articulate any meaningful connections they may have to the piece, thus encouraging students to take ownership and pride in their work. This sense of ownership and pride fosters eMpowerment, Usefulness, and Interest in their learning. Question 3 asks students to explain some basic features of the piece. By approaching the piece as a musician, they distill basic building blocks through which they can create a process or model for how to do transcription. The model they develop is applied in Question 4. Question 5 attempts to bring the learning that took place during the journaling stage to the content students typically see in their coursework. Students were asked to explicitly draw connections between the journals and the music they play, such as recognizing difficult rhythms or hearing chord progressions. These journals were submitted through a learning management system and any errors made during Questions 3 and 4 were addressed by the researcher through the learning management system comment system.

Data Collection

After completing three curiosity journals over the course of two months and receiving feedback after each, students were given an in-class MEA focused on transcription. In groups of four to five students each, students were given a scenario in which the “client” was a hypothetical student struggling with transcription and looking for help. In this scenario, the hypothetical student explained that they had trouble with transcription, and asked students to create a guide to help them learn how to transcribe. Students were given three newly-composed musical excerpts of increasing complexity and were instructed to develop a guide to transcription along with a transcription of each example. The excerpts students transcribed are shown in Example 1.

Example 1a featured a single melody phrase in a major key, harmonized by a single triad. Students transcribed the phrase and wrote down their process. Once they developed a basic guide, they worked on Example 1b, which was of similar length to Example 1a, but in a minor key, and harmonized by a chord progression instead of a static chord. Groups needed to address the progression and ensure that their model included a way to determine the example’s modality by iterating on their previous guide. Example 1c used a 12-bar blues-like progression, which encouraged students to refine their model further by including a method for recognizing chord progressions and how progressions can provide clues to the melody. Not every group fully transcribed Example 1c due to time constraints. The groups then presented

their guides to the class. During the presentations, students acknowledged that there was not a “correct” order for transcription, emphasizing that it was largely a matter of personal preference. Each group developed their own guide, with only minor differences between them. As one group presented, the other groups observed these differences and used the insights from the presentations to refine and iterate on their own guides, continuing the MEA cycle past the initial activity.



Example 1a

First transcription: Short phrase in C major.



Example 1b

Second transcription: Short phrase in A minor.



Example 1c

Third transcription: Short phrase in a pseudo-12-bar blues.

Following the MEA, quantitative surveys were conducted. Each survey consisted of six-point Likert questions measuring motivation and engagement, selected from the *MUSIC Inventory of Motivation*.²³ The MUSIC model was chosen due to its multifaceted approach to motivation and engagement, and the fact that the survey has been validated by multiple studies in various disciplines, including music.²⁴ Additionally, allowing students to self-report their perceptions is inherently valid, because it does not require the researcher to intervene in the students' learning process (Greene 2015).

Focus Groups and Interviews

After implementing the MEA and gathering data, participants were invited to participate in semi-structured focus groups or interviews to discuss their survey results. Four students participated in one focus group and three students participated in individual interviews.²⁵ There was no overlap between groups, resulting in verbal feedback from seven different students. Questions were generated based on the results of the MUSIC Inventory, and further exploration of topics was encouraged. The semi-structured interview questions were:

1. How has transcription been taught to you in the past?
2. Before this activity, how did you feel about your ability to transcribe music?
3. Have you ever done transcription in a group setting where everyone is collaborating, and how was that different from solo transcription?
4. Did this activity seem useful to you? Why or why not?
5. What aspects of the activity made you feel in control of your learning?
6. What could have been changed in the activity to make you feel that you had more control over your learning?
7. What made you feel successful in the activity?
8. What parts of the group project worked well for you?
9. What parts did not work well for you?

23 Jones (2019). The *MUSIC Inventory of Motivation* is a survey designed to measure each of the five aspects in the MUSIC Model of Motivation.

24 Jones et al. (2022); Jones, Krost, and Jones (2021); Wilkins, Jones, and Rakes (2021); Parkes, Jones, and Wilkins (2017).

25 Five separate times for focus groups were offered based on the schedule for the school of music. Due to constraints on participant schedules, one focus group included four participants, and the subsequent four times had either none or only one sign up. After discussing rescheduling opportunities with participants, one-on-one interviews were conducted to include as many participants as possible.

10. Typically, how mentally engaged do you feel during your aural skills class, and was that different during the MEA?
11. What parts of the MEA made you feel more, less, or about the same level of focus as during a typical class?

Quantitative Findings

A *Shapiro-Wilk* test determined that each factor of motivation from the MUSIC framework was distributed normally except for Caring, which skewed heavily to the top. Further descriptive statistics showed high values for every measure. On a 6-point Likert scale, empowerment ($M = 4.71$, $SD = 0.76$), Usefulness ($M = 5.41$, $SD = 0.5$), Success ($M = 4.87$, $SD = 0.9$), Interest ($M = 4.99$, $SD = 0.58$), and Caring ($M = 5.77$, $SD = 0.35$) all showed levels of motivation nearing the upper limits of the MUSIC Inventory. These statistics are consistent with findings from follow-up interviews and the focus group, and support the hypothesis that aural skills students participating in MEAs experience high engagement and express high scores on the MUSIC Inventory. Within-group comparisons were not possible due to sample size for most distinctions, such as gender and age.

