Creative Education, 2024, 15, 2318-2337
https://www.scirp.org/journal/ce
ISSN Online: 2151-4771
ISSN Print: 2151-4755

Mentoring as a Tool for Development of Preservice Early Childhood Music Teachers: A Pilot Study Using the Classroom Assessment Scoring System (CLASS)

Hélène Boucher, Jennifer Y. M. Lee, Catherine Tardif

Music Department, Arts Faculty, Universite du Quebec à Montreal, Montreal, Canada
Email: boucher.helene@uqam.ca

How to cite this paper: Boucher, H., Lee, J. Y. M., & Tardif, C. (2024). Mentoring as a Tool for Development of Preservice Early Childhood Music Teachers: A Pilot Study Using the Classroom Assessment Scoring System (CLASS). *Creative Education, 15,* 2318-2337.
https://doi.org/10.4236/ce.2024.1511141

Received: October 17, 2024
Accepted: November 25, 2024
Published: November 28, 2024

Abstract

This article focuses on mentoring as a learning tool for the music specialist teacher in early childhood. The purpose of this pilot study was to assess the development of three early childhood preservice music teachers in a 7-week mentoring experience and to analyze the feedback provided by the mentor and its influence on the development of the mentees. Using a multiple-case study methodology, this research incorporated the Classroom Assessment Scoring System (CLASS) to observe and evaluate interactions. Results were compared with published studies on early childhood educators to assess CLASS's potential for broader application with music specialists. Our results indicate that two of the three participants improved significantly on some of the dimensions studied. The greatest amount of feedback the mentees received concerned the Instruction Learning Format. No significant association was found between categories of feedback and improvement. Finally, when compared to published results, a significant correlation was found between music teachers in this study and early childhood educators from previous studies using the CLASS. Therefore, the tool has the potential to be used with music specialists in the future. More resources should be attributed to investigating mentoring as a useful supplement to the formal training of music teachers.

Keywords

Classroom Assessment Scoring System, Early Childhood, Mentoring, Professional Development, Music Teacher

1. Introduction

The experiences of preservice music teachers have been studied for many years

(Conway et al., 2019) and the experiences of early childhood preservice educators are well documented (Fleer & Van Oers, 2017). The first experiences of music teachers in early childhood settings, however, have been less examined (Gruenhagen, 2012; Salvador & Culp, 2021). Even though, in many countries, no formal certification is required to become an early childhood music teacher (Gruenhagen, 2012), more programs in higher education now offer specific courses on how to teach music to preschoolers. However, most Bachelor of Music Education degrees still focus solely on elementary and high school music education (Salvador & Culp, 2021). In this context, an important part of learning to teach and interact with very young children has traditionally been done through mentoring by more experienced teachers (Bautista et al., 2022; Gruenhagen, 2012; Welch, 2021).

This project focused on mentoring as a learning tool for the music specialist teacher in early childhood. We will first situate our research in mentoring as a tool for the overall training of the music specialist teacher, then for the early childhood educator, and finally, as a training tool to teach music to very young child by both types of teaching professionals.

In the field of music performance, Renshaw (2009) developed a framework to understand mentoring in one-on-one studio teaching. She distinguishes different practices in this context: instructing, advising, counselling, coaching and mentoring. These different perspectives are also understood as being embedded. In this article, we are understanding this approach according to the following definition:

> Mentoring is a […] developmental process, including elements of coaching, facilitating and counselling, aimed at sharing knowledge and encouraging individual development. It has a longer-term focus designed to foster personal growth and to help an individual place their creative, personal and professional development in a wider cultural, social and educational context. (Renshaw, 2009: p. 63)

2. Literature Review

2.1. Music Education Students and Mentoring

In the field of music education, in addition to the demanding university training, future music teachers experience mentoring as a learning tool throughout their program. Traditionally, preservice music teachers receive a one-on-one guiding experience as they are usually paired with experienced teachers in schools during their practicum (Bell-Robertson, 2015; Draves, 2008; Stegman, 2007). Greene et al. (2020: p. 80) identified four elements associated with positive mentoring experiences: "a sense of partnership, appreciation for encouragement, music-specific instructional support, and a desire to continue the mentoring connection into the future". To better understand interactions that are involved in mentoring, Munroe (2021) studied the dialogues between cooperating teachers and student teachers through a multiple case study. She found that the mentor can play the role of the "encourager" or "imperator" as different topics, and teaching styles are discussed.

The specificities of the music ensemble in which the field experience took place were factors that influenced the relationship between mentor and mentee.

Furthermore, novice music teachers face systemic challenges: the high number of students seen each week, often being the only instructor of the subject, specific classroom management challenges, and feeling that their subject is perceived as being less important (Bell-Robertson, 2015). Moreover, researchers documented how music teachers felt overwhelmed by several other tasks related to music teaching (musical performances, paperwork related to competition participation and other organization tasks) (Conway, 2006; Haack & Smith, 2000). Addressing these topics can be part of the support a mentor provides; however, some challenges can negatively impact the process. Being paired with a successful veteran who teaches the same subject seems a non-negotiable aspect of a successful experience (Bell-Robertson, 2015; Conway & Zerman, 2004). Additionally, Benson (2008) advocated that mentoring programs should be better tailored to novice music teachers' specific needs. She encouraged mentoring through professional learning communities or other forms of peer support to minimize the feeling of isolation music teachers might experience (Bautista et al., 2021), and to provide and share specific knowledge. Additionally, Baughman (2020) found that mentoring preservice music teachers in an authentic context seemed to support their development. Although the traditional form of one-on-one mentoring is largely in place in music teachers' training, peer mentoring, either online or in person, has also shown to be beneficial for musical and social aspects of the teachers' growth (Goodrich, 2021; Gramm, 2021).

2.2. Early Childhood Music Educators and Mentoring

While music in schools is generally taught by music specialists, music education in early childhood can be the responsibility of the music specialists or the early childhood educators. However, in most cases, music instruction is delivered by early childhood educators. Bautista et al. (2022) report that early childhood educators have an urgent need to be better prepared to teach music and that mentoring by content specialists is a strategy that they value. Researchers have shown that such programs can have a significant positive impact on children's singing skills and attitudes to music (Barrett et al., 2019; Barrett et al., 2020; Welch et al., 2020), as well as supporting the development of non-musical elements such as executive functions (Welch et al., 2020), increased listening, attention, and communication skills (Knight et al., 2018). Moreover, Bainger (2010) found that early childhood educators identified a lack of skills and confidence, and that these specific issues could be successfully addressed through a collaborative mentorship with a music specialist.

