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## **Examining the Impact of Student-Centered Teaching Practices on Ownership and Belonging in a Middle School Orchestra Classroom**

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**Examining the Impact of Student-Centered Teaching Practices on Ownership and  
Belonging in a Middle School Orchestra Classroom**

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in fulfillment of final requirements for the MAED degree

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### **Acknowledgements**

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### **Abstract**

The purpose of this study was to examine the impact of student-centered practices on the ownership and belonging of seventh-grade orchestra students. The student-centered practices, based in the theory of social constructivism, consisted of a project in which students worked in small groups to teach a vocabulary term and skill to the class, as well as the routines of class discussions, classroom jobs, and a seat-rotation system. The implementation of the study was documented in a daily teacher journal. Data on students' ownership of the musical process and sense of belonging in the orchestra was collected through a bi-weekly student survey, observations of an audio recording of students' small-group work time, and student interviews at the completion of the study. This study led to the conclusion that student-centered practices can positively impact students' sense of belonging in the classroom, and may also impact their ownership of the musical process. In the future, similar student-centered practices could be implemented that would reduce the intensity of the intervention while still producing similar results.

*Keywords: constructivism, student-centered, belonging, ownership, engagement*

Schools, administrators, teachers, and families alike often speak of the need for a “well-rounded” education for today’s students. This education might be thought to include not only the traditional “core academic” subjects such as mathematics, science, and grammar, but also fine arts, athletics, and music. Stakeholders hope that a music education will provide their students with an engaging environment to cultivate self-expression and actualization. In fact, music courses are often thought to be inherently engaging, actively involving students in a creative process that extends beyond their own technical capabilities and growing them into young artists who use music to communicate their unique, creative ideas. Music classrooms are also often claimed to be “safe spaces” for students, where they can be fully themselves and feel a sense of belonging that might be missing for them in other areas throughout the school or their lives in general.

The vision to see music classrooms as fertile soil for cultivating student artistry and a sense of belonging is a noble one that deserves attention and effort from music educators. However, it is in contrast to some of the traditional methods taught to music teachers entering performance-based ensemble classrooms. Such methods center around rehearsal strategies that allow teacher-conductors to efficiently produce the musical results they want from their ensemble, achieving success based on standards of performance rather than creativity. McElhany (2017) referred to this approach as discipline-based teaching, where students are expected to meet the teacher's requirements and follow their directions precisely. While some students thrive in this structured environment, a discipline-based teaching style stifles students' individual creativity, leading those who struggle to meet the teachers' expectations to conclude that they do not belong in the class (McElhany, 2017). In contrast to discipline-based teaching, some researchers recommended a student-centered approach (Brown, 2008; McElhany, 2017;

Weasmer & Woods, 2000). In this model, students learn through active participation in the learning process, helping shape and create their own classroom experience (Brown, 2008; Weasmer & Woods, 2000).

This study begins at the convergence of these student-centered practices and the vision for music classrooms to be inspiring spaces that nurture student creativity and belonging, as I sought to discover how student-centered practices impact students' ownership and sense of belonging in a middle-school orchestra classroom. The central question addressed by the study is, do student-centered practices help create a classroom environment in which students gain ownership in the ensemble and feel that they belong in the group regardless of their musical ability? The goal of the study was to help all students, regardless of whether they identified as strong or weak musicians, take ownership in the ensemble in response to an increased sense of belonging in the orchestra.

### **Theoretical Framework**

The concepts of students actively participating in the learning process, taking ownership of their work, and feeling a sense of belonging in the classroom community are supported by Vygotsky's theory of social constructivism. According to this theory, students play an active role in constructing knowledge, as learners bring their knowledge and experiences into the classroom and share them with the learning community (Scruggs, 2009). Dewey also added to this theory, claiming that students learn more by doing than by observing and therefore should be more actively involved in the learning process (Brown, 2008). Students learn through interacting with the teacher and each other, adding to their previous knowledge until they are able to function independently (Scruggs, 2009). The *zone of proximal development* is the point at which students are functioning at the highest level they can, with the teacher providing supports, called

*scaffolding*, to fill in any gaps in the student's knowledge or skill (2009). In a process called *fading*, the teacher gradually removes these supports until the student can use the skills and content independently (2009).

Learner-centered or student-centered teaching strategies stem from social constructivism and include students working in cooperative groups and engaging in self-regulated learning (Slavin, 2005 in Guzzetta, 2019). Student-centered instruction also relies on scaffolding, as it begins with highly structured lessons and gradually transfers responsibility to the students as they gain independence. This process goes most smoothly when the instruction is at an appropriate level for the students based on their prior knowledge, allowing them to function in the zone of proximal development as much as possible. These constructivist and learner-centered strategies were the inspiration for the routines and activities implemented in this study, including cooperative learning groups as well as routines designed to encourage students to contribute their existing skills and knowledge to the classroom community.

Student-centered learning strategies based in the theory of social constructivism addressed the main needs I saw in my middle school orchestra classroom, including student apathy, lack of care for the classroom and space, and a student disengagement from the creative learning process. With a focus on keeping students learning in the zone of proximal development, I looked to these strategies to help me authentically engage students in making musical decisions and in taking ownership of their learning. I predicted that implementing cooperative groups could help students become more connected with their peers and develop a deeper sense of belonging in the orchestra, while holding class discussions and establishing new routines could encourage students to take greater ownership of their learning, engaging more deeply in the process of music-making. Many of these strategies stand in contrast to the

traditional methods of ensemble music instruction, turning the focus from the musical product and towards the musical process. Prior research provides greater definition to the term “student-centered practices,” and gives examples of the variety of ways in which they can be implemented in music ensemble classrooms.

### **Review of Literature**

The middle school orchestra classroom is a unique environment that brings together individual students with varying levels of musical interest into an ensemble community that must work together to meet musical goals. In a traditional music classroom, the director is at the center of this dynamic, as evidenced by the podium, off-limits to students, placed at the center of the room (Scruggs, 2009). McElhany (2017) labeled this approach “discipline-based teaching,” where students are expected to meet the teacher's requirements based on their understanding of the material the teacher has provided. The teacher determines the goals, instructional activities, and pacing of material for the ensemble, and students try to please the teacher (Weasmer & Woods, 2000). McElhany (2017) discovered in her middle school art classroom that a discipline-based teaching style stifled students' individual creativity as they focused instead on the teacher's requirements, leading those who struggled to meet these expectations to conclude that “they were not artistic.” Scruggs (2009) also cited a classroom environment in which the teacher “seems to be the most engaged person in the classroom,” and while students are involved in creating a polished performance, they are not included in meaningful music-making. In contrast to discipline-based teaching, researchers recommend a student-centered approach (Brown, 2008; McElhany, 2017; Weasmer & Woods, 2000). In this model, students shape and create their own classroom experience through active participation in the learning process, (Brown, 2008; Weasmer & Woods, 2000). The classroom activities and assessments are

designed based on student input and student needs (Brown, 2008; McElhany, 2017). Brown (2008) proposed three questions which students should be engaged in answering in a student-centered learning environment: 1) Where are you going? 2) How will you get there? 3) Are you getting there? When students are actively engaged in the planning, learning, and assessment phases of the learning process, they begin to take ownership of their learning and feel more belonging in the ensemble (Brown, 2008; Chan, 2014; Scruggs, 2008).