Qualitative Findings

Multiple themes emerged throughout the semi-structured focus group and interviews. Each theme was expressed by three or more students independently. All names are pseudonyms.

Motivation

Throughout the MEA, students felt empowered in their learning and believed that they could accomplish the task at hand. Multiple students mentioned that collaborating with others changed how they approached transcription, with Nina commenting: “Someone’s hearing something different, and we can kind of work it out together.” Jolene, on the other hand, felt more confident in finding the best way to transcribe, because she “didn’t have to turn in my own personal thing, it was other people too,” which reduced pressure and allowed her to explore transcription. Additionally, some students found that the MEA empowered them to focus on their strengths and weaknesses within a group setting. Megan, for example, struggled to hold on to *Do* during exams, but during the MEA reported that she could find *Do* and

“press it the entire time” on a provided electronic keyboard. This helped her identify scale degrees, and prevented her from transposing her transcription erroneously later in the process.

One of the stronger themes was that the MEA was useful to the participants. Students experienced the usefulness of the activity in diverse ways. Megan saw the purpose of the activity as centering “real-life artists who aren’t in college, how they break things down.” She likened the scenario to being outside college, where musicians may not have an expert to fall back on, and would not rely on textbooks. Students found that breaking down the music step-by-step in a manner tailored to their individual needs was more beneficial than following a predetermined process provided directly by their teacher. David remarked that breaking down the steps “helped me remind myself of what the process was.” Transcription had become an automatic activity for David, but during the MEA, he noted that he skipped certain steps in the process, and that he could not articulate what he was doing and why. Being able to articulate the process was important to David as a future educator, because it helped him “approach a student with fundamental music knowledge and help them be able to transcribe music.”

David, Jolene, Megan, and Nina indicated that collaboration facilitated transcription. Nina highlighted that she felt a stronger sense of belonging while working out the process together. David had been paired with the vocal major in the class, and upon noticing that she was able to determine the melody more quickly than others, he started to use the techniques she described. Using techniques learned from others in their group helped students feel that they could be successful and would likely be more successful at transcription in the future. Nina and Jolene commented that having a group made them successful. Jolene had a group that she got along with, “so I think our instructions came out pretty well,” while Nina felt that having a group made the activity more interactive, which “helped me learn concepts better.” In traditional, individual coursework, Jolene struggled to feel successful or interested: “I think if I don’t understand what we’re doing, then it’s easier to just tune out.” In this quote, Jolene highlights the importance of Success being within perceived reach for students to remain engaged. David expressed that being “able to recall the steps in real-time while I’m under evaluation in an exam” would be helpful. Designing a model that he would use in the future increased David’s feelings of Success.

During the MEA, students experienced small breakthroughs, and their model would advance quickly. In the focus group, Rebecca reported that transcription was a major weakness in her musicianship. However, during the MEA she found the opposite

to be true. “I don’t suck at dictation. I’m doing like three of these steps in like the span of a minute.” By breaking down the process, Rebecca was able to see that she was making progress in her transcription skills, instead of focusing on progress still to be made.

Students declared a high level of Interest in the entire activity. Coraline was particularly excited to use small keyboards: “We were still having fun while also trying to figure out what the music even was.” In addition to being, as David mentioned, “something we don’t do normally” to maintain Interest and engagement, Coraline highlighted that the activity was simply fun to do. Interest was also enhanced before the activity, when students transcribed music of their choosing and reflected in their curiosity journals. This activity resulted in high levels of Interest due to general enjoyment. Nina stated that the curiosity journals were where you “pick a song you actually like, and then you just kind of figure it out,” which helped keep her Interest. Nina was more engaged, noting that “it’s more enjoyable this semester ... it’s stuff we’re more familiar with.” This comment also highlighted her increased Interest and engagement with the activity.

The final facet of the MUSIC model, Caring, means that a student feels that their instructor cares about them academically and personally. This is not a theme unique to MEAs, though MEAs provide an ideal vehicle to demonstrate Caring. Group work in a low-stakes environment cultivated Caring in the classroom. Nina articulated the low stakes juxtaposed with what high stakes might cause: “I don’t feel like anyone is going to like, make fun of me.” Because of Caring, Nina felt comfortable exploring and asking questions, both behaviors associated with engagement.

The lack of pressure in the activity was also a contributing factor to Caring. Since students were graded only on participation, they could explore how they were able to transcribe in a way that worked best for them. Rebecca even mentioned that it was not negative to be wrong, that if the instructor “sees something wrong, [they’re] not going to nag me about it, [they’re] going to help me fix it.” Thus, Rebecca felt she could be successful in the activity and the class as a whole, because the instructor cared about their success.