Although not directly studying mentoring, but rather collaborative reflective professional development practices of an early childhood educator, Neelly (2000) suggests that being engaged in a real-life teaching and learning experience, in which a mentor participates in the collaborative process, is essential for the effective development of teaching practices. Similarly, Dogani (2008) looked at how

reflection could play a role in the development of the generalist educator teaching music to children aged 4 to 6. Her findings include an increase in participants' awareness of their beliefs, assumptions, and values, as well as an attempt to immerse themselves in music-making with the children while overcoming their fears. Studying a similar population, Barry and Durham (2017) analyzed reflective writing during a practicum. They found that 'training and mentoring, and access to developmentally appropriate music curriculum resources' (Barry & Durham, 2017: p. 14), especially for the students with a low feeling of musical self-efficacy, is needed to provide positive experiences for both the teachers and children.

2.3. Music Specialists in Early Childhood Settings and Mentoring

While information is available about mentoring early childhood educators by music specialists (Welch, 2021), research on mentoring music specialists in early childhood settings is scarce. Conway and Garlock (2002) conducted a case study with a first-year teacher in which opportunities were provided to discuss difficulties. The authors' conclusion is that "Mentor teachers must work with first-year teachers to help them sort through the emotions associated with teaching" (p. 25). Gruenhagen (2012) examined this topic through the lens of novice music teachers learning in communities. Although not exactly understood as a traditional form of mentoring, learning in communities is a process that also involves the help of peers in the development of professional skills. In her 2012 article, she presented the case study of a music teacher in her first year, without formal university training, teaching in multiple early childhood music settings. The case shows how a learning community helped her acquire and develop professional knowledge and the author argues that "music teacher learning communities situated in practice can be a valuable support for teachers navigating alternative pathways to the teaching profession" (Gruenhagen, 2012: p. 39). Furthermore, Barry and Durham (2017) affirm that the ideal situation would be that music specialists oversee music education from the early years on. However, the availability of trained music teachers seems to be a challenge.

Research on mentoring in early childhood education is limited, with most studies focusing on the mentor's role, relational stance, and the quality of mentor-mentee interactions. Existing literature emphasizes the complexity of mentoring and the importance of reciprocal exchanges to support both the mentor's and mentee's learning and professional identity development (Kupila et al., 2017; Onnismaa et al., 2015). Such studies highlight that empathetic, supportive, and collaborative approaches in mentoring can positively impact preservice teachers' experiences and teaching efficacy (Quinones et al., 2020; Johnson et al., 2017), yet current knowledge cannot confirm its overall effectiveness. Moreover, studies focusing on mentoring as a learning tool for early childhood music teachers are insufficient to understand this practice.

2.4. Purpose of the Study

From the literature presented above, mentoring seems to play an important role

for teachers' development, but little research has investigated mentorship for early childhood music teachers. Therefore, this pilot study had three objectives:

1) To assess the development of early childhood preservice music teachers during a 7-week mentoring experience.

2) To analyze the feedback provided by the mentor and its influence on the development of the mentees.

3) To use the CLASS with music specialists, to examine and compare with published results on early childhood educators.

3. Method

This research is a multiple case study that measured participants' teaching experiences and analyzed mentoring feedback quantitatively. We chose a postpositivist viewpoint (admits the existence of a reality in a probabilistic manner and uses statistical analysis), and not a constructivist one (supports the existence of multiple interpretations of reality and knowledge is constructed through subjectivity), since we hoped to draw objective conclusions from the analysis (Fortin & Gagnon, 2022). Case studies have been found to have this potential (Sneed et al., 2020; Yin, 2009, 2018).

Individual cases have been analyzed and compared to expand our understanding. The small number of participants and their self-selection to participate in the study are common limitations in this type of study (Sneed et al., 2020) and no statistical generalization can be made (Yin, 2018). Finally, this study plays the role of a pilot study. Dugard et al. (2012) suggests that case studies and small-n designs play an important role in exploring a promising idea, allowing researchers to test hypotheses at a low cost before considering larger scale research.

Three student teachers (mentees) participated in the study which involved preparing and teaching music lessons to children aged 1 to 5 years of age and their parents, for a weekly session of approximately 40 minutes, for 7 weeks. The lessons were videotaped, then viewed by the mentor to see the mentees in action. Each week, the mentor provided written feedback. Mentees had access to the videos and if they needed clarification or additional support, they were free to contact the mentor through email or phone. The videos of the lessons and the mentoring feedback were then analyzed using the validated instrument Classroom Assessment Scoring System (CLASS) developed by Pianta et al. (2008). In a subsequent step, the results were compared with published results studying early childhood educators through the same instrument.

3.1. Participants

The mentor: The main author, also the mentor in this research, is a professor of music education in a major Canadian university. She presented the study in a course she was teaching titled Music in Early Childhood. The mentor was trained in active pedagogies and was familiar with different international early childhood programs. She also worked in early childhood and elementary school settings for 15 years, taught a variety of music education courses and supervised many

students through their practicum. To overcome a potential bias, considering that the researcher is also the mentor, and in accordance with the postpositivist point of view, the analyses were carried out by two doctoral students not involved in recruitment and data collection.

The mentees: Students who were interested in participating in the study were invited to contact the mentor directly. Of the three who participated, two (Hailey and Charles[1]) were enrolled in a music education program leading to a teaching certification and had no experience in teaching early childhood. The third one (Rebecca) was a student in a performance program, interested in teaching and already offering music lessons in an early childhood program. All three were in their early twenties. Informed consent was obtained before the beginning of the study.

Families: Children and parents were recruited by contacting community centers in disadvantaged neighborhoods of a large Canadian city, identified as such on their official website. This choice was made to allow for free music lessons for families who would not have had access otherwise. The people in charge of the centers' activities were first presented with the research project. After obtaining their agreement to participate, one researcher met with the parents in each center to introduce the project and answer questions. Informed consent forms were then signed by the parents. Three groups of children, in three different community centers, were recruited. Groups were composed of 6 to 12 children with at least one parent present with their child, for a total of 12 to 18 participants. All children were between the ages of 14 months and up to 5 years of age, with a mix of ages within each group.

3.2. Music Sessions

The mentees offered seven music sessions, once a week for seven weeks, for a duration of approximately 40 minutes each. These lessons followed a plan that was presented in the early childhood methods course: a greeting song followed by three to five activities (singing, dancing, playing instruments, drawing to the music) to support the learning of music concepts, and a goodbye song. As identified by Barry and Durhan (2017) as an effective approach, each lesson was organized around a theme (i.e. transportation, bubble gum, pirates) and the music concepts taught were chosen among the following: beat, rhythm, pitch, tempo, dynamics, timbre, form and expression. The lessons also put an emphasis on the global development of the young child addressing social, affective, language, cognitive and motor skills.