### **Planning: Where are you going?**

A student-centered planning process includes students in several aspects of classroom planning: learning objectives, learning activities, and goal setting. When including students in setting learning objectives, it is vital that the teacher and student roles are well-defined. The process begins with the teacher, who must maintain a high awareness of the year-long learning goals and grade-level standards (Weasmer & Woods, 2000). McElhany (2017) recommended that, in arts classes, the curriculum should focus on "big ideas" that are easily communicated with students. In the orchestra classroom, these ideas could be technique-related, content-related, or thematic. Throughout the learning objective-planning process, the teacher's role is to mentor and coach the ensemble, set the parameters, and oversee content and classroom management (Weasmer & Woods, 2000). The student's role in this process is to help brainstorm instructional goals based on the state standards (2000). Since this could be too abstract for some middle school students, Brown (2008) suggested breaking down the objectives into three areas: cognitive/knowing, artistic/performing, and aesthetic/feeling. To ensure that students stay involved in setting objectives throughout the school year, Scruggs (2008) recommended having a daily class discussion at the end of each rehearsal discussing what areas the ensemble needs to work on and what the goals for the next rehearsal should be. Once the class has determined the

learning targets for a class period or unit, the responsibility shifts back to the teacher to display the learning targets in student-friendly language, referencing them frequently throughout rehearsals to ensure the class stays on-task (Chan, 2014).

Once the learning targets have been established, the teacher should continue to involve students in determining how the class will meet the objectives. Scruggs (2009) and Wall (2018) recommended beginning with a class discussion to choose the performance repertoire. The class should discuss the ensemble's strengths and weaknesses, the audience's expectations for the performance, the variety of musical styles included, and the new skills the ensemble can learn from each piece to help them reach the determined learning objectives and year-long goals (Scruggs, 2009). Intentional effort should be made to ensure that the teacher and students will enjoy rehearsing and performing each selection (2009). As the ensemble begins learning the selected repertoire, students can provide feedback and suggest teaching strategies to further engage in the process (Brown, 2008). When students need to work on their individual skills, assignments should be open-ended and allow students to make choices that allow their unique identities to shine (McElhany, 2017). The assignments should give students opportunities, not requirements, thus allowing even students who do not identify as musically inclined to create something meaningful that they feel expresses their thoughts and ideas (2017).

The final strategy recommended by Chan (2014) and Weasmer and Woods (2000) to create a student-centered planning process is goal setting. Goal setting should be based around the essential questions of where students are going, how they will get there, and how they know they are getting there (Chan, 2014). Weasmer and Woods (2000) described this as teachers "setting the external parameters, and students setting the internal parameters" by making the objectives more specific. Chan (2014) encouraged visually tracking students' progress towards

their goals, whether individually or collectively. Comparing their current achievements to their past ones and publicly celebrating when a goal is met also motivates students to reach new goals (2014). When students know where they are going as individuals and as an ensemble and are involved in the planning process, they are more likely to take ownership in the learning process and feel that they belong in the orchestra.

### **Learning: How will you get there?**

The student-centered orchestra classroom allows students to become self-determined members of the learning process, making decisions for themselves and the ensemble to help them reach the learning goals and objectives (Chan, 2014). Before students can be meaningfully involved in the learning activities, the classroom environment must support student-centered learning by encouraging exploration and risk-taking, honoring diverse student voices, and including students in classroom routines and procedures. Researchers agreed that encouraging students to explore and take risks during the learning process is key to building a student-centered learning environment (Brown, 2008; McElhany, 2017; Scruggs, 2009; Wall, 2018; Weidner, 2020). Brown (2008) emphasized that exploration brings out students' natural curiosity, and McElhany (2017) added that teachers should model exploration in their examples rather than feeding students ideas or directions. As students explore creative ways of reaching a goal or ideas for solving a problem, they will encounter frustration and failure in an authentic way (Wall, 2018). Rather than try to prevent this, Weidner (2020) shared an example of a classroom that had a "failure list" posted on the whiteboard. Gradually erasing the failures reminds students that failure is part of problem-solving. Scruggs (2009) likewise found that not immediately correcting errors but rather guiding students to self-evaluate and identify their own errors built students' skills and encouraged them not to rely on the teacher for answers.

A student-centered classroom environment is also one in which a diverse spectrum of students feels comfortable and welcome sharing their unique voices (Chan, 2014; Draper, 2019; Scruggs, 2009). Draper (2019) found a correlation between student ownership in the learning process and the level to which they felt their thoughts and opinions were heard and acknowledged. To reap this benefit and to encourage a sense of belonging, teachers must create a classroom culture that values student input, reassuring each student that their presence in the ensemble is wanted and needed (Chan, 2014; Scruggs, 2009). Class discussions are a prime opportunity to include all voices. Weasmer and Woods (2000) encouraged teachers to step away from the role of moderator or leader in class discussions, allowing students to talk to one another directly and develop a more natural dialog and stream of ideas. Scruggs (2009) also recognized that the front row of an ensemble tends to feel the most heard and seen and thus suggests a seat rotation using varied layouts that give all students equal access to the front-row experience.

Lastly, teachers can build a student-centered classroom environment by involving students in the class routines and procedures (Weasmer & Woods, 2000). Scruggs (2009) asserted that this involvement must be "musically significant," reminding students that their usefulness in the classroom extends beyond sorting music and setting up chairs. When students are allowed to select a classroom role based on their unique strengths, they are more likely to feel useful and needed, building their sense of belonging in the ensemble. Draper (2019) also found in his classroom that student-led activities were more engaging and motivating for all students and allowed the student leader an opportunity to share their unique voice.

Clearly-defined teacher and student roles remain essential in the learning phase of the student-centered classroom (Andrews, 2012; Scruggs, 2009). Guzzetta (2019) and Andrews (2012) both found that students prefer for rehearsals to include a combination of student-led and

teacher-led learning activities. Andrews (2012) suggested that students do the core work of learning a piece of music on their own or in small groups, then work with the teacher to identify mistakes more efficiently, since this was the primary frustration for students working on their own. When students are working in groups or with a student conductor or leader, the teacher should serve as a coach, making general suggestions but allowing students to struggle through the challenges of independent learning (Scruggs, 2009). Scruggs also warned that students accustomed to discipline-based learning may balk at a student-centered approach at first since it requires more energy output from students. However, Andrews (2012) and Guzzetta (2019) found that their students enjoyed the independence and social aspects of working alone or in small groups despite some of the frustrations they experienced.