Additionally, several students reported a high level of Caring from their peers. Megan, for example, recalled getting stuck on the instructions, but instead of shutting down, she opened up: “We’re in this class together, we can stick together, we are going to get through it.” The instructor’s level of Caring was less important to Megan than the Caring of their peers. The same was true for Coraline, who was previously afraid of asking questions: “I felt like [a question the student had in class] was kind of dumb,

then someone else would ask and I would feel supported in that way.” Students felt supported by their course instructor and perceived that the instructor wanted them to succeed beyond just getting a passing grade.

Other Noted Benefits

Beyond the individual parts of MUSIC, another common theme was that students simply noticed how others transcribe music. Rebecca, as well as others, recalled thinking, “I never thought of doing that!” when they noticed how other students approached transcription. Nina relied on collaborating; Jolene mentioned the value of working with other students; David used techniques from peers to speed his transcriptions. Each determined a method that worked for them and relied on that process, until they realized that other approaches could also be beneficial through collaboration. David was particularly struck by this, saying, “How they [the vocal student] were able to so quickly write it down was pretty eye-opening.” Collaboration helped students who previously may not have seen themselves as successful.

Students also expressed high levels of Interest in collaboration. Jolene relayed that transcription became easier, because she “got different points of view” through collaboration, which facilitated her understanding. Different perspectives provide a secure environment for students to focus on their learning; about working alone, Megan commented: “It’s like you are leading yourself, and if you don’t know where you are leading yourself, you are leading yourself down a hole.” Megan explained that a self-directed student who has not mastered a concept may reinforce it incorrectly, thus causing more harm than had they not practiced at all.

Collaboration also increases interactivity. Nina was excited about this: “I pick it up better, it’s easier and more interactive. The collaboration, I feel like that’s helped me learn certain concepts better.” She also noted that misunderstandings can arise if group members interpret information differently, so having space to apply their own thoughts and assess which was more correct was helpful. Beyond finding correct answers, these interactions foster critical thinking and enhance understanding.

Improving Transcription Skills

Students consistently reported that their perceived personal transcription abilities improved after engaging in the MEA. Before the MEA, Kristen felt that they could find the beat and could detect simple meters, but noted that the activity helped “on being more confident in it.” David explained that his skills may not have changed,

but that his approach was now more consistent after making the step-by-step guide. Nina benefited from the scenario of helping a student: “I think part of it is when you teach something you have to think about how you do it more... You have to think deeper about it.” She became more confident by creating her own model, instead of being told how others have done it. Finally, in a moment that all teachers look for, Rebecca expressed an epiphany mentioned earlier: “I don’t suck at dictation.” Rebecca previously felt confident in getting the grade, but still felt that she were not skilled in dictation. Creating a model for how to transcribe showed Rebecca that she does indeed have these skills. She also perceives herself to be much better at transcription now than before the activity.

Further Directions

This study is not intended to be an endpoint, but rather a demonstration of how to use MEAs to promote student engagement in music courses. Further pedagogical exploration of MEAs can extend beyond transcription. As Small explains, music is something that a person does rather than a finished musical work.²⁶ MEAs reveal students’ approach to a problem, and as such can be implemented in any unit where students would benefit from a focus on articulating a process, either explicitly or implicitly.

A different MEA might have students create a model to describe music rather than transcribe it. How would a student determine and describe the timbres or textures of a short piece? Further examples may focus on creation and performance. An instructor might have first-semester aural skills students build their own instruments, design a custom notation system for these instruments, compose music using this system, and finally perform compositions on these instruments. Through this project, students may model protonotation, determine intervals, and practice basic composition, all of which deepen their understanding of musical concepts. This hands-on experience not only fosters creativity but also reinforces aural skills, making theoretical concepts more tangible and relevant. Finally, an MEA could focus on categorizing music for a database like IMSLP. In this task, students would create a model to filter music by genre, composer, time period, or difficulty. This encourages students to consider questions such as, “How does one determine the genre of a piece?” Not only does this process foster critical thinking and a deeper understanding of music classification, but it also enhances students’ analytical skills, preparing them for real-world applications in music and beyond.

²⁶ Small (1998).

Conclusion

The findings of this research are important for educators hoping to increase student engagement in the aural skills curriculum. With the ever-increasing pursuit for high engagement in the classroom, MEAs are a useful tool that support motivation, personal and educational growth, and engagement. This study has shown high levels of engagement according to the MUSIC Inventory of motivation, alongside explanations for how MEAs contribute to each of the facets that make up the scale. The design of an MEA mimics reality, so students find usefulness in their work. MEAs create a safe and collaborative environment, enhancing students' perceptions of empathy and support among peers. Additionally, these activities engage students by presenting scenarios that allow them to envision themselves in future roles. This connection not only fosters a sense of belonging, but also sustains students' interest in the subject matter. Finally, although Caring is not inherent to MEAs, MEAs provide a vessel for Caring to occur. Students in this study perceived Caring from both the course instructor and the researcher. Students felt safe to explore and make mistakes, because their instructor and peers would support them in their growth instead of criticizing their errors. These factors combined to contribute to increased student motivation and engagement within the classroom.

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