3.3. Assessment Tool, Data Collection and Analysis

Different observation tools exist to assess the quality of curriculum and instructional strategies in early childhood classes. Researchers have reviewed the literature to identify such scales and have provided a list of validated tools to measure the quality of the classroom environment (i.e., teachers' strengths and weaknesses, classroom interactions) (Gill et al., 2016; Grinder & Kochanoff, 2005).

[1]The names of the participants have been changed to maintain anonymity.

The suggested scales have yet to be used to assess the work of the specialist music teacher. Indeed, the context in which music education is done by the specialists has some specificities. Music lessons tend to happen once a week, and for a short period of time of 30 to 60 minutes. They can be offered in a community context, a childcare center or a kindergarten class. Often, the parents participate in the lessons and groups can be made up of children of the same or different age groups.

From the existing scales, the choice was made to use, with adaptations (as described below), the Classroom Assessment Scoring System (CLASS) Pre-K. It was chosen because 1) it looks at many aspects of the classroom environment, 2) it has been frequently used as a research tool and, 3) it supports professional development activities (La Paro et al., 2004). As presented in **Table 1**, it assesses three domains and ten dimensions 'providing a standardized measure to capture teacher-child interactions' (Curby et al., 2009: p. 349). Moreover, the CLASS Pre-K observation system is intended to serve as a framework for research. It has been used in over 3000 early childhood classrooms (Hamre et al., 2009) and is positively associated with children's social and academic improvements (Hamre & Pianta, 2005). Finally, the CLASS has been used to support the development of early childhood educators, therefore making it an appropriate framework for the mentoring aspect of this research (Grinder & Kochanoff, 2005; Pianta et al., 2008).

Every music session was videotaped. The recordings were viewed and analyzed by one of the authors certified to use the validated instrument Classroom Assessment Scoring System (CLASS) developed by Pianta et al. (2008). The training and certification process implemented to use the CLASS as a research tool provides a high degree of internal consistency ($\alpha = .89$ for Emotional Support, $\alpha = .76$ for Classroom Organization, and $\alpha = .83$ for Instructional Support) (Pianta et al. 2008) and inter-rater reliability varying from 78.8% to 96.9% on the different dimensions (Pianta et al., 2008). To meet certification requirements, the evaluator in this study needed to attend a 2-day training offered by a certified CLASS trainer. During the second part of the training, the observer viewed and coded videos of early childhood classrooms selected by the authors of the CLASS and had to meet the inter-rater agreement accuracy standard specified by the authors of the CLASS (Pianta et al., 2008). During the analysis, the observer attributed a score for every dimension according to the behavior's indicators provided (see **Table 1**). Scores ranged from 1 (low) to 7 (high). To meet the standards for qualification, the observers needed to assess the behaviors within one point of the master code, on 80% of their score (Downer et al., 2010).

Four cycles of observations are recommended, each one for the duration of 20 minutes (Pianta et al., 2008). Since the music lessons lasted for 40 minutes, the first two lessons were combined to provide a measure for Time 1 and the last two lessons were combined to provide a measure for Time 2. Since the CLASS was designed for the classroom teachers, the four cycles would normally happen during the same day. This adaptation was made to allow its use within the context of music teaching.

Table 1. Domains, dimensions and behaviors indicators from CLASS (Pianta et al., 2008).

Domains	Dimensions	Behaviors Indicators
Emotional Support	Positive Climate	• Relationships • Positive Affect • Positive Communication • Respect
	Negative Climate	• Negative Affect • Punitive Control • Sarcasm/Disrespect • Severe Negativity
	Teacher Sensitivity	• Awareness • Responsiveness • Addresses Problems • Student Comfort
	Regard for Student Perspectives	• Flexibility and Student Focus • Support for Autonomy and Leadership • Student Expression • Restriction of Movement
Classroom Organization	Behavior Management	• Clear Behavior Expectations • Proactive • Redirection of Misbehavior • Student Behavior
	Productivity	• Maximizing Learning Time • Routines • Transitions • Preparation
	Instructional Learning Formats	• Effective Facilitation • Variety of Modalities and Materials • Student Interest • Clarity of Learning Objectives
Instructional Support	Concept Development	• Analysis and Reasoning • Creating • Integration • Connections to the Real World
	Quality of Feedback	• Scaffolding • Feedback Loops • Prompting Thought Processes • Providing Information • Encouragement and Affirmation
	Language Modeling	• Frequent Conversation • Open-Ended Questions • Repetition and Extension • Self- and Parallel Talk • Advanced Language

After watching each week's video, the mentor sent to each mentee a feedback file outlining the positive elements that were observed, the aspects to improve on,

and suggestions to implement for the next session. To analyze these feedback files, two of the researchers independently coded the content using the ten dimensions of the CLASS as themes. Previously, they attended a two-hour-long training during which the analysis grid was presented by the certified CLASS observer. Each comment provided by the mentor was accounted for and associated with one of the dimensions, then cross-examined to corroborate the coding. In case of a disagreement between the two, the third author resolved the difference. Frequency counts were then calculated to allow a comparison between the observations made during the music session and the feedback received.

Finally, in order to see if the CLASS could be a pertinent tool to use with music teachers on a larger scale in the future, we compared the overall means of the three music specialists in each dimension with early childhood educators scores from data collected in an inter-rater reliability study of the CLASS Pre-K (Sandilas & DiPerna, 2011).

4. Results

4.1. Music Session Observations

Once the teacher child's observation analysis was completed for each mentee using the CLASS procedure, results were summarized in an individual table for each participant according to the three domains and ten dimensions, as presented in **Tables 2-4.** Additionally, the differences between times 2 and 1 are provided to show how the participants evolved throughout the study. Table 2 presents results for Hailey. Table 3 presents results for Charles. Table 4 presents results for Rebecca.

Table 2. Means and standard deviations for CLASS domains and dimensions for Hailey.