Researchers offered two different formats in which students can work together: peer teaching and small-group work. Peer teaching capitalizes on the premise that students learn best when they teach others what they have learned and that students find working with another student less intimidating than working with a teacher (Andrews, 2012; Brown, 2008). Guzzetta (2019) found that peer teaching required significant scaffolding in previous lessons to equip the student teachers with the skills and knowledge to teach their peers effectively. Andrews (2012) found small-group work to be a more effective model and noticed that students naturally began teaching one another within the small groups in an unstructured way. Group work places all students on an equal level, allowing them to learn from and motivate one another naturally without a designated leader (2012). Weasmer and Woods (2000) proposed another option in which small groups of students are responsible for a specific section of a project, such as a new piece of music, and must synthesize it for the rest of the class. Through an intentionally designed learning environment and a variety of teacher-directed and student-directed learning

activities, the learning phase of the learning process can be one in which every student is involved in helping the ensemble reach its goals.

**Assessment: Are you getting there?**

A student-centered assessment phase of the learning process involves students in creating and implementing assessments and multiple forms of reflection and feedback that can be used throughout the learning process. Chappuis (2009) stated that students' "ownership of learning depends on the learner's ability to see where he or she is in relation to where he or she is going" (in Chan, 2014); therefore, time for reflection should be built into the classroom routine and encouraged during all phases of the learning process. This should include time for students to reflect on their personal growth, challenging them to revisit past concepts, as well as time for the entire ensemble to reflect on their collective growth (Weasmer & Woods, 2000). Written reflections from students and dialogue directly with the teacher provide both the teacher and students with insight into their progress towards the learning targets (Brown, 2008).

Building student-centered assessment into the learning process should also include multiple forms and opportunities for feedback throughout the learning process. Chan (2014) asserted that students must be taught the expected and acceptable way to receive feedback from others and request feedback from the teacher and their peers. McElhany (2017) used impromptu peer critiques when students were stuck during work time, and Andrews (2012) found that students naturally gave one another feedback while working in small groups. Researchers warned teachers against providing students feedback that feeds them solutions to their problems and thus re-establishes a discipline-based teaching model. Open-ended and leading questions were touted by many as a way to guide students towards a learning objective but still encourage the student to be active in the learning (Brown, 2008; McElhany, 2017; Weidner, 2000).

McElhany (2017) also began phrasing suggestions as "what if" questions to encourage students to explore a possibility and decide for themselves if it was the answer they needed. With her younger students, Andrews (2012) likewise only gave general suggestions at first, becoming more precise if students were still struggling. These questioning strategies affirm the role of the teacher as the expert, knowing what path will take students to their desired outcome while also putting the responsibility for action in the students' hands (Andrews, 2012).

When the time comes for a formal assessment to determine whether students have met the learning objectives, researchers provided several ideas for keeping this part of the learning process student-centered. Brown (2008) suggested that students help the teacher create the rubric or assessment criteria after reflecting on the learning targets and ensemble goals. Scruggs (2009) added that students can help choose the musical excerpts to be assessed. Portfolios and other means of publishing student work based upon their selection allow students to see their progress over a more extended period and can help them see the impact of their effort (Brown, 2018; Weasmer & Woods, 2000). At the completion of the assessment phase, Chan (2014) proposed teaching students how to respond to feedback, directing them to consider what to do next and how to do it better. This launches students back into the question, "Where are you going?" and begins the learning process anew.

Researchers agreed that student-centered instructional practices yield many benefits in the classroom, including increased student self-determination and creativity, and teacher flexibility (Andrews, 2012; Brown, 2008; Chan, 2014; McElhany, 2017). Student-centered learning recognizes that students' participation or involvement in learning activities does not always lead to higher achievement as students may be passive recipients rather than active participants in their learning (Chan, 2014). Giving students a voice in the learning process

promotes their self-determination, the ability to act as the directional force in their own lives, as well as their self-sufficiency and creativity (Brown, 2008; Chan, 2014). An entire classroom of students actively engaged in their own learning can also begin to support one another, leading to an environment that promotes a sense of belonging as each student is needed to help and be helped (Andrews, 2012; McElhany, 2017). Student creativity blossoms in a student-centered instructional approach as the students become the musicians, expressing their own ideas rather than those fed to them by the teacher (McElhany, 2017). Brown (2008) found that this deeper classroom engagement encouraged students' love and appreciation of music and Andrews (2012) added that it allowed students to exceed her original standards and expectations. Finally, in a student-centered classroom, teachers are free to work with students with specific learning needs as the rest of the class supports one another in the learning process (Weasmer & Woods, 2000).

While Andrews (2012) and Guzzetta (2019) acknowledged that students prefer a blend of teacher-directed and student-centered learning practices, the research summarized in this paper makes a strong case that middle school orchestra students will benefit from using more student-centered rather than discipline-based teaching practices. Involving students throughout the three phases of the learning process, Planning, Learning, and Assessment, creates a classroom environment in which students are more likely to take ownership of their learning and have a greater sense of belonging in the ensemble.

### **Methodology**

To examine the extent to which learner-centered practices increase students' ownership of their work and sense of belonging, the study design used standard methods of qualitative data collection, including both observational and inquiry data. Observational data was collected through a teacher journal and student observations. Inquiry data was collected using a student

survey and student interviews. The key variables in the study were the student-centered classroom procedures and teaching strategies. The data tools collected information about the impact that altering these variables over a three-month period had on students' sense of belonging in the orchestra, as well as the ownership they took of the music-making process.

The subjects participating in this study were 46 seventh-grade students enrolled in string orchestra class at a middle school located in a first-ring suburb of a large metropolitan area in the Midwestern United States. Most students began studying their instrument in fifth grade during their first year at this fifth-eighth grade school. All students are required to be enrolled in a music course, of which orchestra is one of three options. The student sample is representative of the larger pupil population at the school, of which 46% are white, 34% are of Latino heritage, 9% are Black or African-American, 3% are Asian, and 8% are of another or mixed race. Of the student body, 11% are English learners, 20% receive special education services, and 49% qualify for free or reduced-price lunch. The study began in the Fall of 2021, when approximately one third of the students were reentering school in-person for the first time since March of 2020 when the COVID-19 pandemic began.

The data were collected through four different tools: a student survey, student interviews, a teacher journal, and observations of student group work time. The student survey was completed every-other Friday throughout the study. It included five questions that asked students to reflect on their ownership of the learning process, including whether or not they had discussed their progress towards class goals or learning targets, and whether they had given or received help or feedback from a classmate on their playing. The subsequent five survey questions examined students' sense of belonging in the orchestra, and included questions about their feelings toward the class and their classmates, the number of other students' names they

knew, and how they viewed their importance as a member of the group. At the completion of the study, one student from each small group was randomly selected to be interviewed to gather more detailed information about students' perceptions and feelings about the new practices. Students were interviewed in groups of three to four and discussed questions regarding how their group worked together, how much they and their group mates took ownership in the project, and how they felt that the new classroom routines impacted their experience in orchestra. Detailed notes and student quotes were documented throughout the interviews.

The teacher daily journal documented the implementation of the project and was filled out each day that the class met. The form recorded descriptors of the general atmosphere in the classroom that day, as well as the student-centered practices that were used, including different group discussion strategies. There was also open space for the teacher to journal about what went well and what could be improved from that day's rehearsal(s). The final data collection tool was a form used to collect observational data based on audio recordings of students' small-group work time. The form documented various behaviors that would evidence students taking ownership of their work and feeling a sense of belonging, as well as some behaviors that would evidence a lack of these qualities. Notable quotes or interactions were also noted with this data.

The study began at the end of the second week of the school year, when the general purpose of the study was explained to students and they took the student survey for the first time. In the second week of the study, new student-centered routines were taught, specifically the procedures for having class discussions as well as the expectations around students' classroom jobs and responsibilities. These routines continued throughout the subsequent weeks of the project. In the third week, students gave input regarding other students in the class with whom they would like to work for a small-group project. Students were divided into groups of four or

five based on this input, and began completing small tasks and get-to-know-you activities with their groups. In the fourth week, the group project was introduced and students began working with their groups to prepare their presentations. In the fifth week, the teacher gave a sample presentation and students continued to work on and finalize their presentations. In weeks six and seven, student groups presented their work to the class.

The small-group project gave students an opportunity to have input and control over the music-learning process for a portion of a class period. Each group was assigned a vocabulary term used in the piece *The Star Spangled Banner*, which students began learning at the beginning of the school year. Each group was responsible for teaching their vocabulary term to the class. Groups were provided with a slide template to help them structure their lesson. The template included a title slide, a slide for the learning target, a slide on which the group could introduce the vocabulary term and its associated symbols, then a series of slides for guiding the class through practicing the new skill and applying it to the piece of music. The final slide included discussion questions that encouraged the class to reflect on whether they met the learning target during that class period. Each group member was expected to contribute to the slides and to the delivery of the content to the class during the first half of a class period. The project was graded based on completion and students' participation.

### **Analysis of Data**

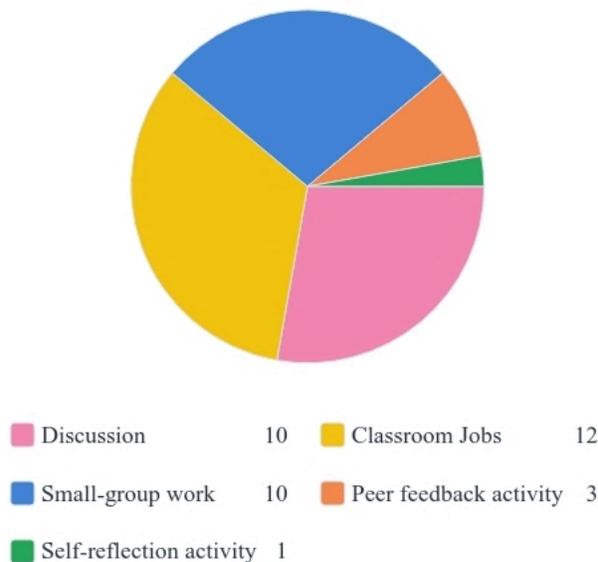
The purpose of the study was to determine the extent to which student-centered practices impacted 7th grade orchestra students' ownership of the musical process and sense of belonging in the orchestra. This was measured through a variety of qualitative data tools that were both teacher- and student-generated, including a student survey completed biweekly throughout the study, a daily teacher journal, audio observations of students' small-group work, and student

interviews conducted at the completion of the study. Each data tool included questions or prompts designed to measure the extent to which students were taking ownership of their individual work and the collective music-making process taking place in the classroom, as well as ones designed to measure students' sense of belonging in the orchestra. The student-centered practices implemented in the study were not intended to only impact student ownership or belonging but were designed to impact both, thus the following paragraphs will first outline the implementation of these strategies and then separately describe the data associated with student ownership and belonging, respectively.

The teacher journal documented the implementation of the study, including which student-centered practices were used during each class period. Figure 1 shows the number of class periods in which each student-centered practice was implemented.

**Figure 1**

*Student-Centered Strategies Completed*



*Note.* Number of occurrences out of 17 documented class periods.

Class discussions included teacher-led discussions about the progress the class had made on a particular piece or skill, a discussion about a video or recording, or a student-led discussion at the end of their presentation to the class. Most of these discussions were verbal discussions in which students were responding to prompts or using sentence starters provided by the teacher or by the group that was presenting. Students' classroom jobs were completed independently, and the documentation in the teacher journal indicated that at least some students completed their jobs, not necessarily that every student did so. The peer feedback and self-reflection activities indicated in Figure 1 included only a formal, teacher-led activity, not any feedback or self-reflection that students completed without being prompted by the teacher. The small-group work documented in the teacher journal only includes students working on their presentations of their *Star Spangled Banner* vocabulary lessons, not any informal work that students did with a partner or any think-pair-share discussion activities.

### **Student Ownership**

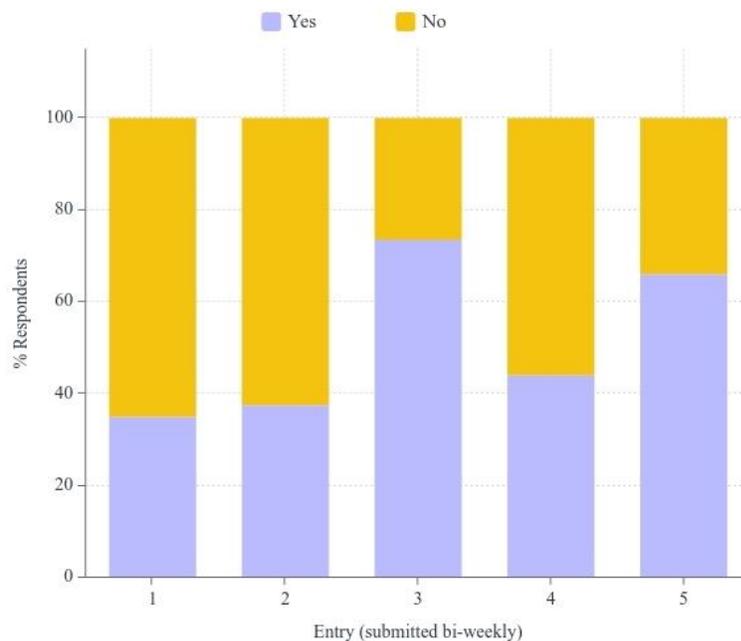
For the purpose of this study, the variable of student ownership was defined as students showing engagement in and taking responsibility for the process of making music as an ensemble. The evidence of student ownership measured in this study included students discussing class goals and learning objectives, working together with their classmates to offer support or feedback, and receiving help and support from others. Several student-centered practices implemented in this study were particularly aimed at cultivating deeper student ownership in the musical process. One practice was a discussion routine designed to encourage the class to talk about their progress towards learning goals and brainstorming future goals and areas of focus. The second was the group project in which students worked in small groups to take ownership of one skill used in a piece of music and to teach that skill to the class. Other

routines that may have impacted students' sense of ownership included students' classroom jobs and the use of peer feedback and self-reflection activities.