Domains	Dimensions	Time 1		Time 2		Time 2 - 1
		Mean	(SD)	Mean	(SD)	Diff. Between Means
Emotional Support	Positive Climate	4.50	(.58)	6.25	(.50)	1.75
	Negative Climate*	1.00	(.00)	1.25	(.50)	.25
	Teacher Sensitivity	2.75	(.96)	3.75	(1.50)	1.00
	Regard for Student Perspectives	3.25	(1.26)	4.50	(1.73)	1.25
	All Dimensions of Emotional Support	2.88	(.43)	3.94	(.66)	1.06
Classroom Organization	Behavior Management	3.75	(.96)	5.25	(1.70)	1.50
	Productivity	3.75	(.96)	5.00	(1.63)	1.25
	Instructional Learning Formats	3.25	(.50)	5.25	(.96)	2.00
	All Dimensions of Classroom Organization	3.58	(.79)	5.17	(1.17)	1.58

Continued

Instructional Support	Concept Development	2.50	(1.00)	3.25	(.50)	.75
	Quality of Feedback	3.00	(.82)	4.25	(.50)	1.25
	Language Modeling	2.75	(.50)	3.75	(.50)	1.00
	All Dimensions of Instructional Support	2.75	(.74)	3.75	(.17)	1.00

*Negative climate is reverse coded, the lower the score the least amount of negative climate was observed. Therefore, a positive difference between times 2 and 1 shows a deterioration of the class climate.

Table 3. Means and standard deviations for CLASS domains and dimensions for Charles.

Domains	Dimensions	Time 1		Time 2		Time 2 - 1
		Mean	(SD)	Mean	(SD)	Diff. Between Means
Emotional Support	Positive Climate	5.00	(.82)	6.50	(1.00)	1.50
	Negative Climate*	1.00	(.00)	1.00	(.00)	.00
	Teacher Sensitivity	3.00	(.00)	3.75	(1.71)	.75
	Regard for Student Perspectives	3.75	(.50)	5.25	(.50)	1.50
	All Dimensions of Emotional Support	3.19	(.31)	4.13	(.72)	.94
Classroom Organization	Behavior Management	6.00	(1.41)	4.00	(.00)	−2.00
	Productivity	5.25	(.96)	4.00	(.00)	−1.25
	Instructional Learning Formats	4.75	(.50)	6.00	(.00)	1.25
	All Dimensions of Classroom Organization	5.33	(.47)	4.67	(.00)	−.67
Instructional Support	Concept Development	2.75	(.50)	3.75	(.96)	1.00
	Quality of Feedback	4.50	(.58)	3.75	(.50)	−.75
	Language Modeling	3.75	(.50)	4.00	(.82)	.25
	All Dimensions of Instructional Support	3.67	(.47)	3.83	(.64)	.16

*Negative climate is reverse coded, the lower the score the least amount of negative climate was observed. Therefore, a positive difference between times 2 and 1 shows a deterioration of the class climate.

To compare the scores on all the dimensions for each participant between times 1 and 2, a Wilcoxon signed-rank test was performed. Due to the small amount of data, but because the same dimensions were compared for each participant, this non-parametric test was deemed appropriate (Field, 2009: p. 552).

Table 4. Means and standard deviations for CLASS domains and dimensions for Rebecca.

Domains	Dimensions	Time 1		Time 2		Time 2 - 1
		Mean	(SD)	Mean	(SD)	Diff. Between Means
Emotional Support	Positive Climate	5.50	(.58)	7.00	(.00)	1.50
	Negative Climate*	1.25	(.50)	1.00	(.00)	−.250
	Teacher Sensitivity	2.50	(.58)	5.50	(1.00)	3.00
	Regard for Student Perspectives	3.00	(.00)	5.00	(.82)	2.00
	All Dimensions of Emotional Support	4.40	(.24)	6.13	(.43)	1.69
Classroom Organization	Behavior Management	3.50	(.58)	6.50	(.58)	3.00
	Productivity	4.25	(.96)	6.50	(.58)	2.25
	Instructional Learning Formats	4.00	(.81)	5.75	(.50)	1.75
	All Dimensions of Classroom Organization	3.90	(.50)	6.25	(.17)	1.17
Instructional Support	Concept Development	3.00	(.82)	3.75	(.96)	.75
	Quality of Feedback	3.25	(.50)	5.00	(.00)	1.75
	Language Modeling	3.25	(.50)	4.25	(.50)	1.00
	All Dimensions of Instructional Support	3.17	(.34)	4.33	(.47)	1.17

*Negative climate is reverse coded, the lower the score the least amount of negative climate was observed. Therefore, a positive difference between times 2 and 1 shows a deterioration of the class climate.

For Hailey, dimension scores were significantly higher on time 2 (Mdn = 4.38) than on time 1 (Mdn = 3.13, z = 2.81, $p < .05$, r = .63). Nine out of ten dimensions showed an improvement between times 2 and 1. Hailey displayed the greatest improvements in Instructional Learning Formats and Positive Climate while Negative Climate showed a very small deterioration.

Similarly, for Rebecca, dimensions scores were significantly higher on time 2 (Mdn = 5.255) than on time 1 (Mdn = 3.25, z = 2.72, $p < .05$, r = .61). All dimensions had a positive difference between times 2 and 1, Behavior Management, Teacher Sensitivity and Productivity showing the most improvements. The effect sizes for Hailey and Rebecca represent a large change according to Cohen's benchmark of above .50 (Field, 2009: p. 558).

However, for Charles, the scores did not elicit a statistically significant change between time 2 (Mdn = 4.00) and time 1 (Mdn = 4.13, z = 6.53, $p = .514$). One ex aequo, six positive and three negative differences were found. The greatest changes were found in the improvement of the dimensions Positive Climate and Regard for Student Perspectives.

4.2. Mentoring Feedback

Feedback statements were provided to the mentees after each music session. Frequency counts of the statements are reported in this section. Although each mentee received overall a similar amount of feedback for each domain, the greatest number of statements for all mentees centered on the Classroom Organization domain (Figure 1).

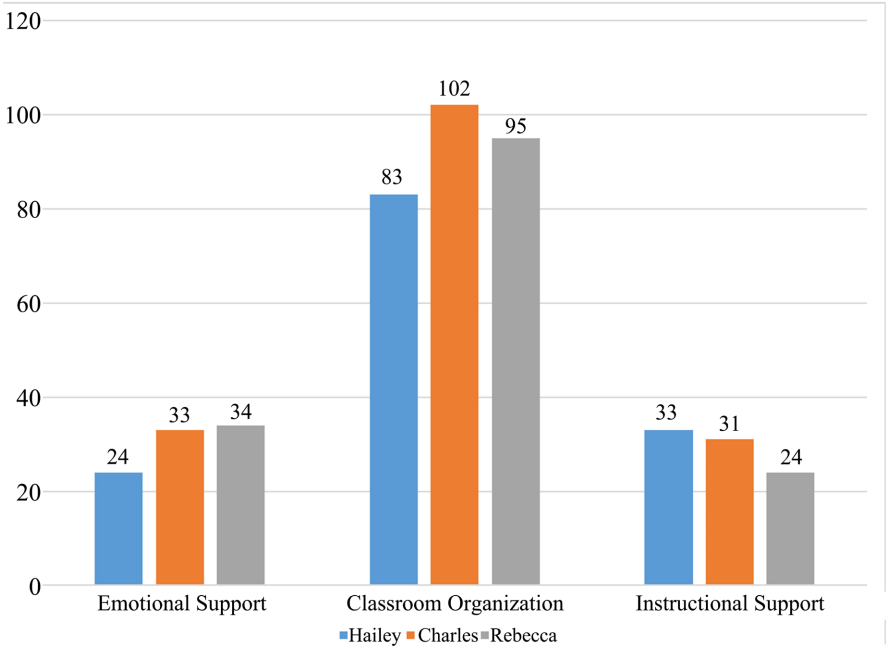

Figure 1. Quantity of feedback received per participant for the three domains of the CLASS.

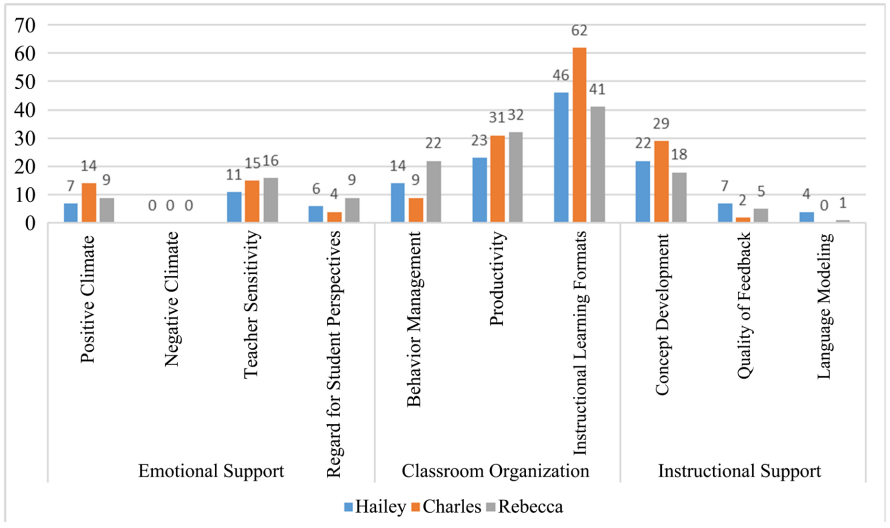

Figure 2. Feedback received per participant for the ten dimensions of the CLASS.

Within the Classroom Organization domain, a higher frequency count was observed in the Instructional Learning Formats, followed by Productivity, as seen in

Figure 2. It is noteworthy that the amount of feedback given was similar in the Emotional and Instructional Support domains.

4.3. Observation and Feedback

To compare the differences between Time 1 and 2 observations of the music lessons and feedback received, we performed Kendall's correlations for all ten dimensions for each participant (Kendall's tau is recommended for small data sets) (Field, 2009: p. 181). No statistical significance was found (Hailey: $\tau = .377$, $p = .072$; Charles: $\tau = .144$, $p = .326$; Rebecca: $\tau = .144$, $p = .326$). It is worth noting that for all three participants, Instructional Learning Format was the dimension that was given the most attention by the mentor.

4.4. Music Specialists versus Early Childhood Educators

In an interest to see how our three music specialists scored in each dimension in comparison with other early childhood educators, and therefore determine if the CLASS could be an appropriate evaluative tool for music specialists, we compared our data to the data collected in an inter-rater reliability study of the CLASS Pre-K (Sandilas & DiPerna, 2011). The study compared 10 raters who assessed 32 observations across 12 preschool classrooms. Since our number of participants was limited, for this comparison, we analyzed two-20-minutes viewing for all seven lessons of all three participants, generating 42 data points, measured from 1 (low) to 7 (high). We understand that we have unbalanced groups in comparing the two data sets. However, this analysis has been done as a first step in understanding if the tool could be used with music teachers or if there were some obvious anomalies that would require attention and adaptation in a larger scale study.

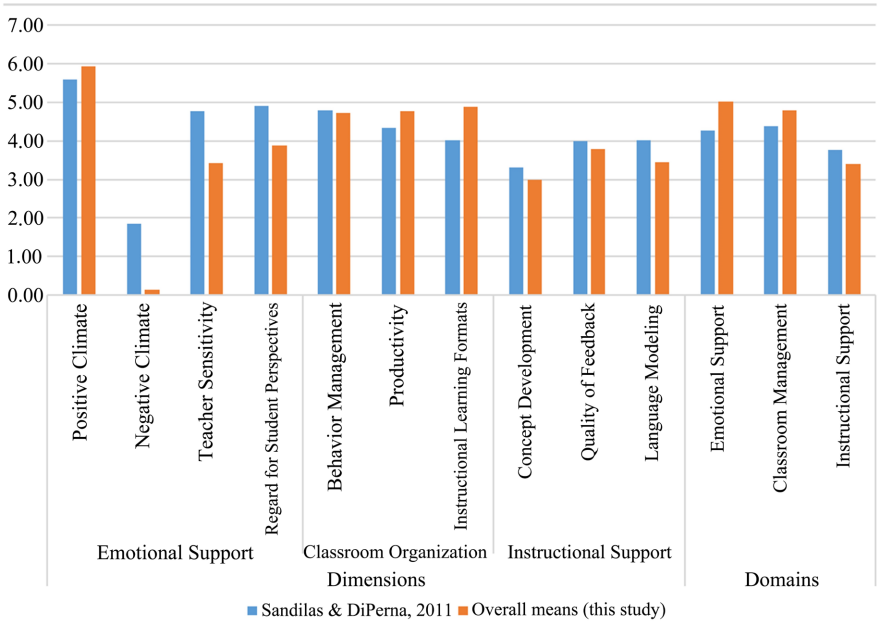

Figure 3. Comparison between Sandilas and DiPerna's Data (2011) and the overall means of the three mentees at Time 1 and 2.

Kendall's correlations for all ten dimensions between the two data sets were performed, indicating a significant correlation ($\tau = .494$, $p < .05$). **Figure 3** shows the differences between the means published in Sandilas and DiPerna (2011) and the overall means of our three participants. In all three domains, the differences between the two groups are small, within 1 point, which is considered by the creators of the test as an acceptable variability when doing the observer accreditation (Downer et al., 2010). For the first two domains, Emotional Support and Classroom Organization, the music teachers scored slightly higher than the early childhood educators, the reverse being true for the third domain, Instructional Support.

When looking at the dimensions of Emotional Support, all but Positive Climate were higher for the generalists than the music specialists. Negative Climate, Teacher Sensitivity and Regard for Student Perspectives were also the only three dimensions to reach differences slightly greater than 1.

5. Discussion and Implications

The objectives of this pilot study were to 1) assess the development of early childhood preservice music teachers during a 7-week mentoring experience, 2) analyze the feedback provided by the mentor and its influence on the development of the mentees and 3) examine the use of the CLASS with music specialists and compare it with published results of early childhood educators to assess its potential use on a larger scale in the future. Our results indicate that two of the three participants had a significant improvement in most dimensions from time 1 to time 2. The greatest amount of feedback the mentees received concerned the Classroom Organization domain. No significant association was found between feedback and improvement. Finally, when compared to published results by Sandilas and DiPerna (2011), a significant correlation was found between their sample and our music teachers. Small differences between the two data sets were found, mostly within the margin of error accepted by the test designers.

Regarding the first objective, our results show contrasting findings where two participants improved their teaching skills significantly and one did not. According to Bressoux (2020), three potential causes can limit teacher development: 1) the teacher does not want to implement his learning since it goes against his values, his experience or his knowledge, 2) the teacher cannot implement the learning since external elements (context) prevent their implementation and 3) the teacher does not know how to transpose it into his work. The first point was not mentioned at any point in time by any of the mentees, they rather expressed that the feedback was helpful and resonated with their experience. "Everything that you've been telling me has been good and I've been trying to think about it for the next lesson. Uh, usually I write it at the top of the lesson plan. So hopefully, I'll see it when I'm doing it" (Hailey). The third explanation also seems unlikely considering that the very purpose of mentoring was to support mentees, and the mentor offered very personalized guidance throughout. The second point, however, is

worth exploring. Indeed, the two participants who improved, Hailey and Rebecca, oversaw the group on their own, while Charles was accompanied by an instructor who led different activities with these families. Therefore, we hypothesize that he might have felt uncomfortable applying the mentor's suggestions if they were not in line with the instructor's interactions with the participants. The mentor's feedback mentioned that Charles needed to take a greater leadership role. For example, the other instructor would interact with the children by name, leaving Charles less involved. The mentor commented as follows: "I suggest you try to learn the names of the children and that you use their names a lot more while teaching. This will help them feel more concerned and connected." Goh and Matthews (2011) have found that student teachers go through some adjustment when they are being mentored: "adjustments to the role as teachers, meeting expectations of school-based mentor, impressing school-based mentor and working harmoniously with the school staff" (p. 96). The concern for adjusting harmoniously with other teachers could have played a role in Charles' use of the feedback. We could also hypothesize that the duration of the mentoring intervention did not offer enough time for Charles to adjust and integrate the strategies that were offered to him.

The second goal was to analyze the feedback provided by the mentor and to measure its influence on the development of the mentees. The process used to provide feedback was done through video recording, and written feedback. It is possible that the lack of a significant association between the mentorship feedback and one of the mentee improvements is associated with the efficacy of the mentoring approach used. On-site participation of the mentor has been identified as a good mentoring practice (Welch, 2021), characterized by a warm and nurturing presence (Conway & Hodgman, 2020; Smith, 2005). It is therefore possible that such a practice could have yielded to a richer mentoring experience and greater association between feedback and improvement. However, Welch (2021) also suggests that using video sessions, when on site observations are not possible, is a viable option. The CLASS guidelines also suggest performing on site observations for measuring the teachers' skills but accept video recordings as a substitute (Pianta et al., 2008). Moreover, it is possible that offering written feedback rather than an ongoing conversation translated in a weaker communication form.

Otherwise, the feedback provided by the mentor put an emphasis on Instructional Learning. Since the mentor is a university professor specialized in developing the teaching skills of preservice music teachers, this is coherent with her practice and experience. The mentor's influence on the feedback and overall observations might have led to a focus on this area, which is more aligned with personal biases. Goigoux et al. (2020) report that expert teachers who offer professional development tend to share research findings as they hope to modify the teachers' conception and practice. However, this approach seems to be less efficient than modelling new teaching practices that would then help the teachers generate new learning. Another possible explanation is that the mentor reacted to the mentees'

emailed questions and requests. An example coming from Charles was: "So far my challenge has been just really creating an activity where both the parent and the child are doing the activity at the same time or somehow engaging with them." This led the mentor to provide guidance on facilitation involving parents, using adapted modalities, suggesting concrete ideas to support the interests of both child and parent.

Since we found contrasting results regarding the effects of mentoring, we are exploring alternative explanations to the improvement of two out of the three participants. The participants in this study were volunteers, which introduces a self-selection bias; highly motivated people who chose to participate in such a study may put in more effort and preparation, and they might also seek support and help from other sources. Additionally, they were still studying music education at the time of the study, so the knowledge they developed in other course work might have helped their improvement as well.

Our final objective was to explore whether the CLASS could be a proper tool to use with music specialists in the future on a larger scale. A positive correlation was found between our participants and previously published data. Our data collection procedure was slightly modified to allow for the use of the tool. The observations were made over two lessons to permit four rounds of observations of 20 minutes each. This shows that although being a music specialist is somehow different from being the homeroom teacher (i.e., lower time and frequency of contact with the children which could be associated with a different kind of relationship), the overall assessment was not impacted. The CLASS seems to be a tool relevant for future use with music specialists, with a slight adaptation needed for duration and frequency of observations. More research will be needed with a greater number of participants to ensure its validity and reliability.

6. Strengths and Limits

This study sheds some light on the use of mentoring with preservice music teachers in early childhood, a field still very little studied. It also opens the possibility of using a standardized tool to measure the teaching skills of music teachers, by adapting the CLASS. On the other hand, this is a case study, with a very small number of self-selected participants, therefore no generalization of results is possible. Since the mentor also played the role of music methods professor to the participants and of a researcher in the study, her biases might influence the results. Two other researchers analyzed the data to ensure some form of distancing, but her views on music education tended to shine through, mostly with a focus on Instructional Learning as part of the feedback. Additionally, the participants in this study were volunteers, which introduces a self-selection bias; highly motivated students who chose to participate may not represent the general population of preservice teachers. Future research would need to take this into account in selecting participants. Other elements to consider in future studies would be to develop a design that involves a greater number of participants, both teachers and

mentors, and ideally incorporate a control group to better isolate the effects of mentorship. Finally, measuring the children's improvement could be an additional measure to put in place as it has been found to be associated with teachers' improvement (Guskey, 2002).

7. Conclusion

Even though our findings raise questions about the efficacy of the strategies that were used in the study, overall, mentoring seems to be a promising tool for the improvement of some music teachers in an early childhood setting. Moreover, the assessment tool, the Classroom Assessment Scoring System (CLASS), showed strong potential for measuring the music teachers' skills. More resources should be allocated to researching this topic as mentoring seems to have the potential to supplement the formal training received by music teachers.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

References

Bainger, L. (2010). A Music Collaboration with Early Childhood Teachers. *Australian Journal of Music Education, 2,* 17-27. https://files.eric.ed.gov/fulltext/EJ916787.pdf

Barrett, M. S., Zhukov, K., & Welch, G. F. (2019). Strengthening Music Provision in Early Childhood Education: A Collaborative Self-Development Approach to Music Mentoring for Generalist Teachers. *Music Education Research, 21,* 529-548. https://doi.org/10.1080/14613808.2019.1647154

Barrett, M. S., Zhukov, K., Brown, J. E., & Welch, G. F. (2020). Evaluating the Impact of a Generalist Teacher-Led Music Program on Early Childhood School Children's Singing Skills and Attitudes to Music. *Psychology of Music, 48,* 120-136. https://doi.org/10.1177/0305735618790355

Barry, N. H., & Durham, S. (2017). Music in the Early Childhood Curriculum: Qualitative Analysis of Pre-Service Teachers' Reflective Writing. *International Journal of Education & the Arts, 18,* 1-19.

Baughman, M. (2020). Mentorship and Learning Experiences of Preservice Teachers as Community Children's Chorus Conductors. *Journal of Music Teacher Education, 29,* 38-52. https://doi.org/10.1177/1057083719876116

Bautista, A., Stanley, A. M., & Candusso, F. (2021). Policy Strategies to Remedy Isolation of Specialist Arts and Music Teachers. *Arts Education Policy Review, 122,* 42-53. https://doi.org/10.1080/10632913.2020.1746713

Bautista, A., Yeung, J., Mclaren, M. L., & Ilari, B. (2022). Music in Early Childhood Teacher Education: Raising Awareness of a Worrisome Reality and Proposing Strategies to Move Forward. *Arts Education Policy Review, 125,* 139-149. https://doi.org/10.1080/10632913.2022.2043969

Bell-Robertson, C. G. (2015). Beyond Mentoring: A Review of Literature Detailing the Need for Additional and Alternative Forms of Support for Novice Music Teachers. *Update: Applications of Research in Music Education, 33,* 41-48. https://doi.org/10.1177/8755123314547910

Benson, M. A. (2008). Effective Mentoring for New Music Teachers: An Analysis of the

Mentoring Programs for New Music Teachers as Described in the Literature. *Update: Applications of Research in Music Education, 26,* 42-49. https://doi.org/10.1177/8755123308317953

Bressoux, P. (2020). À quelles conditions peut-on déployer à grande échelle les interventions qui visent à améliorer les pratiques enseignantes. In B. Galand, & M. Janosz (Eds.), *Améliorer les pratiques en éducation: Qu'en dit la recherche* (pp. 13-22). Presses Universitaires de Louvain.

Conway, C. M. (2006). Navigating through Induction: How a Mentor Can Help. *Music Educators Journal, 92,* 56-60. https://doi.org/10.2307/3878504

Conway, C. M., & Hodgman, S. M. (2020). Undergraduate Music Student Perspectives on the Music School as a Space for the Development of Allyhood. *Music Education Research, 22,* 173-184. https://doi.org/10.1080/14613808.2020.1732317

Conway, C. M., & Zerman, T. E. H. (2004). Perceptions of an Instrumental Music Teacher Regarding Mentoring, Induction, and the First Year of Teaching. *Research Studies in Music Education, 22,* 72-82. https://doi.org/10.1177/1321103x040220011001

Conway, C., & Garlock, M. (2002). The First Year Teaching K-3 General Music: A Case Study of Mandi. *Contributions to Music Education, 29,* 9-28.

Conway, C., Pellegrino, K., Stanley, A. M., & West, C. (2019). *The Oxford Handbook of Preservice Music Teacher Education in the United States*. Oxford University Press.

Curby, T. W., LoCasale-Crouch, J., Konold, T. R., Pianta, R. C., Howes, C., Burchinal, M. et al. (2009). The Relations of Observed Pre-K Classroom Quality Profiles to Children's Achievement and Social Competence. *Early Education and Development, 20,* 346-372. https://doi.org/10.1080/10409280802581284

Dogani, K. (2008). Using Reflection as a Tool for Training Generalist Teachers to Teach Music. *Music Education Research, 10,* 125-139. https://doi.org/10.1080/14613800701871595

Downer, J. T., Booren, L. M., Lima, O. K., Luckner, A. E., & Pianta, R. C. (2010). The Individualized Classroom Assessment Scoring System (inCLASS): Preliminary Reliability and Validity of a System for Observing Preschoolers' Competence in Classroom Interactions. *Early Childhood Research Quarterly, 25,* 1-16. https://doi.org/10.1016/j.ecresq.2009.08.004

Draves, T. J. (2008). "Firecrackers" and "Duds" Cooperating Music Teachers' Perspectives on Their Relationships with Student Teachers. *Journal of Music Teacher Education, 18,* 6-15. https://doi.org/10.1177/1057083708323140

Dugard, P., File, P., & Todman, J. (2012). *Single-Case and Small-N Experimental Designs: A Practical Guide to Randomization Tests*. Routledge.

Field, A. (2009). *Discovering Statistics Using SPSS* (3rd ed.). Sage.

Fleer, M., & Van Oers, B. (2017). *International Handbook of Early Childhood Education*. Springer.

Fortin, M. F., & Gagnon, J. (2022). *Fondements et étapes du processus de recherche: Méthodes quantitatives et qualitatives*. Chenelière éducation.

Gill, B., Shoji, M., Coen, T., & Place, K. (2016). *The Content, Predictive Power, and Potential Bias in Five Widely Used Teacher Observation Instruments*. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory MidAtlantic.

Goh, P. S., & Matthews, B. (2011). Listening to the Concerns of Student Teachers in Malaysia during Teaching Practice. *Australian Journal of Teacher Education, 36,* 12-23. https://doi.org/10.14221/ajte.2011v36n3.2

Goigoux, R., Renaud, J., & Roux-Baron, I. (2020). Comment influencer positivement les pratiques pédagogiques de professeurs expérimentés? In B. Galand, & M. Janosz (Eds.), *Améliorer les pratiques en éducation: Qu'en dit la recherche* (pp. 67-76). Presses Universitaires de Louvain.

Goodrich, A. (2021). Online Peer Mentoring and Remote Learning. *Music Education Research, 23,* 256-269. https://doi.org/10.1080/14613808.2021.1898575

Gramm, W. M. (2021). *Peer Mentoring in Modern Band*. Doctoral Dissertation, Boston University.

Greene, J. L. R., Koerner, B., & Wilson, J. (2020). From the inside out: Exemplary Music Education Association Mentoring Programs. *Arts Education Policy Review, 121,* 74-88. https://doi.org/10.1080/10632913.2019.1596852

Grinder, E. L., & Kochanoff, A. (2005). *Revised Report and Guidelines on Early Childhood Assessment for Children from Birth to Age 8 (Grade 3)*. Pennsylvania's Departments of Education and Public Welfare. https://www.pakeys.org/wp-content/uploads/2018/03/EarlyChildhoodAssessment.pdf

Gruenhagen, L. M. (2012). Learning in Practice: A First-Year Early Childhood Music Teacher Navigates the Complexities of Teaching. *Research Studies in Music Education, 34,* 29-44. https://doi.org/10.1177/1321103x11430593

Guskey, T. R. (2002). Professional Development and Teacher Change. *Teachers and Teaching, 8,* 381-391. https://doi.org/10.1080/135406002100000512

Haack, P., & Smith, M. V. (2000). Mentoring New Music Teachers: Mentoring, an Age-Old Concept, Offers Definite Advantages to the New Teacher Who Takes the Time to Identify a Mentor and Request His or Her Help. *Music Educators Journal, 87,* 23-27. https://doi.org/10.2307/3399659

Hamre, B. K., & Pianta, R. C. (2005). Can Instructional and Emotional Support in the First-grade Classroom Make a Difference for Children at Risk of School Failure? *Child Development, 76,* 949-967. https://doi.org/10.1111/j.1467-8624.2005.00889.x

Hamre, B. K., Goffin, S. G., & Kraft-Sayre, M. (2009). *Classroom Assessment Scoring System (CLASS) Implementation Guide*. CASTL/Teachstone. https://files.eric.ed.gov/fulltext/ED569941.pdf

Knight, J., Stansall, V., Bowmer, A., Mason, K., Voyajolu, A., Ockelford, A., & Welch, G. (2018). *"Music for Change" 2015-2018: Enhancing the School Readiness of Children in Challenging Circumstances*. Creative Futures. https://e2c1a00c-fac6-4afb-ace7-4b7f5f2393f0.filesusr.com/ugd/b407e0_c9879690b9444f81ba6641ce10fd515f.pdf

Kupila, P., Ukkonen-Mikkola, T., & Rantala, K. (2017). Interpretations of Mentoring during Early Childhood Education Mentor Training. *Australian Journal of Teacher Education, 42,* 36-49. https://doi.org/10.14221/ajte.2017v42n10.3

La Paro, K. M., Pianta, R. C., & Stuhlman, M. (2004). The Classroom Assessment Scoring System: Findings from the Prekindergarten Year. *The Elementary School Journal, 104,* 409-426. https://doi.org/10.1086/499760

Munroe, A. (2021). A Multiple Case Study of Music Cooperating Teacher Roles in Mentoring Dialogues. *Journal of Music Teacher Education, 31,* 83-97. https://doi.org/10.1177/10570837211025248

Neelly, L. P. (2000). *Collaborative Early Childhood Music Practice: A Year in the Life of a Prekindergarten Music Teacher*. Ph.D. Dissertations, University of Rochester.

Onnismaa, E., Tahkokallio, L., & Kalliala, M. (2015). From University to Working Life: An Analysis of Field-Based Studies in Early Childhood Teacher Education and Recently

Graduated Kindergarten Teachers' Transition to Work. *Early Years, 35,* 197-210. https://doi.org/10.1080/09575146.2015.1011065

Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom Assessment Scoring System [CLASS] Manual: Pre-k.* Brookes Publishing.

Quinones, G., Rivalland, C., & Monk, H. (2020). Mentoring Positioning: Perspectives of Early Childhood Mentor Teachers. *Asia-Pacific Journal of Teacher Education, 48,* 338-354. https://doi.org/10.1080/1359866x.2019.1644610

Renshaw, P. (2009). *Lifelong Learning for Musicians: The Place of Mentoring.* https://research.hanze.nl/ws/portalfiles/portal/11953213/renshaw.pdf

Salvador, K., & Culp, M. E. (2021). Characteristics of Early Childhood and Elementary General Music Methods Coursework for Preservice Music Teachers. *Journal of Music Teacher Education, 31,* 39-53. https://doi.org/10.1177/10570837211024529

Sandilas, L. E., & DiPerna, J. C. (2011). Interrater Reliability of the Classroom Assessment Scoring System-Pre-K (CLASS Pre-K). *Journal of Early Childhood & Infant Psychology, 7,* 65-85.

Smith, M. V. (2005). Modern Mentoring: Ancient Lessons for Today. *Music Educators Journal, 92,* 62-67. https://doi.org/10.2307/3400199

Sneed, S., Nguyen, C. H. P., & Eubank, C. L. (2020). An Introduction to Case Study Methodology: Single Case and Multiple Case Approaches. *International Journal of Adult Education and Technology, 11,* 1-11. https://doi.org/10.4018/ijaet.2020100101

Stegman, S. F. (2007). An Exploration of Reflective Dialogue between Student Teachers in Music and Their Cooperating Teachers. *Journal of Research in Music Education, 55,* 65-82. https://doi.org/10.1177/002242940705500106

Van Schagen Johnson, A., La Paro, K. M., & Crosby, D. A. (2017). Early Practicum Experiences: Preservice Early Childhood Students' Perceptions and Sense of Efficacy. *Early Childhood Education Journal, 45,* 229-236. https://doi.org/10.1007/s10643-016-0771-4

Welch, G. F. (2021). The Challenge of Ensuring Effective Early Years Music Education by Non-specialists. *Early Child Development and Care, 191,* 1972-1984. https://doi.org/10.1080/03004430.2020.1792895

Welch, G. F., Purves, R., Saunders, J., Mason, K., & Bowmer, A. (2020). *"Sing Every Day": An Evaluation of a VOCES8 Foundation School-Based Singing Project in Hackney, London 2019* (pp. 1-50). VOCES8 Foundation.

Yin, R. K. (2009). *Case Study Research: Design and Methods* (4th ed.). Sage Publications.

Yin, R. K. (2018). *Case Study Research and Applications* (6th ed.). Sage Publications.