To measure students' ownership in the musical process, the student survey asked students to respond to a series of questions regarding the evidence of ownership stated previously. Students completed this survey five times throughout the study so that their sense of ownership could be measured over time. The survey asked students to reflect on actions that may have taken place within the past week, so there were some gaps in this data when students may have taken these actions and they were not recorded. Throughout the study, the frequency of students discussing class goals with a classmate or teacher trended upward as shown in Figure 2, with significantly greater frequency in the middle of the study around the time when students began their work on their small-group teaching projects.

**Figure 2**

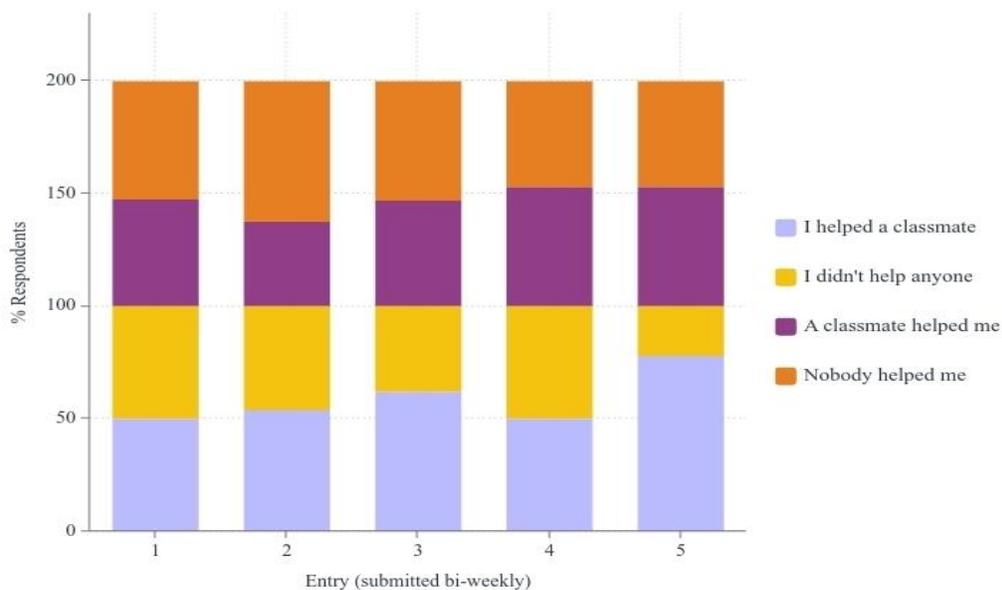
*Discussing Class Goals with a Classmate or Teacher in Past Week*



Students' support of one another throughout the study as measured in the student survey also saw a general increase in frequency, with more students reporting to have helped or given feedback to a classmate or have been helped by or received feedback from a classmate later in the study than at the beginning, as shown in Figure 3. A particularly noticeable increase was seen in students reporting that a classmate helped them or gave them feedback in the final week of the study. The number of students reporting to have received help or feedback does not align with the number of students reporting to have helped or given feedback to a classmate, which could be due either to a misunderstanding of the survey question or to the inconsistent number of responses collected on the various times the survey was administered. Figures 2 and 3 display the percentage of respondents who answered with yes or no for each question because the number of respondents for each entry of the survey was not consistent.

**Figure 3**

*Occurrences of Students' Mutual Support*



Students' ownership of the musical learning process was one focus area of the student interviews, which included 10 students, each of whom represented one of the small groups. The interview included several questions that encouraged students to consider the ways they or their group members took ownership of the work. Themes from the students' comments that gave evidence to the amount of ownership taken are displayed in Table 4.

**Table 4**

*Interview Themes - Ownership of Group Project*

<b>Theme</b>	<b># comments</b>	<b># students</b>	<b>Key points (# of comments in parenthesis)</b>
Caring about project	10	10	Group "kind of" cared (5) Only cared about the grade (2) Some in the group cared, others didn't (4)
Teamwork	5	5	Positive (3): Helping each other focus, more fun to work with others Negative (3): "Bossy" students not including others
Grade over Learning	3	3	Negative: The group only cared about the grade or the credit from the project, not learning.
Off-task	3	3	Negative: Goofing around, more focused on "fun" parts like adding memes to the slides
Workload	8	6	Positive (1): It was helpful to work with others Negative (7): One or two people did all the work, students were bossy or unhelpful

*Note.* Students interviewed = 10

The first interview question asked students how their small group worked together, and many students responded with comments about the division of work: which students took on the responsibility versus students who didn't support or help their group. The second interview

question asked students how much they felt their group cared about the project, to which students answered honestly that most only somewhat cared. Two students mentioned that this was a good thing, as it meant that the group was not stressed about the project and could thus enjoy their time together more. Several students took this opportunity to share that their group cared more about the grade they would receive for the assignment than about learning the content or presenting it well.

The audio observation data tool provided a unique view into the students' work time in their small groups, as an iPad was used to record the students' work time and was later reviewed to gather the data. While students were aware that their work time was being recorded, the observer was not present in the room and so their comments and use of time were unfiltered. The tool documented the frequency of several behaviors that would give evidence to the small group taking ownership of the musical learning process: all group members contributing to the work, the group discussing the learning objective, students supporting one another or providing one another with feedback, and the group trying to solve problems on their own before requesting teacher help. The frequency with which the 8 observed groups displayed these behaviors in their audio recording is displayed in Table 5. The form also included an opportunity for the observer to rate the overall quality of the group's work recorded, which is displayed in the last column.

**Table 5***Audio Observation – Ownership Behaviors*

Group #	Discussion of learning objective	Mutual support	Problem-solving	Constructive feedback	All students contributed	Quality of work
1	X	X	X		X	3
2		X	X	X	X	4
3		X	X			3
4	X	X	X		X	4
5		X		X		4
6		X	X	X		3
7		X	X	X	X	4
8		X		X	X	5

*Note.* Quality of work is rated out of 5, where 1 = poor and 5 = excellent

While no obvious patterns appear between any particular behavior and a group's corresponding quality of work, it is notable that the only group whose work was rated "excellent" was one of only two groups that did not display problem-solving skills. The form did not include a "no opportunity to observe" option, so it is possible that these groups did not encounter any problems to solve during their work session. It is also important to note that groups like group 1 who were observed early in the project may have encountered more challenges and questions in their work than groups like group 8 who were observed later in the project. Creating the learning target was a slide also completed early in the project, so may not have been necessary for discussion by groups observed later. Finally, the "quality of work"

standard is a subjective measure compared to the other behaviors that were objectively either observed or not observed. This data table illustrates that the quality of work rating is not a direct reflection of students' ownership of their work.

### **Sense of Belonging**

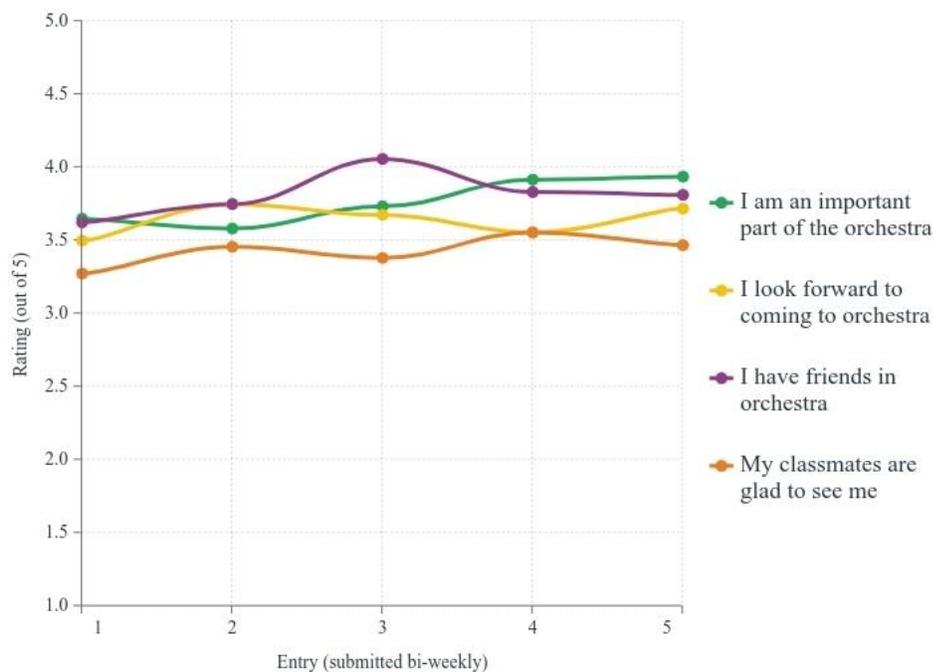
For the purpose of this study, the variable of students' sense of belonging was defined as students expressing a feeling that they were an essential part of the orchestra and that their presence in the group mattered regardless of their musical ability on their instrument. The evidence collected during this study to measure this subjective variable included students' statements regarding their sense of belonging in the student interviews and survey, the teacher's description of the "feeling" of each class period, and the conversations students had during their small-group work time as documented in the audio observation form. Several student-centered practices implemented in the study were specifically aimed at cultivating students' sense of belonging. The first was a seat rotation system that allowed all students to have the "front-row experience." Students were assigned a stand partner and a stand number, and would sit at their assigned stand number with their partner each class period. The stand numbers were rotated each day so that students sat in different rows of the orchestra and next to one new person each class, while staying with their same stand partner. The implementation of classroom jobs was also designed to cultivate in students a sense of belonging, as each student "applied for" a job they thought would suit them and had a job unique from others in the class. Finally, the small-group *Star Spangled Banner* vocabulary project was intended to help students get to know other members of the class better and work collaboratively toward a goal that would benefit the entire orchestra. Other factors that may have impacted students' sense of belonging in the orchestra

include the group discussion routines, students' friendships within the ensemble, and the closeness of students' relationship with the teacher.

To measure students' sense of belonging in the orchestra, the student survey asked students to rate the degree to which they agreed with a series of statements, with a rating of 1 being "strongly disagree" and a rating of 5 being "strongly agree." Figure 6 shows the progression of students' responses to each prompt across the 5 times they took the survey throughout the study.

**Figure 6**

*Student Survey Responses - Belonging*

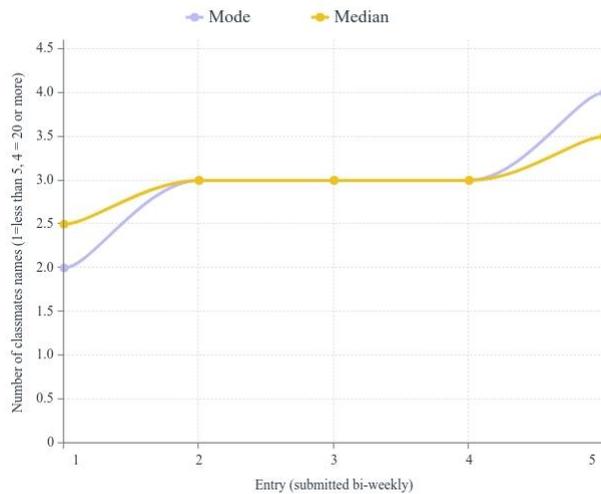


The student survey also asked students how many of their classmates' names they knew, to measure the extent to which they had connected with their classmates to cultivate a sense of

belonging with the group. Students could select from four different options: 1) 5 or less, 2) 5-10, 3) 10-20, or 4) 20 or more. Figure 7 shows the mode and median for this data, with each answer corresponding to the number previously listed.

**Figure 7**

*How Many Classmates' Names Do You Know?*



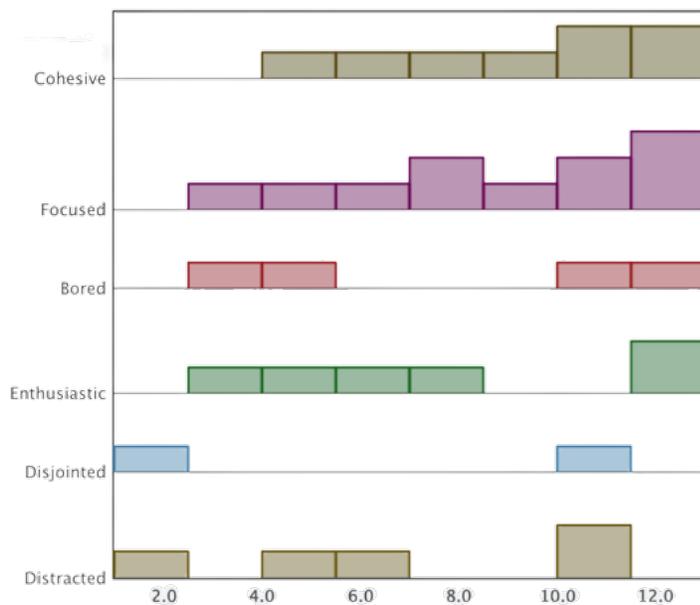
The mode and median increase over the course of the study, with the majority of respondents reporting to know 5-10 students' names at the beginning of the study and 20 or more names by the end of the study. The response options did not allow the data to show a gradual change over the course of the study as students had to choose one of the listed numerical ranges. Throughout the majority of the study, students reported to know 10-20 students' names.

The daily teacher journal documented students' sense of belonging on a much broader scale by recording the primary "feelings" in the classroom each day. While these feelings may not have been reflected by every student in the class on that day, they paint a picture of the composite energy and environment throughout the study. Figure 8 shows the frequency of each

descriptor as the study progressed. “Focused” and “cohesive” were the two most frequent descriptors and also increased in frequency throughout the study, while the other descriptors appeared more spontaneously throughout the study and showed fewer trends.

**Figure 8**

*Teacher Journal - Feeling in the Classroom*



*Note.* The horizontal axis indicates weeks of the study. Some weeks included more class periods.

The student interviews provided students with a few opportunities to share their sense of belonging in the orchestra, particularly in reflecting on their personal feelings about the group project and the student-centered classroom routines. Table 9 details students’ comments related to a sense of belonging in regards to the group project.

**Table 9***Interview Themes - Sense of Belonging in Group Project*

<b>Theme</b>	<b># comments</b>	<b># students</b>	<b>Key points</b>
Relaxed	2	2	Positive: Not stressed about the assignment
Social	8	6	Positive: Getting to know other classmates, more fun to interact with friends
Inefficient	5	5	Negative: Took a long time, extra steps, students aren't used to teaching
Presenting	2	2	Negative: Presentations were challenging for some students, could be awkward for the rest of the class

The most significant positive response students shared regarding the group project was how much they enjoyed working with other students and having the opportunity to be more social during orchestra. Students commented on getting to know each other better and having fun interacting with friends, even if they were sometimes goofy or off-task. On the other hand, students did not enjoy participating in other groups' presentations as they were sometimes awkward and felt like an inefficient use of class time. One student also shared a discomfort with presenting that made them feel uncomfortable with the assignment.

When asked about their feelings regarding the student-centered classroom routines of seat rotations and classroom jobs implemented during the project, students shared a similar mix of positive and negative experiences, as detailed in Table 10.

**Table 10***Interview Themes - Sense of Belonging in Class Routines*

<b>Theme</b>	<b># comments</b>	<b># students</b>	<b>Key points</b>
Seats	6	7	Positive (4): Different perspective, hear different parts Negative (2): Some need to be in front (help, hearing)
Classroom Jobs	3	3	Positive: Sense of purpose in class Negative: Could be used more often

Students understood the benefit of rotating seats and enjoyed getting a different musical perspective in different seats, but also felt that students who needed to sit in the front either for academic or physical reasons could not always do so. One student with hearing loss shared that rotating seats created a challenge since it is harder for them to hear in the back of the classroom. The behaviors recorded in the audio observation form as evidence of students' sense of belonging included students supporting and helping one another, all students contributing to the group, and students sharing conversation about their lives outside of orchestra. Negative behaviors recorded included negative comments about another student in the group and prolonged off-task behavior. Table 11 shows the frequency of each of these behaviors across the groups. The group numbers are correlated with the group numbers in Figure 5, and the quality of work score is again included in the last column.

**Table 11***Audio Observation –Belonging Behaviors*

Group #	A single student dominated as leader	Negative/rude comment	Off-task behavior	All students contributed	Conversation about life outside of orchestra	Quality of Work
1			X	X	X	3
2			X	X	X	4
3	X		X		X	3
4		X	X	X		4
5	X		X		X	4
6		X	X		X	3
7			X	X	X	4
8				X		5

*Note.* Quality of work is rated out of 5, where 1 = poor and 5 = excellent

The bias in the quality of work rating is again illustrated in this table, as group 8, the only group that was never off-task, was also the only group whose work was deemed “excellent.” It is also interesting to note that this group is one of the only two that did not discuss their lives outside of orchestra, suggesting that these conversations were classified as off-task. In the analysis, conversations about life outside of orchestra were considered to be positive examples of students’ sense of belonging, while off-task behaviors were considered negative.

### Conclusion and Recommendations

The purpose of this study was to improve 7th grade orchestra students' ownership of the musical process and sense of belonging in the ensemble through implementing student-centered practices such as class discussions on learning goals and objectives, classroom jobs, a seat rotation system, and a small-group project in which students taught each other a vocabulary term and skill from *The Star Spangled Banner*. As evidenced by the data in the previous section, some progress was made both in students' professed ownership of their work as well as in their sense of belonging over the course of the study. Although the data were not overwhelmingly conclusive on any topic, enough improvement was made in both areas that further effort towards refining the student-centered practices and their implementation in the classroom would be recommended. Specific conclusions and related recommendations for future practice are detailed in the following paragraphs.

Small-group projects of the intensity implemented in this study are likely unnecessary to produce the desired results of increased student ownership and sense of belonging. The social and interactive nature of the small-group project seemed to be more impactful to students than the presentations and students playing a larger role in the learning process. The biggest increase in students' agreement with the statement "I have friends in orchestra" was at the point in the study when they had begun working with their small groups each class period but had not yet begun listening to other groups' presentations. Students were more frustrated than inspired by the pedagogical challenges of teaching and learning from their classmates, yet enjoyed the opportunity to collaborate in groups and most students expressed a desire to do this again without the presentations. One student insightfully shared, "With the students teaching it was at times all over the place because we're students and we're not used to teaching anything."

Another student expressed, “I think the group was fun to work with but I didn’t really learn anything. So I think it’s more fun to go in a [small] group but I learn more in a big group.”

Having fun is a very important aspect of learning, particularly for adolescent seventh graders who may be more motivated by peer interactions than learning for learning’s sake. However,

students shared that trying to learn from other students’ presentations was ineffective. The

Teacher Journal echoed the students’ thoughts, as suggested by this comment on the first day of working in small groups: “The small groups were a hit - students are working with others they get along with well. This is the most engaged and on-task they are, when working with others.”

A few weeks into presentations, however, the comments were mixed, with one class struggling with none of the presentations being “very well organized or executed and they’re losing steam

on the whole thing,” while the other class had a “great presentation today with very thoughtful

responses and participation from other students. Included peer feedback without prompting to do so.” The success of the presentations depended very much on the personalities of the students

and their ability to engage the class, rather than the quality of the content or how much the class was learning.

In the future, I would consider implementing small-group assignments that can be completed in a shorter amount of time, even one class period, and removing the public nature of this assignment that required a presentation. This would address the efficiency concern shared by students who were frustrated that it took so long to hear from each group, as well as the awkwardness of presenting and watching presentations that several students expressed. A simplified approach to the style of project implemented in this study would be for small groups of students to conduct brief research on the performance repertoire, finding relevant facts about the composer, the background of the piece, and helpful tutorial or performance videos that are

available. These resources could be shared with other students without taking extra class time or needing to do a presentation. I could also use these student-generated resources as part of my lesson plans, validating students' work but not putting the burden of pedagogical instruction on them.

The study design included data collection tools that could be more easily correlated to the small-group project than the other classroom routines, and the students interviewed had more to say about the small-group projects than the other student-centered practices. Thus, it is challenging to draw conclusions about the classroom routines that have substantial evidence to support them. However, based on the teacher comments recorded in the daily teacher journal and students' comments recorded in the interviews, the most impactful routine seemed to be class discussions, followed by the seat rotation system and classroom jobs. Class discussions provided several opportunities that shifted the classroom environment to be more student-centered rather than teacher-centered. Even when only a few students spoke up, which the Teacher Journal revealed occurred more frequently in one class than the other, the discussion questions or prompts encouraged all students to reflect on their playing as well as on the performance of the class as a whole. Students were also able to hear the reflections of their classmates and were encouraged to nod or shake their heads to show their agreement. I would often ask follow-up questions and encourage whole-class responses via thumbs-up or down, nodding or shaking heads, etc. Using technology tools was another helpful way to hear from more students. Google Jamboards "did not work well - too many tools and opportunities to erase others' thoughts" (Teacher Journal). Menti was a better tool for gathering student input as it is anonymous and has helpful visual representation tools such as graphs and scales that students can use to rate various aspects of the piece, list the measure of a piece that they felt would be

most important to review in the next class, or ranking 4 different piece options from favorite to least favorite to vote and decide on a new concert piece. Turn-pair-share also worked well, using a random name selector to choose random pairs of students to share their thoughts. Only one student mentioned enjoying the group discussions in the interview, but another student, unprompted, shared the following in a holiday note: “Another thing I like about orchestra is the ability you give us to choose our own music and have opinions.” This comment was one of the highlights of the study for me, as this student did not frequently speak up during class discussions but clearly appreciated having input into the musical selections and the content of future rehearsals. I noticed that allowing students to share their opinions and reflections in an open way improved the classroom environment by making students feel more comfortable and open to sharing their opinions in general. In addition, more students began sharing their thoughts about pieces of music and rehearsals without my prompting, but in a respectful manner that helped me improve future rehearsals.

The seat rotation system seemed to be a system that would work well in certain contexts and for specific purposes, and received mixed feedback from the students interviewed. Students enjoyed getting a new perspective on the room and on the musical parts, as sitting in new spots helped them to hear the music differently. As the teacher, I appreciated having different students in the front row each class period so I could see how they were doing more clearly and have a chance to relate and connect with them better. However, as one student shared, “some people who needed help were in the back and couldn’t get the help they needed,” since having different students in the front also meant that different students were in the back each class period. Some students also commented that the seat rotation systems made it challenging for them to focus or hear their part.

Classroom jobs were one of the most challenging student-centered routines to implement. One of the comments in the teacher journal shared that “Student jobs are not all happening - some more than others.” Students also commented in the interviews that they felt that not all jobs were necessary or that having both seventh-grade classes do the jobs meant that some jobs were needed very infrequently. Still, students expressed the value of having classroom jobs to help take care of some of the classroom tasks and responsibilities. For example, one student proudly shared, “My job is closing the door whenever it gets too noisy so I make sure to go around and not distract anyone and this way it doesn’t throw anyone off.” This student took their job seriously and saw the benefit it made to the ensemble. It seemed that the concept of classroom jobs was a good one and worth pursuing in the future, but in a different format or with a different system. For example, rather than every student having the same job for the entire year, perhaps the most important jobs could be assigned to one student for a quarter or a semester. Students could still have input into their job for that period of time, but limiting the number of students assigned to each job would emphasize their responsibility and make the job feel more necessary. Limiting the amount of time in the year the student is expected to complete the job would also give all students the opportunity to benefit from this responsibility without causing any students to feel they are being asked to do more than others.

This study revealed to me the possibilities available for increasing student engagement via student-centered practices. While some of the practices were implemented with a structure that I concluded to be too intense, the study helped me determine the extent to which each strategy should have a place in my classroom in the future. Through continuing to refine my use of student-centered practices, I hope to have more moments like the one shared earlier in this section, where students realize they can have their own musical opinions and decisions.

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**Appendix A****Audio Observation Form**

1. Group Number:
2. Check all behaviors that occurred (Check all that apply):
  - a. Discussion of learning objective
  - b. Mutual support - students helped each other
  - c. Students gave one another constructive feedback
  - d. Group tries to address a problem on their own before requesting teacher help
  - e. All students contributed
  - f. Conversation about life outside of orchestra
3. Check all behaviors that occurred (Check all that apply):
  - a. A single student dominated as leader
  - b. Negative/rude comment
  - c. Prolonged off-task behavior by 1+ group members
4. What is the overall quality of the work this group is putting out in this session? (Rate from 1 = poor to 5 = excellent)
5. Notable quotes:
6. Notable interactions:

## **Appendix B**

### **Student Interview Prompts**

1. Describe how your small group worked together. What went well? What was challenging?
2. Did you and your groupmates care about the project? What happened that makes you say that?
3. How do you enjoy learning a new song most? (whole class, small group, or on your own)  
What makes you say that?
4. Which classroom strategy do you feel has had the greatest impact on your orchestra experience? (Student jobs, Class discussions, Group projects, Seat rotation)

## Appendix C

### Student Survey

#### Section 1

This week....

1. Did you talk with the teacher or a classmate about one of our class goals or learning targets? (Yes/No)
2. Did you help a classmate with something the orchestra was working on? (ex. shared your music, helped them with a note/rhythm) (Yes/No)
3. Did a classmate help you with something the orchestra was working on? (ex. shared their music, helped you figure out a note/rhythm) (Yes/No)
4. Did you offer a classmate feedback on their playing? (ex. sharing something they did well or something to work on) (Yes/No)
5. Did a classmate give you feedback on your playing? (ex. shared something you did well or something you can work on) (Yes/No)

#### Section 2

How much do you agree with each statement? (Rate from 1 = Strongly Disagree to 5 = Strong Agree)

1. I am an important part of the orchestra.
2. I look forward to coming to orchestra class.
3. I have friends in orchestra.
4. My orchestra classmates are glad to see me.
5. Look around the classroom. How many of your classmates' names do you know?
  - a. Less than 5

- b. 5-10
- c. 10-20
- d. more than 20

**Appendix D****Teacher Daily Journal**

1. Today's date:
2. Check all student-centered strategies that took place in class today (Check all that apply):
  - a. Students completed their classroom jobs
  - b. Small-group work on group project
  - c. Peer feedback activity
  - d. Self-reflection activity
  - e. Discussion of progress toward learning target and target for next class (note type below)
  - f. Other:
3. Check any discussion tools used today (Check all that apply):
  - a. Prompts / sentence starters
  - b. Open, verbal discussion
  - c. Google doc/jamboard
  - d. Think, pair, share
  - e. "Speed dating" circle
  - f. Other:
4. Today this class felt (Check all that apply):
  - a. Enthusiastic
  - b. Bored
  - c. Focused
  - d. Distracted

- e. Cohesive
  - f. Disjointed
5. Do this again!:
  6. This didn't go so well. Change it up next class: