Secondary Instrumental Music Educator Instructional Strategies, Competencies, and Perceived Knowledge Gaps: A Descriptive Design Study

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ELISA CHRISTINE JANSON

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Abstract

The problem addressed by the study was the knowledge gap between the expected competencies of secondary instrumental music educators upon entering the field and their ability to deploy modern instructional strategies based on the demands of the contemporary classroom. The purpose of the qualitative descriptive study was to explore the instructional strategies actively used in the secondary instrumental music classroom, the competencies required for educators to remain relevant and effective as they employ modern strategies, and the perceived knowledge gaps in educator preparation. The study's conceptual framework integrated literature on music educator competencies, instructional design, and teacher preparation to analyze the alignment between educator training and the evolving demands of secondary instrumental music classrooms. Data collection was semi-structured interviews and focus group with N=19 U.S.-based secondary instrumental music educators and fine arts administrators using maximum variation sampling. Braun and Clarke's six-step thematic analysis framework guided data analysis. Findings generated updated frameworks for instructional strategies, competencies in secondary instrumental music education, and misalignment between university preparation and the demands of contemporary classrooms, especially in non-performance instruction, entrepreneurial knowledge, and personal development. Findings align with existing research highlighting the need for curriculum modernization in preservice music teacher education. Recommendations for practice include embedding comprehensive pedagogical training, administrative preparation, personal competencies, and prioritizing holistic skill development to better equip music educators for the psychological, professional, and instructional challenges of modern classrooms. The study contributes actionable insights for improving music educator effectiveness, program sustainability, and long-term career viability in the post-pandemic era.

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Section 1: Foundation

The evolving landscape of secondary instrumental music education has presented unprecedented challenges for educators, particularly in response to the disruptions caused by the COVID-19 pandemic and shifting cultural expectations in K–12 classrooms (Liu, 2022). The pandemic posed challenges for public education, especially in instrumental music, where large performing ensembles had long served as the primary mode of instruction (Miksza, 2021). The shift to fully remote learning forced educators to abandon in-person teaching methods in favor of remote strategies, for which most were unprepared (Kaplan-Rakowski, 2021; Kladder, 2020; Sahoo et al., 2020). Simultaneously, cultural shifts in education required educators to modify teaching and assessment methods to meet stakeholder expectations, increasing the need for innovative, student-centered instructional strategies, including social-emotional learning (SEL), diversity, equity, and inclusion (DEI), and culturally relevant ensembles, activities, and literature (Gray, 2019; Powell, 2022; Raschdorf et al., 2021).

Contemporary research documented significant gaps in instrumental music teacher preparation programs that fail to align university training with actual job demands. Studies examining teacher education standards reveal that programs have traditionally emphasized professional musicianship and performance skills, with performing ensembles, music history, and literature comprising most required coursework (Blackwell, 2018; Kladder, 2020; Matthews & Johnson, 2019; Miller et al., 2017). Meanwhile, researchers have repeatedly identified knowledge gaps between university certification standards and the practical demands teachers face in their roles (Denis & Tucker, 2021; Kim, 2020; Teachout, 1997; Zhao et al., 2021). The mismatch in alignment reflects a fundamental contradiction in program design: while universities prioritize exceptional individual musicianship, research demonstrates that such emphasis creates

an imbalance, leaving graduates underprepared in crucial areas such as pedagogical skills, program management, and professional characteristics essential for effective teaching (Denis & Tucker, 2021; NASM, 2025; Shaw, 2019). The documented deficiencies in teacher preparation became even more critical during the COVID-19 pandemic, highlighting the urgent need for more comprehensive and practice-based music teacher education programs (Conway, 2022).

There is limited research on the skills and abilities music educators need to be optimally effective in the modern secondary instrumental music classroom (Rohwer & Henry, 2024). Much of the formative competency research was confined to periods preceding the dual catalysts of the COVID-19 pandemic and the wave of intensive social change in education, leaving current studies on the skills and abilities music educators need for optimal effectiveness severely limited (Millican, 2008; Rohwer & Henry, 2004, 2024; Sang et al., 2018; Teachout, 1997). Given that music remains a phenomenon ingrained in human culture and retains importance in students' holistic education, instrumental music educators play a crucial role in transferring musical skills, appreciation, and knowledge to their students (Sandu, 2020; Spieker, 2020). However, effective preparation for such responsibility requires more holistic training that develops skill sets and knowledge bases enabling educators to creatively adapt instructional strategies to meet diverse student needs and satisfy educational stakeholder demands (Lv & Luo, 2021). Therefore, music educator preparation programs must adapt their curricula by reprioritizing competencies for effective instruction to align with the instructional strategies currently used in contemporary classrooms (Liu, 2022).

Statement of the Problem

The problem addressed by the study was the knowledge gap between the expected competencies of secondary instrumental music educators upon entering the field and their ability

to deploy modern instructional strategies based on the demands of the contemporary classroom (Butler, 2022; Karabulut & Demirci, 2022). The gap in secondary instrumental music educator preparation contributed to feelings of praxis shock and heightened burnout, ultimately leading to attrition from the field (Laidlaw, 2023; McNeill & McPhail, 2020; Miksza, 2021). Recent periods of disruption of secondary music education programs exposed the deficiencies of music teacher preparation and catalyzed the demand for instrumental music educators to use modern instructional strategies to remain relevant and effective (Butler, 2022; Cao, 2022; Denis & Tucker, 2021; Guo et al., 2021; Kao, 2021; Toscher, 2020; Zabbarova, 2020).

Periods of remote learning revealed areas where secondary instrumental music educators were under-prepared to deliver compelling educational experiences (Hash, 2021). Active educators acknowledged technological incompetence, challenges in technology integration, and the perceived ineffectiveness of remote music instruction (Cheng & Lam, 2021). Changes in students' needs, preferences, and interests necessitated engaging instructional strategies that often did not align with the music educator's university training (Stavrou, 2020).

Music education had evolved to be inclusive of both traditional musical literacy and digital literacy, requiring a more experiential and holistic curriculum that integrated classroom technology to enhance student engagement and motivation (Kao, 2021; Liu, 2022; Lv & Lou, 2021). Remote-learning mandates spurred innovation in instrumental music instruction and illustrated the need to realign educator competencies to adapt to the new paradigm, remain viable in the workforce, and ensure effective teaching (Kao, 2021). If the problem is not addressed, continued educator attrition, ineffective instruction, and the potential decline of secondary instrumental music programs could occur (Sang et al., 2018).

Purpose of the Study

The purpose of the qualitative descriptive study was to explore the instructional strategies actively deployed in the secondary instrumental music classroom, the competencies required for educators to remain relevant and effective as they employ modern strategies, and the perceived knowledge gaps in the preparation of the educators. Identifying emerging instructional strategies and competencies was essential to addressing preparation misalignments and mitigating factors driving music educator attrition (Robinson, 2020). I selected qualitative descriptive design as the most appropriate methodology for the study due to its ability to capture detailed participant perceptions about secondary instrumental music education and to generate insights applicable across various educational contexts.

The general population for the study consisted of secondary (grades 6–12) instrumental music educators and fine arts administrators who oversaw secondary instrumental music programs in the United States. I recruited participants from five music educator Facebook Groups and through an email sent by the National Association for Music Education (NAfME). I selected 19 individuals, representing both educators and administrators, to participate. I used maximum variation sampling based on the variety of instrumental music classes participants taught (as educators) or oversaw (as administrators).

Participants self-qualified based on inclusion criteria. I required participants to be music educators assigned to teach grades 6–12 instrumental music in the United States, to have been actively teaching since the 2019–2020 academic year or earlier, and to have graduated from a NASM-accredited institution. Fine arts administrators needed to have oversight of at least three secondary instrumental music educators and to have been active in their position for at least 2 years.

Once individuals self-qualified and provided informed consent, they completed a prescreening form to collect information about their teaching or administrative assignment. The prescreening data informed participant selection, ensuring a maximum variation sample. The purposeful criterion sampling procedure ensured participants had the experience necessary to inform the exploration of instructional strategies, having implemented them; the necessary competencies, having acquired them; and perceptions of knowledge gaps, having had to overcome them (Cheng & Lam, 2021; Joy, 2021). The data analysis followed a thematic approach using the six-step process outlined by Braun and Clarke (2006) in their qualitative research study. Rather than limiting the analysis to existing frameworks, I omitted the use of Priori Codes, which allowed for discovery of previously undocumented elements and creating a more complete view of the phenomenon. The approach enabled thorough investigation of the research questions while establishing a clear perspective on modern classroom challenges.

Research Questions

*RQ*1

What instructional strategies do secondary instrumental music educators and arts administrators believe can aid secondary instrumental music educators to help their students effectively acquire musical skills and knowledge in the secondary instrumental music classroom?

RQ2

What are the competencies that secondary instrumental music educators and arts administrators believe that secondary instrumental music educators must have to be effective in the contemporary secondary instrumental music classroom?

RQ3

What are the perceived knowledge gaps preventing music educators from being effective in the contemporary secondary instrumental music classroom?

Conceptual Framework

In both university settings and continuing education, the goal has ever been to equip music educators adequately to transfer knowledge effectively and efficiently to their students. To meet the goal of optimized educator preparation, the first step in instructional design was to analyze learners' needs and focus preparation on the essential knowledge, skills, and competencies while eliminating unnecessary elements (Piskurich, 2006). To determine the necessary components of secondary instrumental music educator effectiveness, my conceptual framework for the study drew on existing literature regarding music educator competencies, preparation, and effectiveness. It also supported the development of an understanding of the instructional strategies used in the secondary instrumental music classroom, incorporating rich descriptions derived from educators.

Given the rapid changes in secondary instrumental instruction over the past 4 years, an inquiry into the perceived knowledge gaps in teacher preparation was necessary. I used my conceptual framework to develop an understanding of the preparation needs for music teacher effectiveness in relation to the modernization of secondary instrumental music (Imenda, 2014). Competencies should guide teacher effectiveness (Lloyd, 2024). Accrediting bodies, such as the National Association of Schools of Music (NASM, 2025), established a common framework for competencies used in preparation programs.

Even accredited undergraduate music teacher preparation programs may remain misaligned with the evolving instructional demands of secondary instrumental music classrooms.

Kuglman (2021) found that many programs required revision to ensure educator effectiveness, particularly in non-musical areas such as classroom management and entrepreneurship. Their analysis revealed that musical skills instruction often failed to reflect actual classroom needs. Similarly, Millican (2008) investigated educator perceptions of necessary competencies and called for broader frameworks that account for yet-unidentified skills. Hash (2021) and Kuglman (2021) further emphasized that accrediting mandates focused disproportionately on musical competencies, overlooking the diverse instructional strategies and holistic skills now required. Together, research findings demonstrate that existing competency frameworks are outdated and insufficient, signaling the need for a systemic re-evaluation of music educator preparation curricula.

Traditional music teacher preparation programs have been insufficient in their efforts to effectively prepare educators with the instructional strategies needed for remote and technology-enhanced teaching. Hash (2021) examined how secondary instrumental educators adapted their methods during pandemic-driven remote learning, while Joseph and Merrick (2021) explored the use and implementation of technology-enhanced instruction. Both studies found that teachers entered the classroom with skill deficits modern and remove-learning areas, emphasizing the need for more comprehensive preparation in modern instructional practices. In addition, the researchers predicted that remote learning may become a more routine option in music education, reinforcing the urgency of addressing related gaps. As a result, preparing music educators to teach effectively in digitally mediated environments remains critical for long-term instructional flexibility and program viability. The research findings also underscored the need to identify current instructional strategies and define the competencies required for educator

effectiveness—core concerns that shaped my conceptual framework (Hash, 2021; Joseph & Merrick, 2021; Kuglman, 2021).

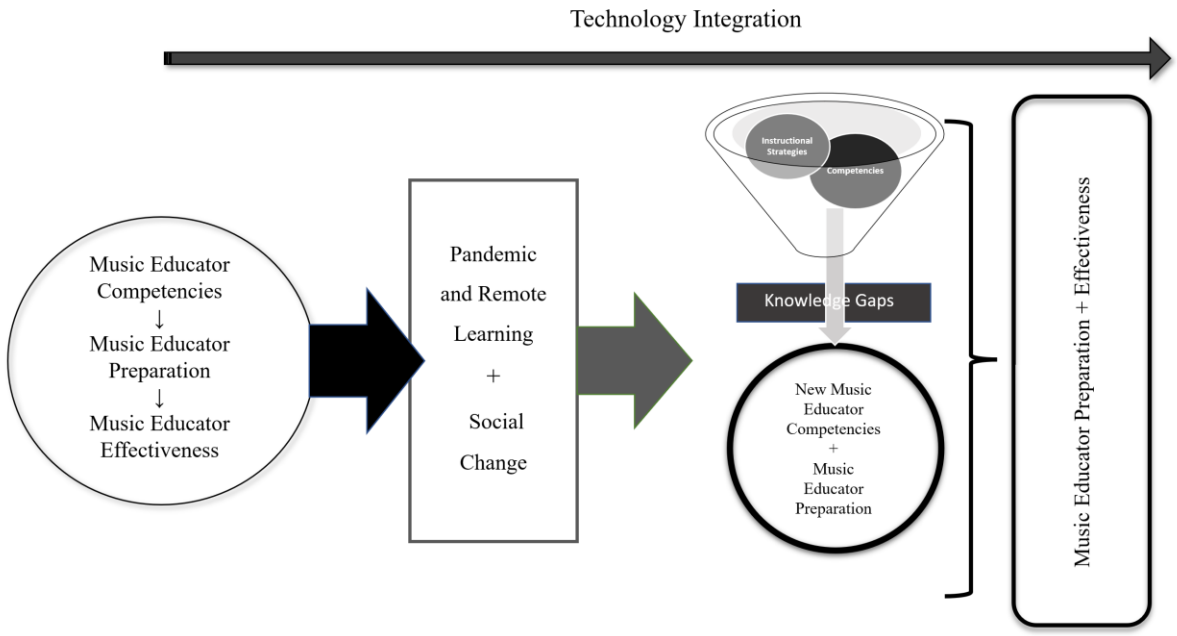
Current music educator preparation programs remain misaligned with the multifaceted demands of modern classrooms, despite established accreditation standards. Denis and Tucker (2021) found that although accrediting bodies such as NASM outline required competencies, the actual preparation tracks for music educators often fail to reflect the realities of contemporary teaching. For example, music performance skills continue to dominate the core standards (NASM, 2025), yet research emphasizes that teaching ability, program management, and personal attributes are equally essential to educator effectiveness (Butler, 2022; Millican, 2008; Rohwer & Henry, 2004). The continued gap between accreditation mandates and the actualities of classroom instruction underscores a foundational inadequacy in current teacher education models.

A persistent knowledge gap exists between the preparation music educators receive and the instructional demands they face in secondary instrumental classrooms. Researchers have identified a misalignment between the competencies emphasized in preparation programs and the real-world expectations of classroom teaching, suggesting that at least some training models fail to equip educators with the practical skills necessary for effective instruction and program management (Artha et al., 2023). Extensive research underscores the necessity of reexamining both the competencies associated with educator effectiveness and the systematic processes through which teacher preparation programs cultivate these competencies in preservice educators (Denis & Tucker, 2021; Millican, 2008; Rohwer & Henry, 2004). Understanding perceived gaps is essential for informing curriculum reform in music educator preparation and for aligning

teacher competencies with contemporary instructional realities (Conway, 2022; Denis & Tucker, 2021; Groulx, 2016; Kladder, 2020; Kugelman, 2021).

Figure 1

Conceptual Framework Guiding the Study



My conceptual framework served as the foundation for analyzing and enhancing music teacher preparation. It guided the development of data collection tools and informed the instrumentation used to explore instructional strategies, essential competencies, and perceived knowledge gaps in secondary instrumental music education. The data gathered from participants yielded a robust set of findings that identified both strengths and deficiencies in current preparation practices. Through thematic analysis, the data generated actionable insights to support improvements in preservice training and ongoing professional development. Ultimately, my conceptual framework provided a structured lens through which I translated participant data into meaningful recommendations for educator preparation reform.

Definitions of Key Terms

Competencies

Competencies are skills, knowledge sets, attitudes, or characteristics that enable an educator to effectively perform the activities and duties of their job to expected standards (Zoraloğlu & Şahin, 2022).

Culturally Responsive

Culturally responsive refers to adopting management practices that consider the ecological factors of students, such as social experiences, community, cultural backgrounds, and ethnic identities, and selecting instructional strategies reflective of contemporary considerations (Gay, 2018).

Diversity, Equity, and Inclusion

Diversity is acknowledging the range of human differences, such as race, religion, ethnicity, gender, political beliefs, age, physical ability, social system, physical attributes, or other elements descriptive of human characteristics. Equity defines the ideal of fairness, or justice, impartially. *Inclusion* is the recognition of the importance or worth of every individual equally and the provisions of empowerment or involvement regardless of any personal characteristic (Corsino & Fuller, 2021).

Information and Communication Technology

Information and communication technology (ICTs) are the set of tools or methods to create, transmit, distribute, or obtain information or data for teaching or learning, including computer equipment, software, online services, applications, multimedia, networks, or technologies (Babaniyazova & Kalimbetova, 2021).

Instructional Strategies

Instructional strategies refer to the planning, selection, and delivery of instructional materials to facilitate the desired learning outcome for the student (Mayo et al., 2022).

Instrumental Music Educator

Music instruction may occur formally or informally as part of an organization or school. It may use various knowledge and skill transfer tools, such as musical instruments, voice, or digital music creation software. It is common for researchers to use the term *music teacher* to describe anyone who shares their musical knowledge, regardless of formal education, training, or certifications. I focused the study entirely on secondary instrumental music educators who received formal training, held certification to teach instrumental music in public schools, and taught students in grades 6–12 (Miller et al., 2017). Most researchers cited in the literature review use the terms *music teacher* and *music educator* interchangeably, without clearly distinguishing between the two. While all music educators are music teachers, not all music teachers hold certification as music educators. Furthermore, many researchers may interchangeably refer to instrumental music educators as *directors* or *conductors.* The literature may not be explicit in differentiating between the teaching assignments of music educators, as most educators who enter the field obtain certification to teach various music education courses, and their specific roles may shift from year to year. Note that *music education instructors* are the university professors who train music education majors for certification. I elected to use the term *music education instructor* for clarification and alignment with the definition of *music educator*, though the more common terminology is *music teacher educator*.

Learning Activities

Learning activities are activities the learner performs that are overt and observable by others. The selected pedagogy guides learning activities selection. Learning activities are the operations used by students and manipulated by instructors and instructional designers to teach a concept, a skill, or to develop understanding. Activities may be active, interactive, or constructive (Chi, 2009; Richter et al., 2021).

Review of the Literature

In the literature review, I examine empirical and theoretical studies that presented findings indicating how recent changes in music education have necessitated the development of 21st-century competencies for effective classroom instruction. The review analyzes three critical areas: existing music educator competencies and standards, shifts in music education due to the COVID-19 pandemic, and the implementation of technology-based instructional strategies (Conway, 2023). Extensive research supports the premise that secondary instrumental music educators have lacked adequate preparation to be effective in contemporary instrumental music classrooms (Cheng & Lam, 2021; Conway, 2022; Edgar, 2017; Kladder, 2020; Kladder & Lee, 2019; Lv & Luo, 2021; McEvoy & Salvador, 2020; Powell, 2019; Sahoo et al., 2020; Salvador & Culp, 2022; Spieker, 2021; Stipp, 2019; Zhao et al., 2021). The convergence of evidence across multiple studies reveals a persistent gap between traditional preparation programs and the evolving demands of modern music education, particularly in the areas of technological integration and adaptive pedagogical approaches. By synthesizing contemporary research

findings, the review establishes a foundation for understanding how music educator preparation must evolve to meet contemporary classroom challenges.

The identification and evaluation of the literature was systematic, drawn from various sources to determine the selected topics for the research (Bloomberg & Volpe, 2019). I limited the search criteria to peer-reviewed literature from journals published between 2019 and 2025, with an exception for seminal literature on selected topics due to the lack of more recent periodicals. The review utilized non-reviewed articles, book chapters, conference presentations, and other source material to illustrate and explain specific content areas, such as technology use in the music classroom and instructional strategy models. Academic Search Complete, EBSCOhost, Education Research Complete, ProQuest, Wiley Online Library, National University Library databases, and ERIC were the databases accessed. Search terms included *music educator preparation, COVID-19 and music education, technology in music education, music teacher effectiveness, music teacher perceptions, music teacher education,* and *music educator competencies.* I combined and cross-referenced with additional terms such as *SEL, culturally relevant, technology use, classroom technology, learning activities, instructional strategies,* and *fully remote.* The literature review highlights the challenges and changes that have occurred over the past 4 years in music education, along with the innovative instructional strategies instrumental music educators have employed to adapt to dynamic shifts in the field. The literature review explored the role of technology in music education praxis and examined how researchers have perceived various catalysts for change (Bloomberg & Volpe, 2019).

Existing Music Educator Competencies and Standards

The review of the literature illustrates the traditional competencies for secondary instrumental music educator preparation (Hill et al., 2023). The research examined studies of

music educators' perceptions regarding competency acquisition and their continued development of competencies through fieldwork and professional development activities. Many researchers used categorization of competencies into three domains: musical, pedagogical, and personal characteristics (Denis & Tucker, 2021). I have supplemented the framework of skills, knowledge, and competencies used by previous researchers with the inclusion of professional skills, such as time management and entrepreneurship, and individual characteristics, like tenacity and confidence (Millican, 2008). I identified specific competencies and educator traits through scholarly examination of the perceptions of university music education instructors, early-career music educators, and experienced music educators (Denis & Tucker, 2021; Kim, 2020; Millican, 2008; Sang et al., 2018; Zhao et al., 2021). The research foundation provides a multidimensional understanding of what constitutes educator effectiveness in instrumental music settings.

I concentrated research around competencies related to pre-service educators' musical skills and subject matter knowledge, alongside the ability to pass similar skills onto students. While NASM, the primary accrediting body for university music educator certification programs, outlined some competencies, the literature illuminated additional competencies requisite for instrumental music educator success (Hill et al., 2023). The NASM handbook was the guiding document accredited university teacher training programs referenced when developing required curricula for graduation from accredited institutions (NASM, 2025). The competencies gained by secondary instrumental music education majors served as indicators of accreditation, ensuring they would be highly effective educators (NASM, 2025). Scholarly studies identified supplemental competencies, such as skills surrounding student motivation and classroom management (Astuti et al., 2019; Crawford, 2017; Denis & Tucker, 2021; Hill et al.,

2023; McNeill & McPhail, 2020; Regier, 2024; Sang et al., 2018; Tucker, 2021).

NASM directs accredited universities to devise music educator training and certification programs that, based on NASM's required percentages, heavily favored the development of musical skills and knowledge (NASM, 2025). Additionally, music education researchers sought to establish the equal importance of personal and professional competencies (Denis & Tucker, 2021; Millican, 2008; Miksza et al., 2010; Rohwer & Henry, 2004). Through literature analysis, ample evidence has suggested an overemphasis on musical performance may have been misaligned with the fundamental competencies required for music educators to succeed in the classroom (Rohwer & Henry, 2004). The researchers' findings indicated that current certification programs prioritized technical musical proficiency over essential teaching competencies such as classroom management, differentiated instruction, and student engagement strategies (Blackwell, 2018; Kladder, 2020; Matthews & Johnson, 2019; Miller et al., 2017).

The field of music education faces unresolved tensions between tradition and innovation, particularly in defining competency standards that support both instructional effectiveness and musical rigor. As literature shows, gaps remain in understanding what constitutes the optimal balance between musical and pedagogical competencies, how to quantify the specific real-world demands of secondary instrumental music classrooms, and which competency frameworks would best prepare educators for contemporary teaching challenges (Conway, 2022; Kugelman, 2021; Millican, 2008; Miksza et al., 2010). Furthermore, limited research exists on how to effectively restructure certification programs to address misalignments while maintaining musical excellence standards (Denis & Tucker, 2021; Groulx, 2016; Kladder, 2020).

Few published sources contain studies on music educators' personal competencies required to be effective (Denis & Tucker, 2021). For example, not incorporating a holistic view

of music teacher education, which incorporates professional and personal skills, illustrated the lack of emphasis on personal skills in teacher development (Denis & Tucker, 2021). Of note, the definition of personal skill areas has been subjective and inconsistent across studies, encompassing competencies ranging from professionalism and patience to organizational skills (Andari et al., 2019). Similarly, Regier (2024) emphasized the importance of personal and contextual factors—such as support from parents and preparation in classroom management—as significant predictors of teacher self-efficacy, demonstrating that personal competencies directly impact teaching effectiveness and job satisfaction. The research findings reinforce calls for broader competency development in preservice training that extends beyond traditional musical and pedagogical skills (Conway, 2022; Denis & Tucker, 2021; Millican, 2008). The lack of standardized frameworks for integrating personal competency development into music teacher preparation programs represents a significant barrier to implementing the adaptable, responsive teacher education models that current literature advocates (Culp et al., 2024; Groulx, 2016; Kladder, 2020).

The structure of secondary school music programs has historically prioritized large ensemble performance, significantly influencing the competencies emphasized in music educator training. Secondary schools most often offered ensemble electives in large group settings (i.e., band and orchestra), and instructors deployed the most common instructional strategies in group rehearsal contexts (Hash, 2021; Powell, 2019; Shaw, 2020). Subsequently, most secondary schools centralized their music programs around selective and elective performing ensembles (Shaw, 2020; Tucker, 2025). Because large ensembles were central to secondary instrumental music education course offerings, the competencies emphasized in music teacher preparation

programs were rehearsal and conducting skills (Miksza, 2021).

Conductor-specific competencies, often framed as musical content knowledge, included the ability to lead rehearsals, identify performance errors, and prescribe technical and musical improvements. However, recent studies have questioned whether such an emphasis sufficiently prepares educators for the full scope of teaching in contemporary ensemble classrooms. For example, Scherer (2021) found that while high school band directors broadly valued democratic rehearsal procedures—such as student-led sectionals and peer-driven performance feedback—they rarely implemented more collaborative practices like student-led full ensemble rehearsals or student-directed repertoire selection. Overall, the research revealed a substantial incongruity between educators' pedagogical values and their instructional practices, indicating that current preparation programs may insufficiently cultivate the competencies required for collaborative ensemble leadership (Martin, 2021; Miksza et al., 2010; Scherer, 2021).

Historically, researchers struggled to differentiate the importance of pedagogical competencies, which tended to morph based on the training track selected by the pre-service educator (Miksza et al., 2010). Similarly, it was challenging for researchers to delineate between the music teaching skill and the musical performance skill (Cao, 2022; Millican, 2008; Rohwer & Henry, 2004). Additionally, the diversity of conceptual and pedagogical frameworks found throughout recent literature illustrates the inherently interconnected nature of teacher competencies required for a comprehensive assessment of secondary instrumental music education (Culp et al., 2024). Overall, studies have revealed that existing frameworks often failed to adequately capture the complex interplay between musical, pedagogical, and personal competencies, leading to fragmented approaches to teacher preparation and assessment. Furthermore, the variation in training tracks created inconsistent competency priorities across

programs, making it difficult to establish unified standards for effective music teacher preparation (Groulx, 2016; Kladder, 2020; Regier, 2024). Additionally, research has yet to determine what specific instructional goals and competency standards would create consistency across teacher education programs while maintaining flexibility for diverse training approaches, and how to validate assessment instruments that accurately measure the multifaceted nature of music teaching effectiveness in secondary instrumental settings (Conway, 2022; Denis & Tucker, 2021).

A sustained division remains between requirements of universities for music educator preparation and perceived competencies for effective instrumental music education (Matthews & Johnson, 2019; Merrick, 2020). Although diverse, comprehensive, and modernized musical skills and knowledge are undoubtedly essential for music educators, most music teacher education programs mandate pre-service educators select an area for specialization (Kim, 2020; Kladder, 2020; Merrick, 2020). Subsequently, future educators who elected to specialize in instrumental music navigated graduation requirements dominated by instrumental methods and literature courses, yet upon graduation they may accept a teaching position encompassing extended music subjects, including general music, digital music production, choir, or piano, rendering bulk of university training superfluous (Kim, 2020; Kladder, 2020; Merrick, 2020). As a result, findings demonstrated that narrow specialization failed to prepare graduates for the diverse instructional demands of contemporary music teaching positions, creating a significant gap between training focus and professional reality (Conway, 2022; Denis & Tucker, 2021; Groulx, 2016). Therefore, mismatch between specialized preparation and broad teaching responsibilities suggests that current program structures inadequately develop the versatile competencies required for modern music education contexts (Hill et al., 2023; Kugelman, 2021; Robison et al., 2021).

Consequently, research gaps persist in determining what specific instructional strategies music educators must be prepared to use across diverse teaching contexts, which actual competencies are necessary for effectiveness in modern music classrooms that span multiple disciplines, and how teacher preparation programs can balance depth of specialization with the breadth of skills required for versatile music education roles (Kladder, 2020).

Although music educators require high levels of musical knowledge and performance skills, researchers have identified additional competency domains as even more essential for effectiveness (Denis & Tucker, 2021). Consequently, findings have suggested that more comprehensive training at the university level was necessary to ensure success of instrumental educators (Denis & Tucker, 2021). Furthermore, as the 21st century progressed, evolving role of music educators necessitated a realignment of perceptions regarding required competencies (Kao, 2021). Specifically, the secondary instrumental music classroom, where in-person, rehearsal-based instructional strategies historically dominated, experienced an especially pronounced need for a shift (Hash, 2020; Kao, 2021). However, research gaps persist in determining which specific additional competencies are most critical for modern music educator effectiveness and what evidence-based strategies can successfully realign competency development in teacher preparation programs (Conway, 2022; Culp et al., 2024; Denis & Tucker, 2021; Hill et al., 2023; Kladder, 2020; Kugelman, 2021). Moreover, research has yet to establish what specific instructional, cultural, and structural preparation needs are most urgent for contemporary secondary instrumental music educators, and how to measure readiness for evolving classroom demands across various contexts (Hash, 2021; Martin, 2021; Robison & Russell, 2021, 2022).

Musical Performance Skills and Subject Matter Knowledge. Researchers focused on

music educator certification and career success predominantly centered research on competencies related to musical skills (e.g., performing, listening, analysis, sight-singing), knowledge of music content areas, and individual musical performance capabilities (Denis & Tucker, 2021; NASM, 2025). Subsequently, preservice music education training institutions and accrediting bodies provided the most comprehensive documentation of competencies in guides (NASM, 2025). Furthermore, NASM, as the primary accrediting body, outlined specific musical performance and knowledge competencies required for preservice music educators to become credentialed instrumental music educators (NASM, 2025). However, research gaps remain in determining what nonmusical competencies are equally or more important for success, how comprehensive current competency frameworks are beyond musical skills, and what gaps exist between NASM requirements and actual teaching effectiveness (Culp et al., 2024; Denis & Tucker, 2021; Groulx, 2016; Hill et al., 2023; Kugelman, 2021). Additionally, research has yet to establish whether emphasis on musical competencies adequately prepares educators for the full scope of contemporary classroom demands and what alternative competency models might better align certification requirements with teaching success (Conway, 2022; Kladder, 2020; Millican, 2008; Robison et al., 2021).

In addition to musical performance and analysis, music educators needed to create music through both composition and improvisation and make value judgments about repertoire selection (NASM, 2025). NASM guidelines recommended that 50% of the music education curriculum consist of musical studies, 30–35% of general studies, and a meager 15–20% of professional education coursework (NASM, 2025). Researchers contradicted the percentages dictated by NASM and criticized the justification for the percentages when applied to real-world praxis in the music classroom (Denis & Tucker, 2021; Mantie, 2024; Millican, 2008). Mantie

(2024) added a philosophical perspective to the critique from previous research, arguing that the prevailing "getting it right" performance paradigm in music education—deeply embedded in certification expectations and ensemble models—often marginalizes opportunities for authentic musical play (Hill et al., 2023; Matthews & Johnson, 2019; Regier, 2024). Drawing from play theory and cultural analysis, Mantie contended that current competency frameworks overly emphasize control, standardization, and competitive models of music-making, which limit student creativity, intrinsic motivation, and agency (Henriksen et al., 2021; Kladder & Lee, 2019; Kao, 2021). Reframing raises important questions about whether an overreliance on performance-centric competencies restricts broader educational goals such as lifelong musical engagement, improvisation, and exploration (Culp et al., 2024; Powell, 2022; Vasil, 2020).

Various competencies encompassing musical, teaching, and personal skills influenced music educator effectiveness (Denis & Tucker, 2021). Subsequently, synthesis delved into several studies that investigated perceptions of educators and stakeholders regarding specific competencies and implications for music teacher education programs (Millican, 2008; Miksza et al., 2010; Rohwer & Henry, 2004). For instance, Millican (2008) illustrated a consistent narrative regarding essential attributes and skills required for effective teaching in the field, highlighting paramount importance of pedagogical knowledge for secondary instrumental educators and underscoring an imbalance in certification requirements that prioritized musical expertise over teaching proficiency. Similarly, Rohwer and Henry (2004) further supported the idea of imbalanced educator preparation by exposing the prioritization of teaching skills over musical prowess among university music education professors (Rohwer & Henry, 2004). However, research gaps endure in determining how certification requirements can be rebalanced to better reflect the importance of teaching skills and what specific pedagogical competencies are most

critical for secondary instrumental educators (Conway, 2022; Hill et al., 2023; Kugelman, 2021; Millican, 2008; Regier, 2024; Teachout, 1997). Additionally, research has yet to establish what systematic approaches can effectively integrate enhanced teaching proficiency into existing music educator preparation programs and how to measure the success of rebalanced competency frameworks in improving teaching effectiveness (Culp et al., 2024; Denis & Tucker, 2021; Groulx, 2016; Kladder, 2020).

Building upon musical competency research findings, Miksza et al. (2010) identified teaching and personal characteristics as crucial for instrumental educators, suggesting a shift towards a more balanced approach in teacher education programs (Miksza et al., 2010). Furthermore, Groulx (2016) echoed sentiments of imbalanced requirements and advocated for curriculum enhancements focusing on effective teaching and career preparation. Additionally, Kugelman (2021) added to the discourse by revealing a misalignment between skills offered in music education programs and those demanded in contemporary music classrooms, urging for a broader skill set encompassing proficiency in accompanying instruments like guitar. Moreover, Denis and Tucker (2021) further supported the claim by exposing challenges faced by novice teachers in acquiring both musical and pedagogical competencies, highlighting deficiencies in university-level training programs. However, further research could assist in determining how teacher education programs can systematically implement more balanced approaches, what specific curriculum enhancements are most effective for improving teaching preparation, and how programs can better align training with contemporary classroom demands (Conway, 2022; Culp et al., 2024; Groulx, 2016; Hill et al., 2023; Kugelman, 2021; Regier, 2024). Additionally, research has yet to establish what evidence-based models successfully bridge identified gaps between program offerings and actual teaching requirements, and how to assess the effectiveness

of enhanced competency integration in preparing novice educators for contemporary challenges (Culp et al., 2024; Denis & Tucker, 2021; Kladder, 2020).

Collectively, the studies above emphasized the evolving nature of music education, wherein a comprehensive approach integrating musical proficiency, pedagogical training, and personal skill development was essential in preparing music educators for success in diverse educational settings (Denis & Tucker, 2021; Millican, 2008; Miksza et al., 2010; Rohwer & Henry, 2004). Each study contributed to the supposition that while knowledge of musical curriculum and competencies was vital, understanding the context and developing strong pedagogical skills were even more essential (Denis & Tucker, 2021; Millican, 2008; Miksza et al., 2010; Rohwer & Henry, 2004). Conway (2023) suggested the importance of reevaluating the essential competencies for secondary instrumental educators to be effective in the 21st-century classroom, through a comprehensive examination of the tasks, roles, and requirements of the instrumental music educator—especially those of pedagogical knowledge (Conway, 2023). Mantie's (2024) contribution reinforced Conway's call for reexamination by suggesting that true musical learning—marked by play, creativity, and exploratory engagement—cannot thrive under rigid competency structures focused primarily on ensemble performance outcomes (Mantie, 2024).

Pedagogical Skills. Synthesis of studies on music teaching and learning competencies revealed consistent themes and divergent perspectives regarding essential pedagogical or teaching skills for music educators. Accordingly, Matthews and Johnson (2019) and Rohwer and Henry (2004) both highlighted the critical importance of pedagogical skills, such as classroom management and instructional strategies, for effective teaching regardless of specialization. However, Matthews and Johnson (2019) delved deeper into specific actions related to pedagogy,

including motivating students and establishing behavior expectations, while Rohwer and Henry (2004) emphasized transferability of teaching skills across different educational settings. Similarly, Kim (2020) emphasized the importance of a comprehensive list of pedagogical skills for music educators, encompassing knowledge of repertoire, goal setting, clear instruction, administrative tasks, and assessment.

In contrast, Denis and Tucker (2021) provided insights into challenges of acquiring teaching competencies, with educators indicating that they gained skills through on-the-job experience rather than formal training. Subsequently, research findings reinforced the importance of improved teacher training education and supplemental professional development for in-service educators, a course Conway (2023) supported. Furthermore, Denis and Tucker (2021) and Matthews and Johnson (2019) agreed on the significance of teaching and pedagogical skills, while contrasting in assessment of how educators acquire skills and role of formal developmental education. Overall, researchers continually underscored the need for music teacher education programs to prioritize pedagogical training alongside musical expertise to better prepare educators for success in diverse teaching contexts (Conway, 2023; Denis & Tucker, 2021; Kim, 2020; Matthews & Johnson, 2019; Rohwer & Henry, 2004).

In addition to research highlighting imbalance between music content knowledge and pedagogical knowledge, the findings supported conclusions indicating pedagogical skills were not only valuable within specialized areas but also transferable between them (Denis & Tucker, 2021; Kim, 2020). Moreover, educators acquire curricular skills, content knowledge, and pedagogical skills through university-level teacher preparation programs, active field experience, and professional development (Denis & Tucker, 2021). However, requirements for effective instrumental music educators extended beyond competencies into the lesser-explored realms of

individual characteristics and professional skills (Kelly, 2008; Millican, 2008). Consequently, critical research gaps persist in determining which individual characteristics and professional skills are most essential for instrumental music educator effectiveness (Culp et al., 2024; Hill et al., 2023; Kugelman, 2021; Regier, 2024). Additionally, researchers have yet to establish how to systematically develop and assess individual traits alongside competency-based training, or what models most effectively integrate transferable pedagogical skills across specialized areas while maintaining the depth of musical preparation required for secondary instrumental instruction (Conway, 2022; Culp et al., 2024; Groulx, 2016; Kladder, 2020).

Personal Characteristics. Researchers undertaking exploration of personal characteristics and competencies among music educators revealed recurring themes regarding the importance of personal attributes in addition to musical and pedagogical skills (Denis, 2019; Hanning, 2020; Miksza et al., 2010; Robinson, 2020; Stavrou, 2020). Specifically, Miksza et al. (2010) and Denis (2019) both emphasized the critical role of personal characteristics such as patience, perseverance, and enthusiasm in effectiveness of instrumental music educators. Subsequently, through studies, researchers advocated for integration of personal skill development into teacher training programs to enhance teacher effectiveness (Denis, 2019; Miksza, 2010). Similarly, Robinson (2020) identified personal skills such as work-life balance, stress management, and motivation as areas where music educators may lack competencies. Furthermore, lack of entrepreneurial skills as a domain focus is indicative of contributing to burnout and attrition rates (Robinson, 2020). Consequently, through findings, researchers have suggested a need for formal training to equip educators with essential personal skills (Denis, 2019; Miksza et al., 2010; Robinson, 2020).

Hanning (2020) explored identity formation in pre-service music educators, highlighting

a potential imbalance in university training programs that prioritize musical content knowledge over pedagogical, professional, and personal skills. As a result, imbalance of competencies across relevant domains may result in graduates identifying more strongly as performers rather than educators, which in turn hinders their ability to effectively fulfill teaching roles (Hanning, 2020). Moreover, Stavrou (2020) further reinforced the significance of personal characteristics in music education, by identifying traits such as kindness, patience, and creativity as essential qualities in ideal music educators. Accordingly, both Hanning (2020) and Stavrou (2020) underscored the importance of integrating personal skill development alongside musical and pedagogical training in music teacher education programs. Therefore, refocusing on personal skill development would help to ensure holistic preparation of future music educators (Denis, 2019; Hanning, 2020; Miksza et al., 2010; Robinson, 2020; Stavrou, 2020).

Researchers who studied traditional competencies for secondary instrumental music educators continually exposed an imbalance between requirements for effectiveness in modern classroom and what music teacher preparation programs required (Haning, 2021; Robinson, 2020; Rohwer & Henry, 2004; Stavrou, 2020). Similarly, as Millican (2008) indicated, frameworks used to facilitate the study of music educator competencies may have omitted essential skills for the role of secondary instrumental educator, but are not directly associated with student instruction. Essentially, professional skills facilitate music educator's ability to be effective (Blackwell, 2018; Gossett, 2023; Miller et al, 2017). However, further research may assist in determining which professional skills not directly associated with instruction—such as organizational abilities, leadership, and communication—are most critical for secondary instrumental educator effectiveness (Conway, 2022; Culp et al., 2024; Kugelman, 2021). Additionally, research has yet to establish how teacher preparation programs can systematically

develop and assess personal characteristics such as patience, perseverance, and enthusiasm, or what evidence-based strategies effectively integrate personal skill development into existing curricula while maintaining balance between performer and educator identity formation (Culp et al., 2024; Ginsborg, 2025; Regier, 2024).

Professional Skills. Analysis of professional skills and competencies among music educators underscores significant gaps between training and workplace demands, as evidenced by Miller et al. (2017) and Blackwell (2018). Subsequently, Miller et al. (2017) utilized data from Strategic National Arts Alumni Project (SNAAP) survey to identify the critical skills necessary for career success. Consequently, researchers uncovered deficiencies in areas such as financial and business management, entrepreneurial skills, and project management (Miller et al., 2017). Furthermore, despite the high importance music educators placed on professional skills, university education programs minimally addressed subjects (Miller et al., 2017). Therefore, additional omissions indicate the need for reconceptualization of traditional music education certification programs (Miller et al., 2017).

Similarly, Blackwell's analysis of SNAAP survey results underscored inadequacy of undergraduate education in preparing music educators for critical professional skill areas. Moreover, fewer than half of respondents indicated they felt adequately prepared (Blackwell, 2018). As a result, researchers collectively emphasized imperative for music education programs to bridge the gap between training and workplace demands (Blackwell, 2018; Miller et al., 2017). Moreover, research by Hanson (2018, 2019) corroborates the systematic disconnect, indicating that despite the prevalence of entrepreneurial behaviors among in-service music teachers, preservice teacher education remains notably deficient in providing formal instruction in entrepreneurial thinking and innovation. Likewise, Demirbatır (2021) found that pre-service

music teachers pursuing nonteaching careers demonstrated significantly higher internal locus of control, suggesting that entrepreneurial orientation and self-efficacy are key differentiators not meaningfully addressed in current curricula. Consequently, integrating comprehensive training in professional skills such as financial management, entrepreneurship, and project management can mitigate training oversights (Blackwell, 2018; Hanson, 2019; Miller et al., 2017).

Exploring requirements of employment may identify professional skills required in contemporary secondary instrumental music classroom (Blackwell, 2018; Hanson, 2018; Miller et al., 2017). However, pre-generated lists of skills and competencies assist with conceptualization of quantitative study but limit discovery of competencies outside existing lists (Bloomberg & Volpe, 2019). Additionally, by limiting the study to mere rankings of competencies of past, it is impossible to explore emerging aspects of secondary instrumental music education (Elliott & Timulak, 2021). Moreover, researchers have identified COVID-19 pandemic and dynamic social change as catalysts for adaptations in secondary instrumental music classroom (Kao, 2021). Consequently, critical research gaps persist in determining which emerging competencies are most relevant for contemporary secondary instrumental music classrooms in the post-COVID-19 era (Culp et al., 2024; Hash, 2021; Hill et al., 2023). Additionally, research has yet to establish how teacher preparation programs can systematically integrate competencies in financial management, entrepreneurship, and project management training, beyond traditional frameworks (Demirbatır, 2021; Hanson, 2019; Kugelman, 2021).

COVID-19 Pandemic and Subsequent Changes in Music Education

The following section reviews the literature surrounding remote instruction and the subsequent adaptations music educators required to fulfill their educational mandates during the period of fully remote and adapted learning. The section synthesizes the literature exploring the

adaptation of pedagogical practices, with a particular focus on implementing remote learning activities and educational technologies. The following literature also addresses the psychological impacts incurred by educators and students. Though remote instruction and the use of information and communication technologies were in practice prior to the COVID-19 pandemic, the mass mandate to rapidly implement online learning forced music educators universally to deploy technology-facilitated instructional strategies (Kao, 2021). Pivoting from in-person rehearsal as the primary instructional strategy to technology-based strategies was a challenge for secondary instrumental music educators (Calderon-Garrido & Gustems-Carnicer, 2021; Hash, 2021; Kladder, 2020). The educators who exploited the capabilities of information and communication technology (ITC) and remote learning instructional strategies discovered improved levels of student engagement (Goodrich, 2021; Liu, 2022). The learning curve that teachers whose training focused only on in-person instruction required became a bottleneck in their ability to implement remote instructional strategies (Calderon-Garrido & Gustems-Carnicer, 2021; Johnson, 2017). Despite the pedagogical impacts brought on by the COVID-19 pandemic, many music educators linked the accompanying stress levels to the psychological well-being of their students (Cheng & Lam, 2021).

Pedagogical Impacts. Early studies on impact of COVID-19 pandemic on instrumental music education converge on several key points (Calderon-Garrido & Gustems-Carnicer, 2021; Hash, 2021; Joseph & Merrick, 2021). Subsequently, among impacts were challenges of transitioning to fully remote learning, particularly in traditional instrumental settings where large ensemble rehearsals have long been instructional strategy of choice (Calderon-Garrido & Gustems-Carnicer, 2021; Hash, 2021; Joseph & Merrick, 2021). Furthermore, de Bruin (2021), Hash (2021), and Joseph and Merrick (2021) all cited necessity for pedagogical adaptations and

utilization of technology tools to facilitate remote instruction. Additionally, researchers emphasized the importance of teacher training and support in navigating complexities of online teaching (de Bruin, 2021; Hash, 2021; Joseph & Merrick, 2021). Similarly, Calderon-Garrido & Gustems-Carnicer (2021) and Liu (2021) echo sentiment, underlining the need for effective course design and facilitation to enhance student engagement.

Divergent perspectives emerged among researchers despite areas of convergence. Specifically, while Hash (2021) emphasized the need for reevaluation of instructional strategies and incorporation of wider range of technology tools, de Bruin (2021) focused more on cognitive and pedagogical adaptations required for effective remote learning. Moreover, Joseph & Merrick (2021) and Calderon-Garrido & Gustems-Carnicer (2021) addressed challenges and benefits of technology integration, with former indicating the need to target pedagogical gaps, while latter highlighting educators' preferences for familiar technologies. Additionally, Goodrich (2021) further contributed by highlighting potential of peer mentoring in mitigating feelings of isolation in online learning environments. Furthermore, Liu (2021) supplemented discussion by addressing challenges of online course design and facilitation in university-level music education programs.

Studies collectively recognized challenges and opportunities of remote learning in instrumental music education, though they differed in emphasis on instructional strategies, technology integration, and pedagogical adaptations (Calderon-Garrido & Gustems-Carnicer, 2021; de Bruin, 2021; Hash, 2021; Joseph & Merrick, 2021). However, despite differences, each researcher underscored the vital importance of teacher training and support in navigating complexities of online teaching, as well as the need for resources to bridge social divide exacerbated by remote learning (Calderon-Garrido & Gustems-Carnicer, 2021; de Bruin, 2021;

Hash, 2021; Joseph & Merrick, 2021, Liu, 2021). Therefore, collectively, research findings indicate that successful remote instrumental music education demands a holistic approach—one that integrates technological proficiency with pedagogical innovation, while centering equity and access to ensure all students can meaningfully engage in musical learning experiences (Calderón-Garrido & Gustems-Carnicer, 2021; de Bruin, 2021; Goodrich, 2021; Hash, 2021).

Research gaps persist in determining which specific strategies most effectively bridge social divides in remote instrumental music learning and which evidence-based models successfully balance familiar technologies with innovative pedagogical adaptations (Calderon-Garrido & Gustems-Carnicer, 2021; Eren & Öztuğ, 2020; Goodrich, 2021; Hash, 2021). Furthermore, scholarship has not yet established the enduring impact of COVID-19 pedagogical adaptations on traditional instrumental music instruction, the systematic pathways for implementing holistic approaches within teacher preparation curricula, or the assessment frameworks capable of evaluating equity-centered remote learning initiatives in instrumental music education (Culp et al., 2024; Conway, 2022; Robison & Russell, 2022).

Psychological Impacts. Researchers explored facets of outcomes wrought on secondary instrumental classrooms and instructors attempting to implement effective learning with limited support provided to them (Calderon-Garrido & Gustems-Carnicer, 2021; Cheng & Lam, 2021; Hash, 2020). Subsequently, Hash (2020) emphasized the need for music educators to be adept at delivering fully remote learning now that schools have an option for mass implementation of remote learning when in-person education encounters exceptional circumstances like mass spread of disease, inclement weather, or natural disasters. Furthermore, whether impacts of pandemic were primarily pedagogical, technological, or psychological, it remains that music educators were wholly unprepared to navigate myriads of challenges that remote-learning

mandates required (Calderon-Garrido & Gustems-Carnicer, 2021; Cheng & Lam, 2021; Hash, 2020).

Competencies developed through university music teacher preparation and certification programs demonstrated substantial misalignment with the actualities of classroom teaching responsibilities. Additionally, pandemic environment exacerbated gap areas, creating frustration and feeling of ineffectiveness, particularly in instrumental music classroom (Blackwell, 2018; Cheng & Lam, 2021; Hash, 2020; Kladder, 2020; Matthews & Johnson, 2019; Miller et al., 2017). Moreover, researchers continue to reinforce that preparation programs failed to adequately address real-world demands that educators face in contemporary teaching environments.

Professional skills, such as communication through technological means, remain essential competencies for music educators both prior to mass-mandated implementation of pandemic and after its cessation. Although COVID-19 pandemic was catalyzing event for ubiquitous technology use in instrumental music education, literature maintains that technological communication competencies are ongoing necessities rather than temporary adaptations (Johnson, 2017; Joseph & Merrick, 2021; Liu, 2021; Powell, 2019). Therefore, pandemic highlighted existing deficiencies in preparation programs while simultaneously creating new demands for technological proficiency.

Emerging research highlights potential gaps in understanding which technological communication competencies are most essential for music educators in post-pandemic teaching environments. Although studies have documented the psychological toll of remote teaching mandates, further investigation is needed to determine how disparate experiences have influenced long-term career satisfaction and educator retention (Cheng & Lam, 2021; Laidlaw,

2023). In addition, the literature has not yet clarified how teacher preparation programs can be systematically redesigned to address misalignments between training and real-world demands, including the development of support systems that prevent feelings of ineffectiveness during crisis situations and the implementation of evidence-based strategies that promote resilience and adaptability in exceptional circumstances (Conway, 2022; Culp et al., 2024). Greater exploration of technology's role in music education may help address applicable challenges by positioning digital tools as both pedagogical resources and mechanisms for fostering connection, communication, and professional sustainability.

Technology in Music Education Praxis

The following section presents a comprehensive synthesis of scholarship investigating technology tool implementation in music education pedagogy across pre-pandemic and post-pandemic contexts. The section addresses technology used for the facilitation of teaching, including Learning Management Systems (LMS) and ICT. The section also explores the uses of music technology for expanding music pedagogy and knowledge, including music production applications, recording technology, and automated assessment tools. Though educators can delineate technologies utilized in the music classroom into two categories of facilitation and pedagogy, some classroom technologies incorporate content knowledge with integrated ICT.

Selected technology tools were actively in use in secondary instrumental music classrooms prior to the COVID-19 pandemic, which provokes the question of why music educators were not better prepared to use the same tools to facilitate remote instruction for their students. If pre-service music educators remain untrained in the knowledge and skills for implementation of ICT in their classroom, how may they be prepared for future (Cheng & Lam, 2021; Kladder, 2020; Lv & Luo, 2021; Powell, 2019; Sahoo et al., 2020; Spieker, 2020)?

Researchers called into question why some secondary instrumental music educators opted out of facilitating synchronous lessons with their students during fully remote learning, despite the capability to do so (Hash, 2021). Of note were applications indicated for musical skill and knowledge instruction, which could have been a boon to instrumental music educators. Many educators overlooked pedagogical options rather than seeing them as an opportunity to shift the educational focus away from a performance-based model to one of music creation, expression, and analysis (Hash, 2021; Henriksen et al., 2021; Kladder, 2020). Music creation, expression, and analysis are equally essential national standards for music education (Randall, 2013).

Hernández Portero and Colás Bravo (2022) evidenced examples of technology use in music pedagogy for at least 20 years prior to the COVID-19 pandemic, with demonstrated successes in student engagement and knowledge acquisition. ICT systems provide a vast toolbox for implementing remote instructional strategies if music educators were willing, able, and supported (Joseph & Merrick, 2021). NASM (2025) did not specifically outline competencies surrounding creative skills in the certification requirements. However, research supports the indication that music educators must acquire creative competencies for their teaching role and pass essential skills on to students (Henriksen et al., 2021). Though COVID-19 amplified gap areas in music educator preparation, educators left many technologies that could have assisted in bridging instructional gaps unused (Hash, 2021). It was the educator's burden to select, create, and implement effective instructional strategies for their students (Goodrich, 2021; Hernández Portero & Colás Bravo, 2022). Educators who did implement technology-centered remote

learning solutions felt more confident in their abilities to teach utilizing a variety of platforms and whether students were fully remote or hybrid (Cheng & Lam, 2021).

Technology for Facilitating Teaching and Learning. Studies by Joseph and Merrick (2021), Hernández Portero & Colás Bravo (2022), and Sahoo et al. (2020) converge on recognition of ICT as a valuable tool for enhancing teaching and learning experiences in music classroom. Subsequently, researchers highlighted positive reception of ICT among educators and its potential to facilitate self-paced learning and creative music experiences for students (Hernández Portero & Colás Bravo, 2022). Additionally, researchers emphasized the importance of effective teacher preparation and support in utilizing ICT effectively (Joseph & Merrick, 2021; Hernández Portero & Colás Bravo, 2022; Sahoo et al., 2020). Furthermore, findings underscored the role of technology in promoting student engagement and expanding creative capabilities of learners (Joseph & Merrick, 2021; Hernández Portero & Colás Bravo, 2022; Sahoo et al., 2020).

Henriksen et al. (2020) presented a different perspective, suggesting a gap between technology integration and fostering creativity in instructional strategies despite opportunities to drive student engagement (Hayak & Avidov-Ungar, 2020). Although acknowledging potential of technology to support creativity in learning activities, the study highlighted lack of clear guidelines for assessment and limited research on cohesive approaches for implementing creative learning activities supported by technology (Henriksen et al., 2020). Consequently, discrepancy between research outcomes have suggested need for further exploration and development of strategies that effectively integrate technology to promote creativity in music education.

Joseph and Merrick (2021) and Sahoo et al. (2020) emphasized benefits of ICT in enhancing music instruction and student engagement, while Henriksen et al. (2020) drew

attention to challenges and limitations in aligning technology with creativity in instructional strategies. Nevertheless, despite divergence, researchers underscore the importance of addressing pedagogical implications and providing adequate support for educators in leveraging technology effectively to enhance music education (Cheng & Lam, 2021; Hernández Portero & Colás Bravo, 2022; Kladder, 2020; Lv & Luo, 2021; Powell, 2019; Sahoo et al., 2020; Spieker, 2020).

Although educators increasingly embed technology in music instruction, critical research gaps remain in identifying which digital competencies are essential for music educators to effectively use ICT in both instructional and managerial roles. While ICT has been shown to support classroom engagement, curriculum delivery, and administrative coordination, limited research has clearly outlined the specific knowledge and skills educators must develop to navigate technology systems effectively (Babaniyazova & Kalimbetova, 2021; Hernández Portero & Colás Bravo, 2022). Current studies also lack consensus on how teacher preparation programs can integrate training in ICT competencies in a way that balances technological fluency with pedagogical relevance across diverse educational contexts (Culp et al., 2024; Conway, 2022). Furthermore, with the emergence of artificial intelligence tools for ICT and instructional purposes, additional research on effective application must occur (Dai, 2021). A deeper understanding of required digital competencies is critical for designing preparation programs that incorporate music-specific technologies, positioning tools like digital scoring software and classroom coordination apps as essential resources in instructional and managerial contexts.

Software and Applications for Musical Instruction. Technology use for teaching fundamental musical skills had not been ubiquitous in music education prior to COVID-19 pandemic (Cheng & Lam, 2021; Joseph & Merrick, 2021; Kladder, 2020; Lv & Luo, 2021;

Powell, 2019; Sahoo et al., 2020; Spieker, 2020). Subsequently, in reviewing Spieker (2020). Kladder (2020), Powell (2019), and Martin and Buchert (2021) observed several areas of convergence and divergence within realm of technology integration in music education. Furthermore, consensus emerged among researchers regarding the gap between potential of technology to enhance music education and its actual implementation (Kladder, 2020; Martin & Buchert, 2021; Powell, 2019; Spieker, 2020). Additionally, Spieker (2020) and Kladder (2020) both highlighted lack of formal education and training for music educators in utilizing technology tools effectively, resulting in discrepancy between real-world industry standards and educational practices.

Educators face significant challenges in incorporating technology into music instruction. Similarly, Powell (2019) underscored challenges faced by educators in incorporating technology due to administrative restrictions, lack of training, and time constraints. However, Martin and Buchert (2021) provided insights into effective instructional strategies utilizing technology, emphasizing the importance of establishing clear communication channels and collaboration frameworks. Moreover, while each researcher recognized potential benefits of technology in enhancing student engagement and learning outcomes, they diverged in focus and recommendations.

Training and curriculum integration emerged as primary areas of concern among researchers. Specifically, Spieker (2020) and Kladder (2020) primarily addressed need for comprehensive training and integration of technology in music education curricula, advocating for change in basic assumptions to align educational practices with industry standards better. Additionally, Powell (2019) delved into challenges and motivations of educators in adopting technology, highlighting the importance of professional development, and overcoming

administrative barriers. Furthermore, Martin and Buchert (2021) offered practical insights into effective instructional strategies for online music collaboration, emphasizing the importance of communication protocols and collaboration frameworks (Hernández Portero & Colás Bravo, 2022).

Contemporary classroom demands require comprehensive approaches to technology integration in music education. Although consensus exists on need for improved technology integration and training in music education, studies vary in focus and recommendations (Hernández Portero & Colás Bravo, 2022). Consequently, addressing the gap between potential of technology and its implementation requires multifaceted approach, encompassing curriculum reform, professional development, and establishment of effective instructional frameworks (Kladder, 2020; Hernández Portero & Colás Bravo, 2022; Powell, 2019; Spieker, 2020). Moreover, educators may have perceived effective integration of instructional technologies as optional prior to COVID-19 pandemic, but integration has now become essential in modern secondary instrumental classroom (Hernández Portero & Colás Bravo, 2022; Sahoo et al., 2020).

Engaging students in today's music classrooms requires a reexamination of instructional strategies through the lens of digital fluency and evolving learner expectations. Critical research gaps persist in determining which specific teaching approaches most effectively foster student engagement in contemporary settings, particularly among digital natives who anticipate the integration of technology in their educational experiences. Additionally, researchers have yet to establish how traditional music education practices can be systematically adapted to align with students' technological fluency, what instructional frameworks most effectively blend technology with pedagogical best practices, and how teacher preparation programs can equip educators to implement strategies that meet the learning preferences and digital expectations of modern

students (Culp et al., 2024; Henriksen et al., 2021; Lv & Luo, 2021). Greater focus on instructional strategy development is essential for identifying technology-enhanced approaches that promote active, personalized, and relevant learning in secondary instrumental music contexts.

Instructional Strategies

Among the most notable pedagogical developments in contemporary music education has been the systematic implementation of technology to support student learning in secondary instrumental music classrooms. In 2014, NAfME established standards for the musical skills and knowledge of students in the United States. NAfME intended the standards to guide music educators' pedagogical practices to ensure students obtain an optimal music education and become lifelong musicians and musical connoisseurs. The following section provides insight into the application of innovative instructional strategies and their alignment with the NAfME National Standards. Instructional strategies fall into like-topic categories: fostering creativity, performance, assessment, and listening and responding (Randall, 2013).

The opportunity for students to access self-paced musical learning in digital environments independent of classroom instruction provides a considerable advantage that educators should recognize as essential (Hanny et al., 2021; Johnson, 2017). The number of online courses, projects, and degree programs continues to expand, and with it, the implication of a trajectorial shift from the traditional in-person teaching models to those that embrace technology-integrated models of teaching stratagem (Johnson, 2017). Educators can use remote and blended learning opportunities to support all the pillars of NAfME's National Standards while supplying more educational offerings for students outside of traditional ensemble settings (Randall, 2013). Remote and blended learning technologies enable the fostering of creativity,

even as they create more real-world application opportunities for students (Hanny et al., 2021; Kladder, 2020).

Instructional strategies that drove music performance and assessment in secondary instrumental music classrooms largely focused on large-ensemble (band and orchestra) instruction (Joy, 2021). Researchers showed that the application of modern technologies and methods can improve and enhance educators' abilities to decipher growth on an individual level (Dunbar, 2018; Hash, 2020). The individual's knowledge and abilities primarily impeded educators' ability to provide meaningful feedback and offer digital projects that created opportunities for additional growth (Cheng & Lam, 2021; Kladder, 2020; Lv & Luo, 2021; Powell, 2019; Sahoo et al., 2020; Spieker, 2020).Though the primary focus for most secondary instrumental music educators remained fixed on ensemble performance, other National Standards facets demanded recognition as they provided essential teaching strategies that open musical opportunities for a more diverse population of students as they learn to listen, connect, and respond (Merrick, 2020). Mantie (2024) further critiqued ensemble-dominant paradigms, arguing that the emphasis on standardization, control, and "getting it right" in school music often suppresses student agency and limits opportunities for authentic play, creativity, and exploration, which are essential for fostering lifelong engagement in music.

Technology-based Instructional Strategies. Lack of technological knowledge and the ability to use programs, systems, and applications provided to them represents the most poignant barrier cited by teachers to implementing technology-based instructional strategies (Hanny et al., 2021). Subsequently, Crawford (2017) and Hanny et al. (2021) offer complementary perspectives on technology integration in education, emphasizing the pivotal role of teacher readiness and adaptability. Furthermore, Crawford particularly focused on integration of

multimedia technology in music education, and demonstrated positive impact of providing access to online platforms on teacher confidence and effectiveness in implementing digital learning activities (Crawford, 2017). Similarly, Hanny et al. (2021) highlighted challenges and successes of technology implementation in blended learning environments among nonmusical educators, emphasizing the importance of teachers' willingness to adapt and experiment with digital instructional strategies.

Technology integration benefits emerge despite initial implementation challenges. Additionally, both studies underscored potential benefits of technology integration in enhancing student learning experiences and improving classroom management. However, they differed in specific focus areas, with Crawford (2017) examining music education and Hanny et al. (2021) exploring blended learning practices across various subjects. Moreover, despite differences in analysis, both studies emphasized the critical need to address teachers' technological knowledge gaps and provide support for effective utilization of digital tools to optimize student outcomes (Crawford, 2017; Hanny et al., 2021).

Educator preparedness for technology utilization remains significantly inadequate across multiple studies. Consequently, necessity of advancing technical expertise, as identified by researchers, aligns with findings from similar studies cited in the literature review, which indicate that educators were significantly underprepared to effectively utilize technology even when provided with access to it (Cheng & Lam, 2021; Kladder, 2020; Lv & Luo, 2021; Powell, 2019; Sahoo et al., 2020; Spieker, 2020). Nevertheless, despite lack of preparedness, teachers embraced instructional strategies, like the ability to personalize learning for individual students,

building communities through digital communication between students and teachers, and providing individualized feedback due to ease of application.

Successful technology adoption creates efficiencies and enhanced support capabilities for educators. Furthermore, teachers discovered that once initial learning curve for technology stabilized, they were able to create efficiencies and be able to provide more support for students and additional time resources for themselves (Lam, 2021; Lv & Luo, 2021). Therefore, conclusion drawn by researchers was that with sufficient support and growth mindsets that enablers can overcome barriers to learning technologies thus providing teachers ability to apply modern learning strategies and for students to reap scholastic rewards (Hanny et al., 2021).

Effectively engaging digital native students in secondary instrumental music education requires instructional strategies that reflect both technological relevance and pedagogical intention (Henriksen et al., 2021; Lv & Luo, 2021; Conway, 2022). Further investigation is needed to identify how music educators can acquire and apply the specific digital and instructional competencies required to overcome implementation barriers, increase teaching efficiency, and sustain student engagement through integrated technology use (Babaniyazova & Kalimbetova, 2021; Culp et al., 2024; Hernández Portero & Colás Bravo, 2022). Advancing research in digital competency development and instructional design can provide the foundation for identifying strategies that also promote creativity, exploration, and student agency in contemporary music education contexts (Martin & Büchert, 2020; Kao, 2021; Vasil, 2020).

Fostering Creativity. Educators and stakeholders agree on the importance of music education as a tool for fostering creativity (Kao, 2021). Subsequently, Kladder and Lee (2019) examined music educators' perceptions of creativity in context of National Standards for Music Education and found a discrepancy between belief in the importance of fostering creativity and

limited implementation of instructional strategies to support it in classroom (Kladder & Lee, 2019). Furthermore, while 95% of participants acknowledged the role of classroom environment in nurturing student creativity, many expressed challenges in creating such environment due to time constraints and personal discomfort with musically creative pursuits like improvisation and composition (Kladder & Lee, 2019). Additionally, researchers have suggested a gap in educators' preparedness to effectively cultivate creativity, potentially stemming from lack of emphasis on creative concepts in university-level music education programs (Kladder & Lee, 2019).

Performance-focused paradigms present significant challenges to creativity development in music education. In contrast, Zhao et al. (2021) investigated relationship between higher-order thinking skills (HOTS), critical thinking, and music educators' ability to develop creativity in students and found that while instrumental music educators historically prioritize performance skills over critical thinking and creativity, fostering critical thinking in music classroom can enhance students' creative abilities (Zhao et al., 2021). Moreover, Mantie (2024) further critiqued dominant performance-focused paradigm in school music, arguing that systemic emphasis on standardization and ensemble correctness diminishes opportunities for playful, imaginative, and exploratory learning—qualities that underlie genuine creativity. Consequently, he asserted that unless music education embraces a "ludomusical" culture that balances compliance and improvisation, it will struggle to foster creativity necessary for lifelong musical engagement (Mantie, 2024).

Implementation challenges persist despite the recognition of creativity's importance in music education standards. Although developing creativity in music students remains a national standard for music, most secondary instrumental music classrooms continue to find supportive instructional strategies challenging to implement, as they value performance skills above creative

and connective skills (Hash, 2021; Kladder & Lee, 2019; Mantie, 2024). Nevertheless, research of Zhao et al. (2021), where application of critical thinking skills enhanced pedagogical capabilities of music educators, remains a hopeful imperative for future music educator preparation and certification (Zhao et al., 2021). Furthermore, capacity of modern music educators to engage in creative thinking and apply higher-order cognitive skills in developing instructional strategies that foster creative abilities in students is fundamental to effective music education (Zhao et al., 2021). Additionally, literature indicates that educators can further support student skill development through how they assess similar abilities in music classroom (Scherer, 2021).

Fostering creativity in secondary instrumental music education requires intentional instructional design and educator competencies that extend beyond traditional performance-based approaches. It remains to be determined how music educators are cultivating creative thinking in contemporary classrooms and what specific skills they must possess to do so effectively, exposing an opportunity for supplementary research (Culp et al., 2024; Henriksen et al., 2021; Vasil, 2020). Additionally, research has yet to establish which instructional strategies successfully balance creativity development with ensemble performance excellence and creative pedagogies while still meeting traditional ensemble expectations in classrooms composed of digital native students (Conway, 2022; Kao, 2021; Mantie, 2024; Martin & Büchert, 2020). Understanding how educators foster creativity in instructional practice prompts important questions about how performance outcomes and assessment standards are defined in contemporary music education.

Performance and Assessment. Technology-driven instructional strategies have significantly reshaped music education, especially during remote learning era. Subsequently,

both Eren and Öztuğ (2020) and Lv and Lou (2021) examined how virtual platforms can enhance musical interest, assessment, and skill development, aligning with findings by Crawford (2017) and Powell (2019) on pedagogical potential of technology integration. Furthermore, Eren and Öztuğ's virtual choir project demonstrated how collaborative digital performances can foster engagement and provide publicly shareable learning artifacts, reinforcing similar insights by Joseph and Merrick (2021) and Henriksen et al. (2020) about the role of technology in student connection and collaborative learning. Additionally, Lv and Lou emphasized students' positive perceptions of Web 2.0 platforms for skill development, mirroring findings of Sahoo et al. (2020), Martin and Buchert (2021), and Spieker (2020) regarding usability and educational value of online tools.

Growing acceptance of technology-enhanced music instruction demonstrates efficacy in engaging students across diverse settings. Consequently, studies collectively support growing acceptance of technology-enhanced music instruction and affirm its efficacy in engaging students and enriching instructional delivery in diverse settings. Moreover, research shows that virtual platforms not only enhance traditional musical skills but also create new opportunities for collaborative learning and public sharing of student work.

Emerging pedagogical models emphasize experiential and student-centered learning as essential for modern music education. Specifically, Urbaniak and Mitchell (2025) introduced immersive, role-based strategies—such as backstage simulations and expert performer roleplay—that enabled students to build stage confidence, develop metacognitive awareness, and embrace artistic autonomy. Furthermore, modules reflected culturally responsive, embodied learning practices by validating students' emotional experiences and encouraging performance identity development. Additionally, Daly (2024) further contributed to discourse by critiquing

traditional definitions of success in music programs and highlighting how innovative ensembles are redefining instructional goals to prioritize identity, engagement, and community relevance over competition and ratings.

Implementation challenges revealed a discrepancy between pedagogical objectives and the constraints of practical application. Similarly, Louth (2022) found that while ensemble directors conceptually supported student-centered approaches, they often struggled to apply them in large ensemble settings due to systemic constraints such as concert demands, scheduling, and class size, revealing misalignment between constructivist ideals and instructional realities. Consequently, findings advocate for instructional design that integrates technology with authentic, student-centered experiences to promote inclusive, reflective, and personally meaningful music education in 21st century (Daly, 2024; Louth, 2022; Urbaniak & Mitchell, 2025).

Future research priorities must address fundamental questions about educator preparedness for innovative instructional delivery in contemporary music education (Conway, 2022; Culp et al., 2024). While studies demonstrate benefits of immersive strategies and technology integration, what specific competencies music educators need to effectively implement immersive, role-based strategies in technology-enhanced environments remains unclear (Henriksen et al., 2021; Kao, 2021). Moreover, the field lacks empirical data on professional development models that successfully equip teachers with skills to navigate both technological platforms and experiential learning frameworks simultaneously (Culp et al., 2024; Conway, 2022; Kladder, 2020). Without systematic investigation into educator preparation for dual competencies, music education risks perpetuating the discordance between innovative pedagogical possibilities and classroom implementation realities that current literature

consistently identifies across multiple contexts (Kugelman, 2021; Hill et al., 2023; Mantie, 2024).

Listening, Connecting, and Responding. Instructional strategies deployed during periods of remote learning, like virtual or video-based ensembles, demonstrate potential significant impact on both musical and socio-emotional learning outcomes. Specifically, Fancourt and Steptoe (2019) investigated impact of virtual ensemble instructional strategy on emotional self-regulation and perceived social presence among participants. Furthermore, the study revealed correlation between reduced use of emotional regulation strategies and increased feelings of connectedness (Fancourt & Steptoe, 2019). Additionally, research findings underscore effectiveness of virtual ensemble projects not only in fostering musical skills but also in promoting emotional regulation and interpersonal connection, as observed in similar studies by Eren & Öztuğ (2020).

Multimodal listening approaches present implementation challenges within traditional educational frameworks. Similarly, Lewis (2020) explored perceptions of university music education students regarding multimodal listening as instructional strategy, which revealed concerns about student self-efficacy and challenges of implementing such innovative approaches within traditional linear teaching methodologies. Moreover, Urbaniak and Mitchell (2025) showed how individual performance can be enhanced through listening, interpretation, and connecting activities. Consequently, findings illuminate requisite shift in music educator preparation and certification to embrace digital-native students and leverage technology to enhance learning experiences, as supported by research by Sahoo et al. (2020) and Martin and Buchert (2021).

Instructional design frameworks show potential for supporting innovative learning

activities across diverse classroom environments. Additionally, Lewis's study underscores potential of instructional design frameworks to support implementation of engaging learning activities both in physical and virtual music classrooms, aligning with insights from studies by Joseph and Merrick (2021) and Henriksen et al. (2020). Therefore, emphasis emerges on the importance of technology integration in contemporary music for facilitating effective pedagogical practices and collaborative learning experiences (Henriksen et al., 2020; Joseph & Merrick, 2021; Lewis, 2020; Richey et al., 2001).

Despite empirical evidence supporting virtual ensembles and multimodal approaches, scholars have yet to identify the specific competencies educators need to effectively deploy multimodal listening strategies while attending to students' self-efficacy concerns (Eren & Öztuğ, 2020; Henriksen et al., 2021; Robison & Russell, 2022). Furthermore, how traditional linear teaching methodologies can be adapted to accommodate innovative digital approaches for digital-native students requires systematic investigation (Hash, 2021; Lv & Luo, 2021; Martin & Büchert, 2020). Without understanding fundamental implementation requirements, music education risks maintaining the misalignment between innovative pedagogical research and practical classroom application that continues to challenge the field (Kugelman, 2021; Mantie, 2024).

Instructional Modernization

The instructional strategies selected by K–12 educators span a continuum from traditional methodologies that have been in practice for decades to the integration of technological innovations that enhance student efficacy and promote student-centered learning (Crawford, 2017; Lewis, 2020; Powell, 2019). The application of instructional strategies could have been enabled by educators who had the mindset to, yet many avoided optimized learning due to a lack

of preparation (Johnson, 2017). The modes and variety for instituting modern instructional strategies continue to expand, as observed through the literature on learning activities (Armstrong & Gale, 2018; Goodrich, 2021). Though the COVID-19 pandemic was a catalyst for mass technological adoption, it is not the exclusive factor that has created shifts in instrumental music education in recent years (Laidlaw, 2023). Civil unrest, demand for equality, and efforts to shift the pedagogical focus away from music acquisition to lifelong learning applications have all contributed to pivotal changes in the modern music classroom (Liu, 2022). Daly (2024) further highlighted similar shifts illustrated to Laidlaw by critiquing the continued reliance on legacy definitions of success—such as adjudicated ratings and technical achievement—which often stand in contrast to more holistic, inclusive educational goals. His findings underscored the need for student-centered instructional design that emphasizes musical identity, community engagement, and personal growth, and he documented successful programs that have redefined instructional outcomes through diverse repertoire, interdisciplinary integration, and flexible performance formats.

Music educators face a nearly insurmountable challenge when they abandon the methods used in their own training (Gray, 2019; Mellizo, 2020). Educators' ability to select educational activities and materials that reflect students' interests and create student-directed activities was key to embracing classroom diversity while supporting the skills students required to thrive in a 21st-century world (Kao, 2021; Powell, 2019; Vasil, 2020). For example, Regier (2024) emphasized that perceived mastery and satisfaction rather than teaching experience significantly influenced teacher self-efficacy in classroom management, an essential element for student-centered instruction, reinforcing the importance of preparation programs that empower educators to implement modern, responsive practices. By crafting lessons and materials that captivate

students, teachers can engage them in an ever-deepening learning experience and help them take ownership of their education (Lv & Lou, 2021; Mellizo, 2020). The shift toward student-centered instruction constitutes a fundamental pedagogical reorientation for music educators and proves essential for the effective integration of culturally diverse curricular content (Đurđanović et al., 2018; Salvador & Culp, 2022; Sorenson, 2021).

Implications of social-emotional learning (SEL) and trauma-informed educational practices can guide and direct educational activities in the music classroom, though researchers have yet to determine how SEL activities affect the desired outcomes of music education (Edgar, 2017; Stipp, 2019; Váradi, 2022; Wang, 2022). The discord between advocating for music as a societal benefit versus the extramusical benefits of student social improvements remains (Shaw, 2022). Despite ongoing scholarly debate, the integration of SEL and trauma-informed pedagogical practices remains a critical priority shaping contemporary music classroom instruction and the methodologies of 21st-century music educators (Edgar, 2017; Stipp, 2019; Zhao et al., 2021). The evolving demands of social change shaped the design and development of learning activities, particularly in the adoption of student-centered practices, the integration of social-emotional learning, and the implementation of modern technological tools in the classroom (Martin & Büchert, 2020; Orzolke, 2021; Stipp, 2019; Wang, 2022). Researchers have yet to determine if professional development can effectively substitute for a holistic and relevant music educator education program at the university level (Battersby, 2019; Edgar, 2017; Johnson et al., 2019; Kladder, 2020; Kuebel, 2019; Sorenson, 2021; Zhao et al., 2021).

The following section covers the literature aligning musical learning activities and the surrounding culturally responsive adaptations implemented due to the cultural shift toward Diversity, Equity, and Inclusion (DEI), including repertoire selection, reflective practices, and

performing ensemble offerings (Phillips, 2021). Discourse also includes strategies for the implementation of Social-Emotional Learning (SEL) and trauma-informed pedagogical practices that center around the perspective of music as a vehicle for the transformation of emotional education (Gossett, 2023; Wang, 2022). The final section explores activities employed for music teaching and learning in remote and blended music settings.

Culturally Responsive and Student-Centered Activities. Cultural sensitivity and preparedness gaps exist in music educators' ability to teach diverse musical genres and respond to student backgrounds. Specifically, Đurđanović et al. (2018) and Sorenson (2021) delved into cultural sensitivities within music education and investigated preparedness of music educators to teach popular music. Subsequently, researchers revealed the gap in training and recommended professional development to bridge it (Đurđanović et al., 2018; Sorenson, 2021). Furthermore, Orzolek (2021) similarly explored student perceptions of diverse music selection, emphasizing benefits of culturally responsive pedagogy in enhancing musical instruction, supporting conclusions that selecting music that is relevant and culturally responsive to needs of students drive more effective music learning (Đurđanović et al., 2018; Orzolek, 2021; Sorenson, 2021).

Modern pedagogical frameworks offer approaches to improve equity and inclusiveness in music education contexts. Additionally, Salvador and Culp (2022) provided insights into modern pedagogical approaches like Universal Design for Learning (UDL), culturally responsive education, and trauma-informed education. Moreover, studies highlighted potential for various modalities to improve equity in music education (Salvador & Culp, 2022), while McEvoy and Salvador (2020) underscored intersection of culturally responsive practice and trauma-informed

learning, advocating for activities that validate and support students' diverse backgrounds and needs (McEvoy & Salvador, 2020).

Student-centered pedagogies prioritizing agency and identity demonstrate potential for transforming traditional music education approaches. Consequently, contemporary research increasingly supports shift toward student-centered, inclusive pedagogies in music education that prioritize agency, identity, and creative autonomy over traditional performance metrics. Furthermore, Hatch (2023) demonstrated that when students engage in repertoire selection, analysis, interpretation, and peer critique, they develop metacognition, leadership, and ownership—skills often underdeveloped in rehearsal-driven environments aligned narrowly with Anchor Standard 5 of National Core Arts Standards. Similarly, Urbaniak and Mitchell (2025) found that immersive, experiential modules such as backstage simulations and expert performer roleplay promoted stage confidence and artistic identity by validating students' emotional experiences and encouraging empowered performance mindsets.

Implementation barriers persist despite recognition of benefits from culturally responsive and student-centered approaches. However, Daly (2024) extended argument into ensemble settings, highlighting how rigid success measures like adjudicated ratings and competition often misalign with broader educational goals. Additionally, their study showcased programs redefining success through diverse repertoire, student voice, and community engagement, despite facing systemic barriers. Moreover, Scherer (2021) found that while high school band directors broadly valued democratic rehearsal procedures—such as student-led sectionals and peer-driven performance feedback—they rarely implemented more collaborative practices like student-led full ensemble rehearsals or student-directed repertoire selection. Furthermore, Mantie (2024)

further contended that large ensemble structures and standardization frequently suppress very creativity and inclusivity that 21st-century music education aspires to cultivate.

Fundamental questions about educator preparation for inclusive practices remain unresolved in contemporary music education research (Conway, 2022; Culp et al., 2024). While extensive literature documents the benefits of culturally responsive and student-centered approaches, what specific competencies music educators need to effectively implement culturally responsive pedagogy while maintaining traditional ensemble performance standards requires urgent investigation (Gay, 2018; McEvoy & Salvador, 2020; Orzolek, 2021). Additionally, how professional development programs can systematically prepare educators to navigate tensions between inclusive practices and performance expectations demands empirical study (Conway, 2022; Culp et al., 2024; Robison & Russell, 2022). The field currently lacks comprehensive frameworks for developing educator capacity to integrate diverse pedagogical approaches while addressing systemic constraints that continue to limit implementation of equitable music education practices (Salvador & Culp, 2022; Mantie, 2024; Robison & Russell, 2021).

SEL and Trauma-Informed Activities. Professional development frameworks for Social-Emotional Learning integration in music education have established foundational approaches for educator preparation. Initially, Edgar (2017) laid groundwork for integrating Social-Emotional Learning (SEL) into music pedagogy, emphasizing the importance of professional development for music educators to improve implementation support in the classroom. Subsequently, Stipp (2019) investigated effectiveness of SEL professional development on classroom practices, highlighting its benefits for educators' teaching strategies and emotional support skills. Furthermore, research demonstrates that structured professional

development can enhance educators' capacity to address students' social and emotional needs through musical instruction.

Music education research demonstrates significant potential for enhancing students' social-emotional development through structured musical experiences. Additionally, Váradi (2022) reviewed literature on SEL in music education, revealing music's potential to enhance students' emotional awareness, self-management, and social relationships through structured musical experiences. Moreover, Shaw (2022) examined relationship between high school music participation, academic achievement, and SEL outcomes, suggesting need for further research to determine empirical connections between music education and desired outcomes. Consequently, evidence supports music education's capacity to foster social-emotional growth when implemented with intentional pedagogical approaches.

Implementation gaps persist between educator recognition of SEL importance and actual classroom integration practices. More recently, Culp et al. (2024) surveyed music teacher education programs across United States and found that while educators increasingly deemed SEL vital to music instruction, preparation programs implemented it inconsistently and inadequately. Therefore, findings reflect growing awareness of the importance of preparing music educators to meet social and emotional needs of P–12 learners, reinforcing earlier calls for structured, research-informed SEL integration in both teacher training and classroom practice. Nevertheless, a substantial disconnect persists between theoretical knowledge of SEL principles and their practical implementation within music education contexts.

Implementation research reveals critical knowledge deficits about current SEL practices and educator preparation needs in music education (Culp et al., 2024; Conway, 2022). Although literature establishes SEL’s significance and potential benefits, how music educators are

incorporating the targeted strategies—if at all—remains unexplored (Edgar, 2017; Raschdorf et al., 2021; Stipp, 2019). Furthermore, what specific competencies music educators need to effectively integrate SEL principles into traditional ensemble instruction requires systematic investigation (Culp et al., 2024; Salvador & Culp, 2022). Without empirical understanding of current implementation practices and requisite educator skills, music education cannot advance beyond theoretical discussions to meaningful integration of social-emotional learning that meets contemporary students' developmental needs while maintaining musical excellence standards (Shaw, 2022; Mantie, 2024).

Technology-Based Learning Activities. Fick and Bulgren (2021) provided comprehensive guide for integrating tablet-based technology into music education, emphasizing its applicability for both in-person and remote instruction. Furthermore, aligning with Kladder (2020), research emphasized growing significance of music production skills across various genres and underscores efficacy of technology-enhanced learning activities in fostering student engagement in music, regardless of prior experience. Additionally, findings demonstrate that technology can accommodate diverse learning approaches while maintaining educational effectiveness across different delivery modes.

Flipped-classroom models and technology-enabled approaches show promise for supporting holistic student development in music education. Moreover, Ng et al. (2021) further explored potential of classroom technology in education through flipped-classroom model, demonstrating its ability to sustain engagement, accommodate diverse learning styles, and rejuvenate interest in music topics. Consequently, findings aligned with previous research, such as that of Edgar (2017), which advocates for technology-enabled instructional strategies to support Social-Emotional Learning (SEL) in music classroom, thereby promoting holistic

student development. Similarly, work of Đurđanović et al. (2018) emphasized the importance of cultural responsiveness in music education, suggesting that technology can facilitate exposure to diverse musical traditions, fostering empathy and understanding among students.

Societal demands on student learning outcomes necessitate fundamental shifts in music educator preparation and instructional approaches. Therefore, implications of explored literature related to learning activities were explicit in need to shift to more modern methods of instruction (Kladder, 2020). Subsequently, face of music education has changed due to societal demands on student learning outcomes, particularly in public schools. Consequently, demands, in turn, drive necessary shift in needs of educators to be prepared to meet demands of modern music classroom (Blackwell, 2018; Kladder, 2020; Matthews & Johnson, 2019; Miller et al., 2017).

Post-pandemic implementation patterns and sustained technology use in secondary instrumental music education remain largely unexplored areas requiring immediate investigation (Hash, 2021; Conway, 2022). While research demonstrates clear benefits of comprehensive technology integration approaches, what remains unknown is how and if music educators are using technology-based learning activities in secondary instrumental music classrooms, or if they have moved away from technology-enabled remote-learning strategies post-pandemic (Eren & Öztuğ, 2020; Goodrich, 2021; Calderon-Garrido & Gustems-Carnicer, 2021). Furthermore, systematic study is needed to determine what specific competencies enable educators to sustain technology integration beyond crisis-driven implementation, and how institutional support systems can maintain innovative practices that emerged during remote learning periods (Culp et al., 2024; Henriksen et al., 2021; Hernández Portero & Colás Bravo, 2022). The field currently

lacks empirical data on long-term adoption patterns and factors influencing continued technology use in traditional ensemble settings (Martin & Büchert, 2020; Conway, 2022).

Summary of Literature Review

The themes explored in the literature review highlight the necessity of a comprehensive examination of 21st-century standards and competencies to enhance the training of music educators, thereby optimizing teacher preparation and effectiveness in contemporary classrooms. The review also outlined historical standards for music educators as established by NASM, the primary accrediting body for undergraduate music education programs, alongside studies that investigate perceived competencies from the perspectives of students, pre-service music educators, university faculty, and in-service professionals. Several studies emphasized the need for updated standards, as their continued reference in modern research suggests their relevance despite their potential obsolescence.

The literature review provided ample references outlining the catalysts for massive shifts in music education and what modern classrooms demand of music educators. The COVID-19 pandemic amplified the need for music educators to increase the use of technology in their classrooms for information and communication and to reinforce curricular knowledge. The literature review presented the radical social changes since the 2019–2020 school year, specifically as they related to creating learning activities to address social-emotional learning (SEL), diversity equity and inclusion (DEI), and culturally responsive teaching and learning. Additionally, researchers emphasized the need to align instructional strategies with technology integration, fostering creativity through technological means, using modern adaptations for performances and assessment, and instructing students in listening and responding to music

(Hash, 2021; Urbaniak & Mitchell, 2025; Culp et al., 2024). Each section illuminated the potential knowledge gaps in music educator preparation.

Professional development remained the preferred recommendation for bridging knowledge gaps in music teacher preparation, and yet there are only so many opportunities for active teachers to engage in the kind of professional development that results in student growth (Battersby, 2019; Edgar, 2017; Johnson et al., 2019; Kladder, 2020; Kuebel, 2019; Sorenson, 2021; Zhao et al., 2021).The ability to utilize technology and leverage the changes in music education was deemed essential for educators to embrace as they innovate and create learning opportunities that benefit students like never before (Joy, 2021). For effective technology use to happen, it must begin with identifying the competencies required for music educators to foster learning environments that serve all students and provide educational institutions guidelines for teacher education program improvements (Denis & Tucker, 2021; Sang et al., 2018; Zhao et al., 2021). It is necessary for music educators to have the technical skills and the ability to adapt the learning environment to the new standards and expectations where students hold the dominant position, the classroom environment is experiential, and the intention is to cultivate the innovative spirit and practice ability of students (Astuti et al., 2019; Cao, 2022; Fick & Bulgren, 2021).

Comprehensive analysis of literature reveals critical competency gaps that demand systematic investigation to advance music educator preparation for contemporary teaching contexts (Conway, 2022; Culp et al., 2024). For example, while extensive research documents the benefits of technology integration, SEL implementation, culturally responsive pedagogy, and student-centered approaches, fundamental questions remain about educator preparedness to implement the various strategies effectively in secondary instrumental music education

(Henriksen et al., 2021; Salvador & Culp, 2022; McEvoy & Salvador, 2020; Vasil, 2020). Moreover, post-pandemic implementation patterns, sustained technology use, and the specific competencies required for successful integration of innovative approaches with traditional ensemble performance standards require urgent empirical study (Hash, 2021; Hill et al., 2023; Mantie, 2024). Consequently, future research must prioritize identifying evidence-based frameworks that systematically develop educator competencies for engaging digital native students while maintaining musical excellence, thereby transforming theoretical possibilities into practical classroom realities that serve all learners in 21st-century music education contexts (Culp et al., 2024; Kugelman, 2021; Martin & Büchert, 2020).

Ethical Assurances

I received approval to perform the study from the National University Institutional Review Board (IRB) prior to data collection (Appendix A). Questionnaire data remained confidential, and I obscured the identities of interview and focus group participants from publication. I used an encrypted cloud-based file to save participants personal information. I have limited access to participant personal information and identities to myself and will maintain accessibility for no more than 3 years following the study closure. I limited study participation to individuals with informed consent. All participation was voluntary, and participants were eligible to remove themselves and their data at any time, meeting the principle of respect for persons. The study outcomes benefited the participants and others in the music education space by providing improved guidance for music educator preparation, professional development and for schools and districts in the creation of teaching assignments.

The ethical assurances outlined align with the Belmont Report (1979) guidance regarding respect for persons, the principle of doing no harm while maximizing benefits, and the

maintenance of justice through the selection of participants (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). I limited the data collection instruments to individual and focus group interviews, which utilized guides to ensure that the scope of questioning remained focused on instructional strategies, competencies, and knowledge gaps, minimizing discussions of topics that could be sensitive or triggering in nature. Meanwhile, the insights generated from the study may assist professional development providers in crafting improved offerings to support in-service secondary instrumental music educators. I selected participants exclusively based on the information provided in the prescreening form. I limited screening form data to participant teaching assignment(s) and did not include any additional details that could introduce bias into the selection process. The participants selected did not impose any risk of power dynamics as no hierarchical relationship existed. Before data collection (interviews or focus groups) took place, participants affirmed that they had received informed consent information and verbally confirmed their willingness to continue. When presenting the data, I de-identified participants, using nonidentifying terms in place of names. Additionally, the researcher obscured information about participants' employment situations (location, school size, subjects taught) that could have revealed their identity.

I acknowledge biases inherent in the research due to my former career as a secondary instrumental music educator, with family connections to at least two other music educators who have either worked in the field or received training to do so. I am also a public figure in instrumental music education networks, maintaining a large social media following, contributing publications to music education editorials, and demonstrating expertise in in-service teacher education. Research positionality defines the relationship between the researcher and the participants, how researchers share the study purpose with participants, and how they may

manage any ethical issues (Bloomberg & Volpe, 2019). Mitigating potential bias was essential to ensuring the study's credibility and reliability, thereby establishing trustworthy and transferable findings. Given my roles as a professional development provider, music education community stakeholder, and founder of the Music Teacher Guild (a position associated with perceived industry leadership), I acknowledged a personal investment in the study's outcomes. The first step in mitigating bias was acknowledging researcher biases, and reflexivity. I also mitigated my biases by having expert panels review data collection instruments, including the semi-structured interview guide, and focus group guide. I documented my research process, maintained standardization in questioning, and followed established guidelines for qualitative research, including member checking, to enhance the study's reliability.

Summary

The demands placed on music educators during the transformational time that began in the 2019–2020 school year warranted revisiting the standards and competencies through which educators received training. Discovering the standards and competencies was essential and must be based on the lived experiences of music educators and the arts administrators who advise and direct them. The need for an exploratory investigation arose from the necessity to produce research data capable of enhancing fundamental understanding of the multifaceted demands confronting secondary instrumental music educators. The COVID-19 pandemic and concurrent social changes amplified the demands on educators and exposed potential knowledge gaps that improved teacher education can fill (Liu, 2022). The dynamic shifts in music education forced educators to abandon long-established habits and traditions and required them to develop contemporary teaching competencies to meet the challenges of the modern instrumental classroom (Cheng & Lam, 2021; Joy, 2021). Teachers require robust conceptual knowledge of

21st-century learning principles to successfully facilitate the development of corresponding skills in their students (Sang et al., 2018; Turhan & Demirci, 2021).

In the literature review, I outlined the existing standards and competencies for music educators, as put forth by NASM, and perceived competencies from the perspective of students, pre-service music educators, university music education professors, and in-service music educators. I organized known existing standards and competencies into four key areas of teacher effectiveness: musical performance skills and subject matter knowledge, teaching and learning skills, personal characteristics, and professional skills. There remained a sustained discrepancy between the requirements of universities providing music educator preparation and certification and what the perceived competencies must be for effective music educators entering the field (Matthews & Johnson, 2019). Although musical proficiency is undoubtedly necessary for music educators, nonmusical competencies encompassing teaching practice, personal skills, and professional capabilities are regarded as more significant determinants of educator effectiveness, suggesting these domains require more intensive attention in university-level preparation programs (Kim, 2020; Kladder, 2020; Rohwer & Henry, 2004). As the profession evolved through the 21st century and confronted the disruptions of the COVID-19 pandemic, the role of the music educator underwent substantial transformation, necessitating corresponding realignment of requisite competencies (Kao, 2021).

The disruptions precipitated by the COVID-19 pandemic revealed specific domains where music educators lacked adequate preparation (Cheng & Lam, 2021; Goodrich, 2021). The technologies required to effectively mass-implement remote instruction existed prior to the pandemic, but educational institutions rarely provided educators guidance on selecting and implementing effective instructional strategies (Hash, 2021). The supposition was professional

skills, such as communication through technological means, were essential competencies for music educators, even prior to the pandemic and the remote instruction attributed to it (Johnson, 2017; Joseph & Merrick, 2021; Liu, 2021; Powell, 2019).

K–12 educators used diverse instructional strategies, and many classrooms adopted technological opportunities that foster student efficacy and student-centered learning to address the demands of rapid social change (Crawford, 2017). Educators with robust self-efficacy regarding professional development engagement demonstrate increased propensity to adopt and implement adaptive instructional strategies (Vasil, 2020). By crafting lessons and materials that captivate students, teachers can engage them in an ever-deepening learning experience and help them take ownership of their education (Mellizo, 2020). Shifting to a student-centered approach is one of the more significant advancements demanded of music educators and is essential to implementing culturally diverse learning activities (Sorenson, 2021), underscoring the necessity for continued innovation in pedagogical practice.

The implications of SEL and trauma-informed educational practices guided and directed the educational activities undertaken in the music classroom. The relationship between student-centered SEL activities and the achievement of music education objectives remains inconclusive (Stipp, 2019). The conflict between advocating for music as a societal benefit versus the extramusical benefits of student social improvements remains (Shaw, 2022). Contemporary research has suggested that although educators increasingly acknowledge SEL as essential in music education, music teacher preparation programs vary significantly in how they address preparing educators, revealing a gap between awareness and implementation (Culp et al., 2024). Despite ongoing scholarly debate, the integration of SEL and trauma-informed pedagogical practices remained a critical priority shaping the evolution of contemporary music classroom

instruction and 21st-century teaching methodologies (Culp et al., 2024; Edgar, 2017; Stipp, 2019; Turhan & Demirci, 2021; Zhao et al., 2021).

The design and implementation of learning activities responded to evolving societal demands, yet the effectiveness of professional development as a replacement for robust teacher preparation remains uncertain (Battersby, 2019; Johnson et al., 2019; Kladder, 2020; Kuebel, 2019; Zhao et al., 2021). The face of music education has changed, simultaneously driving a shift in the need for educators to be prepared to meet instructional and societal demands (Blackwell, 2018; Kladder, 2020; Matthews & Johnson, 2019; Miller et al., 2017). Section 2 explicates the methodological framework for this study, detailing the research design, data collection strategies, and analytical procedures.

Section 2: Methodology and Design

The problem addressed by the study was the knowledge gap between the expected competencies of secondary instrumental music educators upon entering the field and their ability to deploy modern instructional strategies based on the demands of the contemporary classroom (Butler, 2022; Karabulut & Demirci, 2022). The gap in secondary instrumental music educator preparation contributed to feelings of praxis shock and heightened burnout, ultimately leading to attrition from the field (Laidlaw, 2023; McNeill & McPhail, 2020; Miksza, 2021). Recent periods of disruption of secondary music education programs exposed the deficiencies of music teacher preparation and catalyzed the demand for instrumental music educators to use modern instructional strategies to remain relevant and effective (Butler, 2022; Cao, 2022; Denis & Tucker, 2021; Guo et al., 2021; Kao, 2021; Toscher, 2020; Zabbarova, 2020). The discovery of emerging instructional strategies and competencies was pivotal in resolving the problem of knowledge gaps and the subsequent drivers of attrition of music educators (Robinson, 2020). The purpose of the qualitative descriptive study was to explore the instructional strategies actively deployed in the secondary instrumental music classroom, the competencies required for educators to remain relevant and effective as they employ modern strategies, and the perceived knowledge gaps in educator preparation. I selected the methodology and design for its superb alignment with the intent of answering the research questions.

***RQ*1**

What instructional strategies do secondary instrumental music educators and arts administrators believe can aid secondary instrumental music educators to help their students effectively acquire musical skills and knowledge in the secondary instrumental music classroom?

RQ2

What are the competencies that secondary instrumental music educators and arts administrators believe that secondary instrumental music educators must have to be effective in the contemporary secondary instrumental music classroom?

RQ3

What are the perceived knowledge gaps preventing music educators from being effective in the contemporary secondary instrumental music classroom?

The section below elucidates descriptions of the population, information on the sample, along with justification for each. Additionally, I developed the research design using the methodological information in the following section. The section also outlines materials and instrumentation, data collection methods, and strategies for data analysis, along with assumptions and delimitations.

Design and Method

Qualitative research generates rich descriptions and in-depth discoveries while allowing researchers to explore and derive meaning from participant data (Patton, 2015). I gleaned perspectives from music educators and fine arts administrators to identify improvement opportunities. I selected qualitative methodology for its ability to employ various approaches to understand perceived meaning from participants' perspectives (Patton, 2015). The qualitative approach aligned with my study purpose: to explore instructional strategies deployed in secondary instrumental music classrooms, competencies required for educators to remain effective when employing modern strategies, and perceived knowledge gaps in educator preparation. Qualitative methodology effectively generated rich descriptions from participants' experiences. The approach offered flexibility, allowing me to adapt data collection based on

unique participant responses. The ability to explore using existing frameworks as guides without limitations facilitated examination of undocumented elements, creating the holistic view needed for my study (Bloomberg & Volpe, 2019).

I selected descriptive design to provide accounts of experiences and perceptions, particularly when theoretical context constraints proved unnecessary or when limited knowledge about the investigated issues existed (Doyle et al., 2019). The qualitative descriptive methodology guided my exploration of each research question, provided detailed data collection, and generated descriptions based on participant perceptions. Descriptive studies collected data to describe perceptions, experiences, and variables in nuanced ways without regard to any hypothesis, framework, or causal relationship (Aggarwal & Ranganathan, 2019; Lambert, 2012). Harklau (2011) emphasized that qualitative methods provided nuanced insights into individuals' experiences, aligning with my goal to explore secondary instrumental music educators' perceptions. Patton's (2008) evaluation criteria, which emphasized appropriate methods to address research questions and produce credible findings, influenced my selection of qualitative descriptive design. The descriptive design aligned with my study purpose to collect perceptions, rich descriptions, and target population actions, as I aimed to provide insights for further inquiry or learning solution creation. Descriptive design allowed robust data collection within my resources. Patton's criteria invited me to consider various contexts, including inquiry purpose, audience for findings, illuminating questions and data, available resources, and how sampling decisions and data collection methods ensured trustworthiness, transferability, and credibility (Patton, 2008).

My data collection tools included semi-structured individual and focus group interviews, common instruments in qualitative descriptive studies. Both methods generated instructional

strategies, competencies, and perceptions of knowledge gaps from secondary instrumental music educators and fine arts administrators based on individual experiences (Kallio et al., 2016). I initiated the semi-structured interview discussions with targeted inquiries related to research questions while allowing expansion into related areas. Focus groups explored topics more deeply with participants, added rich descriptions, and identified areas of convergence and divergence. Semi-structured interviews and focus groups aligned with descriptive design studies. The instruments produced rich descriptions of experiences from participants' perspectives and allowed exploration of emerging instructional strategies, learning activities, and perceptions of knowledge gaps outside specific theories or previously studied frameworks. I invited each participant first for individual interviews and then for focus group interviews (Doyle et al., 2020).

A quantitative approach proved unsuitable for my proposed research. Quantitative research ranked or compared variables, such as specific instructional strategies or competencies and their relative effectiveness. Quantitative approaches effectively explored what occurred in a research problem but proved less effective in explaining why. A quantitative approach limited findings by restricting data collection to existing competencies (Bloomberg & Volpe, 2019). The discovery of emerging instructional strategies and competencies remained key to resolving knowledge gap problems and subsequent drivers of music educator attrition (Robinson, 2020). I evaluated alternative qualitative designs to determine appropriateness, applicability, and feasibility. I considered case study methodology. While case studies provided in-depth exploration through various perspectives of phenomena bounded by time, location, organization, participation, or other social systems (Stake, 1995, 2005; Yin, 2018), case studies generated extensive insights to inform professional practice or social action (Bloomberg, 2018). The

information depth from case studies or narrative inquiries proved unnecessary to discover instructional strategies, competencies, and knowledge gaps identified in my research questions. Grounded theory proved unsuitable as my study did not seek to create a new educational theory (Harklau, 2011). Descriptive design operated unencumbered by adherence to preexisting theory or philosophy, making it ideal for my exploratory research to discover emerging instructional strategies, aligned competencies, and previously unidentified knowledge gaps. Because I utilized participants' experiences and perspectives, descriptive design allowed a more fluid approach designed to co-create knowledge. After careful consideration of strengths and limitations of alternative research methods, I selected descriptive design as most suitable for achieving my research goals of defining instructional strategies, deriving competencies, and identifying potential knowledge gaps in secondary instrumental music educator preparation.

Population and Sample

The general population for my study consisted of secondary (grades 6-12) instrumental music educators and fine arts administrators who oversaw secondary instrumental music programs in the United States. According to Naber-Allen (2025), there are approximately 22,200 instrumental music-only teachers in grades 6–12. While there is no exact number for secondary fine arts administrators who oversee instrumental music teachers, estimates suggest approximately 700–1,000 district-level fine arts administrators exist nationwide, with likely less than half specifically focused on secondary instrumental music (Utah State Board of Education, 2016). I recruited participants from five music educator Facebook groups with a combined membership of over 113,000 educators: Music Teacher Guild Forum (45.6K members), Music Teachers (36.6K members), Middle School Band Directors (19.2K members), Orchestra Teachers (7.5K members), and Band Directors (4.7K members). However, group membership

numbers do not represent unique individuals, as many music educators belong to multiple groups, creating duplication. Additionally, the actual reach of recruitment posts is unknown due to Facebook's algorithmic variations, varying login frequencies among members, and the fact that group membership may include industry professionals and retired teachers in addition to active educators. Recruitment also occurred through an email sent by the NAfME to a segment of their membership that aligned with the study's inclusion criteria. NAfME has more than 58,000 members, including current, future, and retired music educators (National Association for Music Education, 2025), though the administrators did not provide exact number of members who received the recruitment email.

I selected 19 individuals, representing both educators and administrators, to participate. I used purposeful criterion sampling based on the variety of instrumental music classes participants taught (as educators) or oversaw (as administrators) (Palinkas et al, 2015). I recruited participants using criterion sampling initially, then supplemented through snowball sampling to reach additional qualified candidates (Bloomberg & Volpe, 2019). The criterion sampling procedure ensured participants had the experience necessary to inform the exploration of instructional strategies, having implemented them; the necessary competencies, having acquired them; and perceptions of knowledge gaps, having had to overcome them (Cheng & Lam, 2021; Joy, 2021). Participants were self-qualified based on inclusion criteria. The inclusion criteria required music educators to receive assignments to teach grades 6-12 instrumental music in the United States, to have taught actively since the 2019–2020 academic year or earlier, and to have graduated from a NASM-accredited institution. Fine arts administrators needed to have oversight of at least three secondary instrumental music educators and to have been active in their position for at least 2 years. The criteria ensured that participants had experienced the

dynamic shifts in secondary instrumental music education and had overseen the implementation of instructional strategies in the classroom.

Once individuals self-selected through criterion sampling and provided informed consent, they completed a prescreening form to collect information about their teaching or administrative assignment. The collected information included participant role (e.g. educator or administrator), teaching assignments (courses and subject areas), grades taught, region, and school enrollment size. The prescreening data informed participant selection, ensuring a maximum variation sample. The data analysis followed a thematic approach using the six-step process outlined by Braun and Clarke (2006) in their qualitative research study.

Recruitment continued until I was confident data saturation could be achieved, ensuring comprehensive representation across participant categories. Hennink and Keiser (2022) discovered that researchers could reach saturation in a participant segment with as few as nine interviews if the sample effectively represented the population. Saturation occurred when no additional insights emerged, and participants began to repeat similar insights or become redundant (Fusch & Ness, 2015). I obtained Institutional Review Board (IRB) approval before any data collection began and with each additional recruitment method. IRB approval documentation may be found in Appendix A.

The study adhered to rigorous ethical research standards to protect participant rights and ensure research integrity throughout the data collection process. I obtained IRB approval before proceeding with any data collection activities and designed all procedures to align with established ethical guidelines (National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, 1979). Participants received comprehensive informed consent documentation, including initial consent forms and contextual information via email,

followed by verbal consent review before each interview recording began. Multi-layered ethical safeguards ensured that participants maintained full agency over their involvement while providing them with complete transparency about study procedures and their rights, thereby strengthening the research validity and trustworthiness through voluntary, well-informed participation (Creswell & Miller, 2000). Consent information is available in Appendix B. With ethical protections established, I implemented systematic participant recruitment.

Before recruitment took place, I received approval from each Facebook groups' administrators. Once administrators granted approval, I posted the recruitment image and text with a link to the prescreening form. Recruitment materials are viewable in Appendix B and included eligibility for participants to self-select and the consent form. As an additional recruitment method, I applied for and was granted approval for NAfME to send a recruitment email to relevant members on my behalf. Volunteers who self-identified with the inclusion criteria completed the prescreening form, which collected information about their teaching or administrative assignment, career duration, location, and accreditation history. The prescreening form is viewable in Appendix C.

Individuals who completed the prescreening form and met the established inclusion criteria constituted the purposeful sample for my study. For secondary instrumental educators, inclusion required continuous teaching of at least one secondary (grades 6-12) instrumental music class since March 2020 and possession of teaching certification from a NASM-accredited institution. Fine arts administrators and principals needed to have supervised at least one secondary instrumental music educator since March 2020. I analyzed the prescreening information from eligible participants to ensure representation across various secondary instrumental performing ensemble classes, teaching assignments, and geographical regions

(West, South, Midwest, and East), with administrator participants selected from schools and districts of varying sizes. The specific criteria ensured that all participants had direct experience with the pedagogical shifts and challenges that emerged during and after the pandemic period, while the diverse representation across ensemble types, geographical regions, and institutional sizes enhanced the transferability of findings to various secondary instrumental music education contexts. With the purposeful sample finalized, I proceeded to invite qualified participants to schedule their interviews and begin the formal data collection process.

Upon receiving the invitation to participate, I provided participants with a link to a Calendly booking form to schedule their interview. I emailed the informed consent form, interview guide, and context information in advance, along with my contact information for any questions. After completing their individual interviews, I invited participants to join the focus group interview to further discuss instructional strategies, competencies, and perceived knowledge gaps.

Materials/Instrumentation

I utilized two data collection methods to perform the study: the Secondary Instrumental Music Educator and Fine Arts Administrator Semi-Structured Interview Guide and the Focus Group Interview Guide. Data collection instruments included a recruitment social media post containing a link to the personal data screening form. Once I selected individuals for the study, they received consent information and context information via email. I conducted interviews and the focus group using Zoom online video conferencing. Focus group participants had previously completed the individual interview.

The Secondary Instrumental Music Educator and Fine Arts Administrator Semi-Structured Interview Guide design was informed by the literature referenced in the conceptual

framework, and is available in Appendix D. I gave particular emphasis to previous research of perceptions of music educator effectiveness, instructional strategies implemented in the classroom, shifts in instructional strategies due to remote learning and rapid social change, necessary competencies for effective secondary instrumental music educators, and perceived knowledge gaps between teacher preparation and instructional implementation. Seidman's interviewing technique also guided the interview process (Seidman, 2019).

To capture information beyond the participants' initial answer to an interview question, I strategically opted to use semi-structured interviews. The flexibility to probe further allowed me to explore participants' perceptions in greater depth and elicit richer descriptions to answer the research questions. The semi-structured approach provided a more detailed understanding of participants' experiences. Additionally, having the depth of information collected through semi-structured interviews allowed me to identify of areas of convergence and divergence among participants (Bloomberg & Volpe, 2019).

The focus group guide included a presentation of the initial data analysis generated from the interview process, initiating discussion for participants to identify areas of convergence and divergence (Doyle et al., 2019). I developed the interview and focus group guides to ensure participants had a thorough understanding of the process and desired outcomes, that the data collected aligned with the research questions, that participants felt comfortable in the facilitated discussion, and that the process remained systematic and consistent across focus groups (Krueger & Casey, 2001). Questions developed for the focus group interviews aligned with the individual interview protocol and the research questions related to instructional strategies, competencies, and perceived knowledge gaps in secondary instrumental music educator preparation (Vaughn et al., 1996).

An expert review panel of two music education researchers evaluated the semi-structured individual and focus group interview guides. The panelists were experienced music education researchers with advanced degrees and multiple peer-reviewed publications. Expert review was an essential element in refining the study and enhancing its trustworthiness by providing insights into the question appropriateness and their ability to accurately capture data relevant to the research questions (Bloomberg & Volpe, 2019). The expert reviewers also contributed insights from alternative perspectives and evaluated the relevance of the questions across different contexts (Seidman, 2019). I provided the guides to the expert panelists as Google Docs with instructions for annotation and delivered them via email. Both experts collaborated asynchronously on the same document. I collected feedback until both experts approved the guides. The individual and focus group interview protocols are documented in Appendix D. After establishing compliance with ethical standards and implementing rigorous data collection procedures, data collection commenced.

Data Collection and Analysis

The following section outlines my data collection and analysis process. My qualitative descriptive design study aimed to identify instructional strategies used in secondary instrumental music classrooms, competencies required to ensure music educator effectiveness, and perceptions of knowledge gaps in music educator preparation. The data clarified skill and knowledge gaps affecting music educators entering the field, which informed universities, districts, schools, and professional organizations in formulating professional learning opportunities. Professional learning opportunities assisted in bridging gaps and ensuring music educator effectiveness. Such data use benefited all study participants.

Data collection followed a structured two-phase approach designed to capture both individual perspectives and collective insights from participants. After participants self-identified as meeting inclusion criteria and completed prescreening forms, I selected and invited 19 participants representing both educators and fine arts administrators to schedule semi-structured interviews via email. All 19 participants completed individual interviews, after which I invited them to submit availability for focus group interviews, scheduling sessions when at least five participants were available. The sequential design allowed for in-depth exploration of individual experiences before facilitating group discussions that could reveal shared themes and generate additional insights through participant interaction. The complete data collection workflow and consent documentation are detailed in Appendices E and B, respectively.

Data recording and verification procedures incorporated multiple strategies to ensure accuracy and enhance the credibility of findings. I recorded interviews and focus groups using Zoom online video conferencing and generated transcripts using Descript software. After editing transcripts for grammatical and homophone errors, I sent participants access to their transcripts for member-checking, allowing them to verify accuracy and provide clarifications or corrections. I maintained detailed field notes throughout interviews and focus groups to document contextual information, nonverbal cues, and environmental factors not captured in audio recordings (Phillippi & Lauderdale, 2018). Member-checking enhanced data credibility by providing participants the opportunity to confirm that their perspectives were accurately represented, while field notes added rich contextual descriptions to the holistic data set and built additional trustworthiness into the study through triangulation of data sources (McKim, 2023; Phillippi & Lauderdale, 2018). Together, transcription accuracy checks, participant verification, and

comprehensive field documentation established a robust foundation for the subsequent data analysis phase.

I conducted thematic analysis following six steps outlined by Braun and Clark (2006) in their qualitative research study. First, I familiarized myself with collected data by facilitating interviews and the focus group, maintaining field notes, and formatting interview and focus group transcripts. I performed an open analysis of participant data which produced various codes. I identified significant statements, patterns, repetitions, actions, strategies, competencies, and descriptions. I stored, categorized, retrieved, and compared collected data using NVivo software. For each research question, I analyzed, grouped, condensed, and categorized the codes, producing a thematic analysis in response to all three (Saldaña, 2009). Third, I coalesced emerging patterns into themes. As coding continued, schemas emerged as information appeared repeatedly from participants, and I began identifying areas of convergence and divergence. Fourth, I conducted independent review of themes and codes for alignment. Fifth, I defined and named themes. Finally, I interpreted and reported study findings by pulling quotations from transcripts and writing the research report using vivid participant language and presenting findings in direct alignment with research questions (Cernasev & Axon, 2023).

I used two data collection methods – semi-structured individual and focus group interviews – to facilitate data triangulation, contributing to research trustworthiness. Trustworthiness referred to study rigor and established confidence in methods, data, and interpretation to ensure study quality (Bloomberg & Volpe, 2019). Triangulation involved integration of multiple data sources to corroborate findings and provide comprehensive understanding of participant perceptions (Bloomberg & Volpe, 2019). Using multiple diverse data collection methods mitigated limitations associated with reliance on single data collection

methods, fostering nuanced and holistic interpretation of descriptive data. Triangulation and subsequent data analysis fostered deeper insights into complexities of experiences in secondary instrumental music classrooms (Bloomberg & Volpe, 2019).

I ensured study trustworthiness using Bloomberg and Volpe's (2019) criteria consisting of credibility, dependability, confirmability, and transferability. I established credibility through member-checking and external evaluation of coding schemas, through thick descriptions provided by participants, and through reflexivity in field notes. I achieved dependability and confirmability criteria through triangulation and by identifying where research findings converged and diverged. My first step in study design assisting triangulation involved selecting participants from both secondary instrumental music educator and fine arts administrator populations providing responses to identical questions (Richey & Klein, 2014). Differing stakeholder perspectives provided data which added rich descriptions of instructional strategies, competencies, and knowledge gaps in secondary instrumental music educator preparation. Using multiple data collection methods supported triangulation by extracting various perspectives and experiences. Transparency, through member-checking and external evaluation, enhanced study credibility (Bloomberg & Volpe, 2019).

Assumptions

Assumptions are understandings researchers' view as true that others may not see or understand, which researchers must acknowledge (Creswell & Guetterman, 2019). I made four assumptions for my proposed study. My first assumption was that secondary instrumental music educators who taught through the pandemic experienced at least some remote learning, which altered their post-pandemic instructional strategies from pre-pandemic approaches. My second assumption was that some music educators did not engage in remote learning while many

experienced various learning activities along a continuum. For example, some educators provided only asynchronous learning activities, while others participated in synchronous activities mandated by schools. My third assumption was that even within the synchronous-asynchronous continuum, vast disparities existed between experiences in secondary instrumental music classrooms. My fourth assumption acknowledged varied instructional strategies used in classrooms responding to shifts in school systems' political climate, such as integrating social-emotional learning strategies or selecting more relevant musical repertoire for diverse communities. I recognized secondary instrumental music educators might instruct students in playing instruments not covered in their teacher preparation programs or lead ensembles in which they lacked experience. Additional assumptions surrounded instructional strategies deployed through asynchronous means or using ICT due to immersive use during remote instruction periods.

The variety of assumptions related to instructional strategies reflected similar assumptions about competencies secondary instrumental music educators required for effectiveness. I assumed educators received either training or no training in ICT use and that technology selection in classrooms occurred through school or district mandates rather than educator choice. Based on my literature review, I made assumptions about perceived knowledge gaps in music teacher preparation, including deficiencies in managerial and personal skills. By maintaining objectivity throughout the process, I nullified researcher assumptions through the exploratory nature of my research design and revisited assumptions during the data analysis phase (Bloomberg & Volpe, 2019).

Limitations

Limitations are design or methodology characteristics that influence research findings interpretation (Bloomberg & Creswell, 2019). While I aimed to make valuable contributions to the field, I acknowledge limitations affecting my study's scope and generalizability. My study relied on specific sample size and selection criteria, limiting findings generalizability to broader populations. Sample representativeness presented potential concerns as I limited recruitment to social media and NAfME's email list, possibly excluding potential participants who were not members of Facebook or NAfME, inactive group members, or members not served posts in their group feeds due to website algorithms. My data collection process faced potential biases or limitations, such as self-reporting errors or response bias, which affected results trustworthiness.

My study faced limitations due to sample size and the participant narratives, which may not be a comprehensive representation of secondary instrumental music courses. A more extensive study with higher participant volume could yield more robust results. Despite limiting my study to only two data collection methods, triangulation still occurred. Additionally, since I served as interviewer, focus group facilitator, and sole analyst, bias potentially informed results synthesis. I recognized the limitations as they underscored the need to carefully interpret study results and highlighted potential future research areas. While I made every effort to mitigate limitations, I acknowledged them as inherent parts of research endeavors and considered them in the broader context of my study's contributions.

Delimitations

Delimitations are areas where the study was limited in scope through design choices (Bloomberg & Volpe, 2019). I selected peer-reviewed scholarly publications from the last 7 years to guide the study, with few exceptions for seminal or significant studies and articles.

Though music educators entering the field with K–12 music teaching credentials may teach various music-based subjects, I limited the study to secondary instrumental music educators to maximize research transferability and findings applicability. I restricted the study to exploring instructional strategies, competencies, and knowledge gaps specific to secondary instrumental music educators, excluding learning strategies applied in classrooms or elements educators employed in non-instrumental music courses (e.g., elementary music, choral music, musical theatre, music technology, music theory). I based my research question about knowledge gaps on educator and administrator perceptions, not on rigorous study and comparison of knowledge summative assessments related to individual university program-stated competencies. I limited my study to NASM-accredited school graduates, excluding universities accredited by other bodies or through nontraditional academic means. I removed competency or instructional strategy rankings and any related value statements. I determined specific strategy, competency, or knowledge gap importance through thematic analysis and interpretation. I limited the study population to the five Facebook group members, their contacts via snowball sampling, and the NAfME email. Though I employed purposeful criterion sampling for participant selection, I limited criteria to known ensembles and course types, potentially missing emerging and undocumented instrumental education subject areas.

Summary

I selected methodology and design intentionally to ensure rigor, transparency, transferability, and effectiveness of educational solutions and responses to research questions. The preceding section reviewed the problem statement, purpose statement, and research questions. I aligned the study design with data collection methods to answer research questions most effectively. The design facilitated exploratory description of instructional strategies,

competencies, and perceptions of knowledge gaps in secondary instrumental music education. I recruited populations through social media and email, with IRB-approved materials. I selected participants as a purposeful sample, representing a cross-section of music courses and performing ensembles taught in United States secondary schools. I included music administrators as participants to develop more comprehensive and holistic perspectives to the research questions.

I ensured data collection methods provided accurate and rigorous information, stored, analyzed, and presented with participant privacy protections. My data analysis followed coding, review, categorization, theme development, and contextualization based on the conceptual framework. I provided the IRB with all requisite materials including study methodology, design, population, sampling, materials, data collection and analysis, assumptions, limitations, and delimitation aspects. Section 3includes a comprehensive report of study findings, implications for secondary instrumental music fields, and recommendations for further academic exploration.

Section 3: Findings, Implications, and Recommendations

The problem addressed by the study was the knowledge gap between the expected competencies of secondary instrumental music educators upon entering the field and their ability to deploy modern instructional strategies based on the demands of the contemporary classroom (Butler, 2022; Karabulut & Demirci, 2022). The gap in secondary instrumental music educator preparation contributed to feelings of praxis shock and heightened burnout, ultimately leading to attrition from the field (Laidlaw, 2023; McNeill & McPhail, 2020; Miksza, 2021). Recent periods of disruption of secondary music education programs exposed the deficiencies of music teacher preparation and catalyzed the demand for instrumental music educators to use modern instructional strategies to remain relevant and effective (Butler, 2022; Cao, 2022; Denis & Tucker, 2021; Guo et al., 2021; Kao, 2021; Toscher, 2020; Zabbarova, 2020).

The purpose of the qualitative descriptive study was to explore the instructional strategies actively deployed in the secondary instrumental music classroom, the competencies required for educators to remain relevant and effective as they employ modern strategies, and the perceived knowledge gaps in educator preparation. Identifying emerging instructional strategies and competencies was essential to addressing preparation misalignments and mitigating factors driving music educator attrition (Robinson, 2020). I selected qualitative descriptive design as the most appropriate methodology for the study due to its ability to capture detailed participant perceptions about secondary instrumental music education and to generate insights applicable across various educational contexts. The methodological approach facilitated comprehensive examination of the research questions while illuminating contemporary classroom challenges. Rather than constraining the analysis within existing theoretical frameworks, I employed them as

conceptual reference points, thereby enabling identification of previously undocumented elements and generating a more holistic understanding of the phenomenon.

Limitations are characteristics of the design or methodology that influence the interpretation of the findings in the research (Bloomberg & Volpe, 2019). Descriptive qualitative design presented methodological limitations that influenced the study. While the study yielded rich, context-specific data from purposeful sampling, the relatively small sample size, compared to the study population, limited generalizability to broader contexts. I mitigated limited sample size by achieving data saturation and triangulation in participant responses. Sample representativeness presented potential concerns as I limited recruitment to social media and the NAfME email list, possibly excluding potential participants who were not members of Facebook or NAfME, inactive group members, or members not served posts in their group feeds due to website algorithms. I mitigated limited representative sampling by selecting participants with diverse teaching contexts and experience levels as a reflective representation of demographics within the United States. The data collection process faced potential limitations, such as self-reporting errors or response subjectivity, while analysis relied heavily on my ability to select meaningful observations and interpret them accurately, introducing potential researcher bias. I addressed data collection and analysis limitations through member checking procedures, allowing participants to review and validate my interpretations of their contributions, and through triangulation by incorporating multiple data collection methods into the methodology. My reliance on participant self-reporting created vulnerability to information distortion, potentially affecting data credibility. To counter potential information distortion, I established rapport with participants before data collection and used probing questions during interviews to verify understanding. Additionally, since I served as interviewer, focus group facilitator, and sole

analyst, bias potentially informed results synthesis. I mitigated my biases by maintaining reflexivity and my positionality while limiting analyzed data to participant responses and previous literature. I recognized the limitations as they underscored the need to carefully interpret study results and highlighted potential future research areas.

The following section presents the findings from the descriptive qualitative study of secondary instrumental music educators. Drawing from interview responses and focus group discussions, I have developed a rich narrative that addresses the three research questions guiding the investigation. I have organized the findings thematic areas, each connected to a specific research question, providing a detailed picture of current practices and challenges in secondary instrumental music education. Following the presentation of findings, I evaluate the potential significance to establish meaningful implications and actionable recommendations for music education practice and teacher preparation. The section concludes with recommendations for future research directions and reflections on the study's contribution to the field.

Findings

To maximize transferability of the study results, I used purposeful sampling to recruit and select a diverse group of participants including three fine arts administrators and 16 secondary instrumental music educators, for a total of $N = 19$. Participants represented a variety of geographic regions and economical demographics across the United States, including the Northeast, Midwest, South, and West. Participants' professional roles spanned teaching, program management, and administrative responsibilities. Participants' expertise encompassed a wide range of musical content areas, instructional settings, and years of active teaching practice. The characteristics of participants reflected the diversity of secondary instrumental music and the various programming options throughout their representative regions. Administrator participants

represented management at the school, district, and state levels, respectively. Collectively, the deliberate sampling strategy strengthened the study's representativeness and established a foundation for discussing its trustworthiness and methodological rigor.

To ensure trustworthiness in the qualitative descriptive study, I applied Bloomberg and Volpe's (2019) four evaluative criteria—credibility, dependability, confirmability, and transferability—across all phases of the research process. Each criterion informed strategic decisions from participant recruitment through final thematic synthesis, ensuring the study's transparency, consistency, and interpretive rigor. I used Braun and Clarke's (2006) six-phase reflexive thematic analysis framework to guide the thoughtful examination of participant data. Thematic analysis was particularly appropriate for exploring the multifaceted experiences of secondary instrumental music educators, as it provided a structured yet flexible process for identifying patterns, constructing meaning, and interpreting latent and semantic themes across diverse participant responses. The reflexive nature of the data analysis method required consistent researcher engagement with the data and critical reflection on positionality, which was essential for maintaining analytical integrity and minimizing interpretive bias (Braun & Clarke, 2022). Following the framework, I moved inductively from raw transcribed data to thematically organized findings that addressed the study's three research questions and upheld qualitative standards of trustworthiness.

Following IRB approval, I began participant recruitment through professional social media platforms, but the initial response rate proved insufficient. I expanded recruitment through NAfME, which distributed a targeted recruitment email. Interested participants completed a prescreening form that assessed their experience level, current teaching assignments, and suitability for addressing the research questions. I followed Bloomberg and Volpe's (2019)

recommendation for purposeful sampling to ensure a breadth of perspectives and contexts. The prescreening tool also ensured the final sample reflected a representative cross-section of secondary instrumental music courses offered across the United States. Participants represented teaching experiences across a wide range of instrumental music disciplines in Grades 5–12, including concert and jazz band, orchestra, percussion, piano, marching band, commercial (popular music) ensembles, guitar, cultural groups, and digital music creation, which increased the applicability of insights across multiple educational settings. Many participants managed multiple ensembles and instructional levels, often teaching during and beyond the regular school day. Table 1 presents demographic and contextual details across participant roles, school types, geographic locations, and teaching loads. Including classroom educators and fine arts administrators allowed the study to capture pedagogical, managerial, and policy-level insights. Thorough documentation of sampling criteria, interview protocols, and analysis frameworks alongside detailed descriptions of participants, settings, and methodological procedures ensured transferability, enabling future researchers to evaluate the relevance of findings to their contexts.

Table 1

Participant Demographics, Roles, and Teaching Assignments

Participant	Role	Teaching assignment	Grades	Region	School enrollment
1	Educator	Concert Band, Jazz Band, Percussion Ensemble	7–9	West	More than 1,000
2	Educator	String Orchestra, General Music	6–8	Midwest	751–1,000
3	Educator	Guitar/Ukulele, Concert Band, Marching Band, Jazz Band, General Music	6–12	Midwest	751–1,000
4	Educator	Concert Band, Marching Band, Modern/Rock/Commercial Band	5–12	South	200–500
5	Educator	Musical Theater Orchestra, Concert Band, Jazz Band, Digital Music Creation, General Music	6–12	Northeast	More than 1,000
6	Educator	Concert Band, General Music	6–12	West	200–500
7	Educator	String Orchestra, Symphony Orchestra, Chamber Music	6–12	Northeast	More than 1,000

Table 1 (continued)

Participant	Role	Teaching assignment	Grades	Region	School enrollment
8	Educator	Concert Band, Marching Band, General Music	6–12	Midwest	751–1,000
9	Administrator	Fine Arts Manager for the Tennessee Dept. of Education	6–8	South	More than 1,000
10	Educator	Concert Band, Marching Band, Jazz Band, Piano	6–12	Midwest	200–500
11	Educator	Guitar/Ukulele, Musical Theater Orchestra, Piano, General Music	9–12	South	More than 1,000
12	Educator	Concert Band, Jazz Band	6–8	West	More than 1,000
13	Educator	Concert Band, Marching Band, Jazz Band, Percussion Ensemble	6–12	Midwest	More than 1,000
14	Educator	String Orchestra, Symphony Orchestra, Musical Theater Orchestra	9–12	Midwest	More than 1,000
15	Educator	String Orchestra, Musical Theater Orchestra, Modern/Rock/Commercial Band, Piano, Digital Music Creation	9–12	West	More than 1,000

Note. School enrollment numbers represent total student population at the primary institution(s) where each participant worked. Some participants taught at multiple schools with similar enrollment. Most secondary instrumental music education courses are electives in represented schools (Tucker, 2025).

The rigorous procedures, expert-vetted data collection instruments, and a clear audit trail of methodological decisions supported dependability. Each participant completed an individual interview ranging from 60 to 90 minutes, concluding once the participant fully responded to the research prompts and could provide no additional information. All participants received the same set of eight semi-structured interview questions. To enhance clarity and ensure alignment with research objectives, the interview protocol underwent peer review prior to implementation. When closing each interview, I invited participants to participate in a follow-up focus group. Eight expressed interest and five ultimately attended. I used the same interview protocol format with identical questions for the focus group to promote consistency and enable cross-comparison of data. The data collection process spanned five months to accommodate participant schedules

and promote data saturation. Data collection continued until no new themes emerged, and all I had recorded and justified coding decisions, creating an analytic trail (Bloomberg & Volpe, 2019).

The data collection methods yielded rich, descriptive data across three research questions, allowing for individual and group perspectives triangulation. The use of both interviews and a focus group offered a dual lens for examining participant experiences and confirming emerging themes (Patton, 2008). Member-checking further strengthened credibility with participants reviewing grammatically corrected transcripts of their interviews and confirming accuracy, requiring only minor modifications (Bloomberg & Volpe, 2019; Lincoln & Guba, 1985). Following rigorous procedures ensured dependability by grounding them in participant-validated accounts. The procedures supported interpretive accuracy and ensured that the study reflected a broad range of voices within instrumental music education. Data Collection Flow Charts can be found in Appendix E.

I used Braun and Clarke's (2006) six-phase reflexive thematic analysis protocol to guide data analysis. The six-step progression—familiarization, initial coding, theme searching, theme review, theme definition, and report production—provided a built-in structure for addressing credibility, transferability, dependability, and confirmability at every turn. The methodological framework provided the analytical flexibility required to navigate complex educator perspectives while ensuring transparent, replicable procedures that established a foundation for confirmable findings (Regier, 2021).

After validating all transcripts through member checking, I imported the files into NVivo for systematic coding. I began data analysis by thoroughly reviewing the transcripts, focus group data, and field notes. Phase 1 (familiarization) thus established prolonged engagement with the

raw data, an approach that Lincoln and Guba (1985) identify as foundational for credibility. I based all coding, categorization, and thematic development on direct participant contributions. Using open and descriptive coding, I developed initial codes without applying priori frameworks, thereby preserving the study's exploratory nature. Initial coding activity represents Phase 2 (generating initial codes), where meticulous documentation of every line-by-line decision enhanced dependability and created the audit trail needed for confirmability. I identified recurring language, patterns, and concepts across participant responses through an iterative coding process. Grouping codes into candidate patterns marked Phase 3 (searching for themes), a step that further strengthened dependability by showing how early codes clustered into larger analytic units. The coding process revealed saturation, as similar codes appeared consistently across multiple transcripts. During Phase 4 (reviewing themes), I re-examined every coded extract against its proposed theme and triangulated the fit across interviews, focus groups, and field notes, thereby reinforcing credibility through verification. I used triangulation across data sources and member checking to confirm that emergent findings authentically represented participant viewpoints (Lincoln & Guba, 1985; Patton, 2008). Reflexive journaling also allowed me to critically assess how my background as a music educator might influence interpretations. The reflexive journalling process ensured that meaning was derived from data rather than imposed by researcher preconceptions, establishing confirmability (Bloomberg & Volpe, 2019; Braun & Clarke, 2022).

Throughout the analysis process, I actively reflected on my biases and preconceptions, reinforcing objective interpretations. I organized codes into research-aligned categories, including instructional strategies, professional competencies, and perceived knowledge gaps. Although previous literature informed the thematic organization, particularly in the competencies

domain, I intentionally derived all codes directly from the data. Some codes appeared across multiple research question categories due to the interconnected nature of participants' experiences. I refined each category by developing concise labels and definitions that captured the data's essence while enhancing accessibility for readers. Thoughtful refinement corresponds to Phase 5 (defining and naming themes), where rich, context-laden descriptions promote transferability by allowing readers to judge applicability to their own settings. Thematic development continued until each category was aligned under a broader emergent theme associated with a specific research question. By documenting every analytic decision in reflexive notes and maintaining a complete audit trail in NVivo, I created a transparent chain of evidence that enables external reviewers to trace each theme back to its source data, thereby establishing confirmability (Lincoln & Guba, 1985).

Phase 6 (producing the report) involved weaving analytic narrative with illustrative quotations, maintaining a transparent link between raw data and the final claims—an explicit safeguard for confirmability. Applying a rigorous, trustworthiness-centered process was essential to accurately capture the complexity of participants' perspectives, ensure the findings credibility, and support future replication or adaptation (Bloomberg & Volpe, 2019; Lincoln & Guba, 1985). Each analytic phase deliberately foregrounded a specific criterion: Phase 1 bolstered credibility, Phases 2–3 reinforced dependability, Phase 4 strengthened credibility again through triangulation, Phase 5 enhanced transferability, and Phase 6 sealed confirmability via a transparent audit trail.

The complexity inherent in both the research questions and the educational environment under investigation required analytical methods that transcended discrete thematic boundaries. For example, the competencies derived for RQ2 combined both explicit competencies described

by participants, and implicit competencies, logically emergent from the instructional strategies discussed in the RQ1 findings. Similarly, RQ3 analysis presented methodological challenges given the subjective nature of participant perspectives on educator preparation and knowledge gaps. Personal teaching philosophies, institutional contexts, and pre-service educator experiences influenced participant insights, necessitating careful facilitation for authentic disclosure. Additionally, overlapping code meanings occasionally required assignment to multiple themes to preserve conceptual clarity. Throughout the process, I documented analytic decisions in reflexive notes and maintained awareness of my positionality and potential biases, as advised by Braun and Clarke (2022).

Secondary instrumental music education encompasses diverse instructional approaches, contextual variables, and professional expectations, which required a research design capable of handling both depth and variation (Louth, 2022). Following Braun and Clarke's (2006) reflexive thematic analysis and grounding all procedures in Bloomberg and Volpe's (2019) trustworthiness framework ensured that the data collection, coding, and interpretation processes were transparent, replicable, and analytically sound. Methodological alignment enabled the development of credible themes grounded in participant-verified experiences, ensured consistency across data sources and coding decisions, and allowed for the analytical flexibility required to navigate complex educator perspectives (Regier, 2021). Methodological rigor enabled the study to produce nuanced, evidence-based insights into the instructional strategies, professional competencies, and knowledge gaps relevant to the preparation and practice of secondary instrumental music educators. The methodological decisions collectively minimized bias, supported interpretive validity, and strengthened the transferability of results across educational contexts. As a result, the study produced a nuanced and evidence-based account of

instructional strategies, professional competencies, and training insufficiencies in secondary instrumental music education, offering both scholarly contributions and practical implications for music educator preparation and support.

Research Question 1

What instructional strategies do secondary instrumental music educators and arts administrators believe can aid secondary instrumental music educators to help their students effectively acquire musical skills and knowledge in the secondary instrumental music classroom? For RQ1, I organized the 53 codes into 10 categories, and composed a definition for each category. Clear definitional frameworks established explicit criteria for code placement, reduced ambiguity in classification decisions, and improved the understandability of each category for readers. I further organized the 10 categories into three themes based on instructional delivery methods: Instruments in Hands: Ensemble Rehearsal, Small Group Work, Individual Practice; Non-Instrument Musical Development and Exploration; Performance and Assessment: Evaluation, Motivation, Validation, and Reflection. Table 2 displays the themes, categories, and codes. Appendix F contains an expanded list with descriptions.

Table 2

Thematic Analysis of Instructional Strategies in Secondary Instrumental Music Education

Theme	Category	Codes
Instruments In Hands: Ensemble Rehearsal, Small Group Work, Individual Practice	Repertoire-Centered Learning and Cultural Inclusion	Choosing repertoire to teach music notation reading, interpretation, and instrument performance skills. Integrating music theory, history, and performance skills through repertoire study. Selecting culturally diverse and developmentally appropriate pieces. Broadening students' exposure to multicultural and contemporary works. Using repertoire as a tool for cross-curricular connections and interdisciplinary projects. Allowing student "voice and choice" in repertoire selection.

Table 2 (continued)

Theme	Category	Codes
	Student-Led and Peer-Based Instruction	Leveraging student leaders to model techniques and lead small group rehearsals. Facilitating informal peer feedback sessions to enhance ensemble cohesion and individual growth. Encouraging student-led sectional rehearsals to address technical challenges. Promoting leadership development through ensemble responsibilities and mentorship roles. Structuring activities that foster collaborative problem-solving and shared accountability.
	Individualized and Differentiated Instruction	Designing personalized practice plans to target individual skill gaps. Using multimodal teaching techniques to address diverse learning preferences. Incorporating inclusive practices to accommodate varied abilities and cultural contexts. Modifying repertoire and lesson objectives based on student needs. Providing one-on-one or small group instruction tailored to specific goals. Informal self-direction opportunities. Facilitating group discussions to analyze performances and set improvement goals. Teaching students to assess strengths and areas for growth in their playing.
	Technology Integration and Flipped Classroom Models	Assigning pre-recorded video lessons for flipped classroom approaches. Using platforms like *SmartMusic* and *SightReadingFactory* for practice and assessment. Integrating video feedback tools to encourage self-assessment and growth. Incorporating practice apps and learning management systems to track student progress.

Table 2 (continued)

Theme	Category	Codes
	Adaptive Ensemble Pedagogy	Balancing full ensemble, sectional rehearsals, and individual practice time to address specific challenges. Incorporating warm-ups and drills to develop tone, rhythm, and articulation. Using adaptive rehearsal structures to meet varying skill levels and group needs. Providing targeted feedback to refine balance, dynamics, and phrasing. Coaching chamber groups and small ensembles. Rehearsal roving for information assessment, modeling, and demonstration. Alternative ensemble structures and seating.
	Visual Aids and Multimodal Learning Tools	Projecting scores and diagrams to visually represent musical concepts. Incorporating video, audio, and multimedia resources to enhance understanding and motivation. Supplementing lessons with method books and online materials for skill development. Adapting instructional content for visual, auditory, and kinesthetic learners. Using interactive tools such as smartboards or tablets for dynamic teaching.
	Creativity, Games, Kinesthetic, and SEL-Based Activities	Teaching improvisation across genres such as jazz, classical, and contemporary styles. Using music-related games and call-and-response activities to reinforce rhythm. Incorporating kinesthetic exercises to support physical engagement with music. Implementing SEL activities such as journaling and goal-setting to foster confidence. Designing activities that build empathy and teamwork within ensembles.
Non-Instrument Musical Development and Exploration	Critical Listening and Reflective Practices	Conducting guided listening exercises using professional and student recordings to develop critical musicianship. Encouraging students to journal reflections on their musical experiences. Using reflective practices to build metacognition and artistic decision-making.

Table 2 (continued)

Theme	Category	Codes
	Composition, Improvisation, and Project-Based Learning	Guiding students in composing original works that balance creativity and structure. Exploring various musical genres and historical foundations. Designing long-term, collaborative projects that integrate music with other subjects. Encouraging students to use DAWs and notation software for creative expression. Facilitating interdisciplinary projects that connect music with STEAM concepts.
Performance and Assessment: Evaluation, Motivation, Validation, and Reflection	Concerts, Adjudications, and Community Connections Supporting Reflective Learning Practices	Performing concerts and recitals to showcase student progress. Preparing students for musical stage presence in performance settings. Facilitating community-based events to connect music education with broader audiences. Using performances as opportunities for ensemble and individual assessment. Encouraging students to collaborate with local organizations or participate in outreach programs.

Note. SEL = Social-Emotional Learning. DAW = digital audio workstation. STEAM =Science, Technology, Engineering, Arts, Math. *SmartMusic* changed its name to *MakeMusic* Cloud in 2022.

Theme 1: Instruments In Hands: Ensemble Rehearsal, Small Group Work, Individual Practice. All 16 educator participants taught primarily in the large ensemble rehearsal setting. The instructional setting influenced participants' selection of instructional strategies. Participants described how ensemble-based instruction, including full ensemble rehearsals, sectional work, and small-group instruction, shaped their approach to skill development, differentiation, and student engagement. Educators strategically integrated peer-led instruction, differentiated learning techniques, adaptive rehearsal strategies, and technology

within the ensemble context to address diverse student requirements and maximize instructional time. For example, Participant 7 illustrated:

> One thing I'm ready to do, if needed, is small group instruction or breaking the class into more sectionals. Normally, I'll keep everyone together because it's easier to manage time that way, but if we need more focused work—like, say my brass section is struggling, or the guitar kids need extra help with finger placements—I'll split them off. It's not something I do every day, but if I see a section really needs to home in on something specific, I'll make that call and work with them separately. It's super helpful in those crunch times before performances.

Participant 10 described their approach similarly:

> I like to mix traditional methods with some more innovative approaches to keep things engaging and to help students learn in different ways. One strategy I use a lot is flipping the traditional conductor-led model. Instead of me always leading from the podium, I'll step back and let the students take over in various ways.

To offer another perspective of the ensemble-based environment, Participant 17 offered a description of the common challenges facing large-group learning:

> There are so many various ability levels in the ensembles from anywhere from beginner to more advanced students and then balancing how to meet all of those challenges or all of those challenges. Ability levels within the ensemble so that our higher-level achieving students have the same type of attention that maybe is necessary or lower level achieving students do aural skills, there's improvisation that happens, there's integration of theory that happens.

Participant 12 shared the challenges associated with trying to balance individualized approaches within the ensemble setting, stating, “When you have 37 or 40 kids, it's hard to do a lot of small individual stuff because everybody starts bouncing off the walls.” In sum, participants consistently tied instructional choices to the realities of large-ensemble teaching: they leveraged sectionals, student-led podium time, and flexible grouping to target specific technical gaps, sustain engagement, and accommodate a wide range of ability levels.

The three participants teaching guitar or piano labs employed more individualized and self-paced learning structures, yet the ensemble setting remained the dominant paradigm for secondary instrumental music instruction. Participant 11, for example, shared how they instruct guitar:

> After I demo the week’s material, I let every kid set their own pace: the folks who breeze through the new chords jump into the *MusicTheory.net* drills or coach a friend, and the ones who need more time hang back with me for a quick tune-up. On Friday they come to the desk one-by-one for their playing test, same rubric but at a speed they choose, so the assessment matches where they honestly are instead of forcing everyone to march in lockstep.

Participant 7 illustrated the self-paced approach used in piano classes:

> In piano lab, I post a demo video Monday, then students plug in headphones and progress at their own speed—looping passages, isolating hands, slowing the metronome. I circulate for mini-lessons, and Friday one-to-one tests let each student choose a tempo that proves genuine mastery.

Overall, three participants reported individualized, self-paced structures in guitar and piano lab classes, whereas the remaining participants cited ensemble-based rehearsal as their primary instructional model with individualized approaches being layered in as instructional strategies.

Supporting the dominance of rehearsal-based instruction, all 16 educator participants indicated using in-person classroom time to integrate the wide variety of skills required for student development in instrumental music performance. Educator participants relied heavily on method books and repertoire, utilizing diverse learning activities to develop both individual musical skill and ensemble performance mastery. Participant 18 stated:

> At the beginning, when we're teaching [a new piece] it's a lot of listening and a lot of pre-playing activities, counting out rhythms, things like that, trying to give them skills to be able to take and do that on a different piece.

When selecting instructional strategies for deploying repertoire-based learning, seven participants highlighted the importance of including individualized and differentiated instruction techniques into the learning activities. Participant 17, an administrator participant, stated:

> Differentiated instruction has to happen. There are so many [varying] ability levels in the ensembles, from anywhere from beginner to more advanced students. And then we are balancing how to meet all of those challenges [and] ability levels within the ensemble so that our higher-level achieving students have the same type of attention that maybe our…lower level achieving students do.

Repertoire selection emerged as a foundational instructional strategy, valued by participants for its ability to align educational goals with technical development, promote cultural inclusivity, and enhance student engagement. Participant 13 articulated their perspective, stating, "We pick songs because yeah, we like what they are, but then in those songs, there's specific things, or

there's an educational goal that we're trying to get across." Similarly, Participant 18 emphasized the importance of diverse repertoire selection, explaining, "I try to pick a broad range of pieces…including an ethnic piece, a novelty piece, and core literature like *Russian Sailor Dance*." Extending the pedagogical function, repertoire served as a key motivational tool, with Participant 1 noting, "It needs to be challenging, but at the same time, not overwhelming." Some educators also emphasized the importance of student agency in repertoire selection, encouraging students to take an active role in their learning. Participant 5 described their approach, stating, "A lot of teachers are also giving students more ownership of their learning by letting them make choices about what repertoire they want to work on or even encouraging them to create small ensemble arrangements." In addition to musical skill development and student motivation, participants indicated using repertoire selection to broaden student exposure to multicultural works and cross-curricular learning activities, with Participant 16 affirming, "We aim to include culturally relevant and diverse repertoire to reflect the student population inclusivity." Participant 4 similarly shared how they used repertoire for cross-curricular instruction:

> There are maps all over my classroom. So, when in the method book, we play a folk song, we find it on the map, which is a skill that a lot of students struggle with. We find it on the map, look up and read about the country, and learn to say a couple of words in that language. We talk about food a lot. I'm a big foodie, so I talk about what I've cooked from that country. We talk about physics a lot. When I'm explaining intonation, we talk about vibrations in an open tube. We talk about, uh, capping the boom whackers and why it drops it an octave. Yes, we have a whole lot of cross-curricular [opportunities].

All participants indicated the integration of various instructional strategies within rehearsal time to develop both individual musicianship and ensemble performance skills. All but three

participants indicated relying heavily on method books and repertoire-based learning. The necessity of differentiated and individualized instruction was emphasized by seven participants as critical to supporting diverse learners within ensemble settings.

Ten participants used repertoire for non-performance extension opportunities, integrating formal SEL strategies, historical research, interdisciplinary learning, and musical traditions. Interactive activities and SEL strategies engaged students and enhanced motivation. Participant 2 shared, "I made a music staff on a piece of felt and threw a beanbag…students had to jump for it when they saw the note." SEL activities, such as journaling and goal-setting, supported student resilience and teamwork. Participant 16 said, "Repertoire choices often help with technical, emotional, and academic goals, like playing music that challenges technique, express emotion, or connects to historical events." Participant 9 offered a divergent perspective, disagreeing with repertoire-centered learning:

> I never felt like I could program enough concerts in a year to adequately cover everything every student in the room needed to know…the literature that you do should be excellent supplemental material to what you teach in the room.

Despite recent advances and emerging technology available to secondary instrumental music educators, traditional repertoire-centered learning remains the dominant instructional strategy, with educators leveraging the various elements of repertoire for both musical and non-musical instruction.

Four participants indicated they frequently turned to student leadership roles and peer instruction to foster collaboration and shared accountability. Participant 8 shared, "Peer-to-peer teaching happens a lot here. I always tell the kids, 'If your partner doesn't know what's going on, help them out.'" Similarly, Participant 15 described using student-centered rehearsal approaches,

explaining, "After a chunk of rehearsal, students get an opportunity to pair-share with their stand partner." Participant 7 illustrated peer assessment techniques as well:

> I'll have small groups play a section of music for the class, and then we'll open up the floor for feedback. But instead of just 'good job' or 'that wasn't great,' I guide them to use specific language—like pointing out tone quality, phrasing, or rhythm accuracy. It helps them become better listeners and self-assessors.

Participant 5 implemented peer feedback for educational benefits, "Peer feedback is common, too. Students will listen to each other's performances and offer constructive feedback, which helps them develop critical listening skills." Participant 10 described student-conductor role exchanges in rehearsals:

> I'll ask a section leader or even a volunteer to conduct a passage while the rest of the ensemble plays. It forces them to think critically about tempo, dynamics, and ensemble communication. It's empowering for the students and gives them a sense of how the conductor's role shapes the performance.

Participant 18 indicated using peer-work to support different skill levels:

> We do a lot of sectionals where the senior or maybe the most talented one in that section, the section leader, will take charge and do that [play the role of instructor in the small group session]. And especially when we get freshmen into the band program, they are definitely not on the level as everybody else in the band. So, they end up with a lot of one-on-one time with a senior or a junior in one of the practice rooms.

Nine participants emphasized student leadership and engagement strategies. Four highlighted peer instruction and feedback as essential tools for fostering collaboration and accountability explicitly, while five underscored interactive and varied rehearsal techniques, including student-

led conducting, improvisation, and structured questioning to promote deeper learning and ensemble cohesion. Student leadership as a driver of engagement thus emerged as a prominent category within participants' instructional strategies.

Seven participants discussed additional strategies for maintaining student engagement and ensuring appropriate pacing. Participant 19 emphasized maintaining engagement throughout rehearsal time, "We try to keep it engaging by balancing technical drills with opportunities for creativity, like improvisation or composing," highlighting collaboration and creativity. Participant 2 similarly stated the importance of sustained engagement, "making sure that you keep that engagement going because otherwise you lose the kids and you lose your focus as well." Participant 12 suggested balancing rehearsal time through adequate pacing to maintain student engagement:

> You have to make sure your whole ensemble has a chance to play something interesting each day whether you're playing small parts of a crowd or small parts of a march or something like that, just trying to keep everybody engaged.

Participant 1 provided additional detail stating:

> I'm asking the students, “Why would we need to know this skill?” and be able to discuss, but also to play to perform and to do…I'll ask students all the time, “Who's nailing it? Tell me who's nailing it.” and the kids will volunteer and say, “I'm nailing it.” And then I'll have another student. Then, I'll see a couple of hands. “Okay, let's have the two of you play together.” So, two of them play together. I'll say, “Anyone else think they can get it?” and then I'll have a couple more, and I'll keep growing that group. And then students will jump in and help out. So now it becomes a group mentality of, “Yeah, I can do this,” and I can match with the other person. Going from the smaller [group] to the bigger and

> involving more students. That's another favorite way I will tackle something technical or musical or just [to build] fluency.

Seven participants emphasized student engagement and appropriate pacing during rehearsal time to maintain focus and maximize learning outcomes. Participants agreed on engagement necessity but varied in approach. Some prioritized structured pacing and repertoire selection, while others implemented interactive learning techniques to foster collaborative rehearsal environments.

All 16 educator participants implemented differentiated instruction to address diverse skill levels and learning styles. Five participants explicitly cited challenges in performing constant informal assessments of individual students while simultaneously managing the behaviors of entire large ensemble. Educators used sectional rehearsals as a vehicle for personalized instruction and leadership development, as noted by Participant 9, "The most growth happens in small ensemble settings." Participant 6 utilized smaller-group dynamics, "Our staff can run sectionals while I focus on the larger group, or we might even split the ensemble in half for part of a rehearsal if one group needs to focus on something specific." Participant 15 emphasized regular small ensemble work, "We do sectionals every time we have class on Friday." Participant 17 highlighted, "There are so many [varying] ability levels in the ensembles…balancing how to meet all of those challenges is essential." Participant 12 used student-led small-group work for informal individual assessment, "A lot of the students break up into sectionals, and I'll pick one student to lead the section. I'll just float around to the different groups so I can see what they're doing." Participant 14 utilized small-group time for student leadership opportunities, "The section leaders are in charge, and we have a goal—'What do we want to accomplish in this?'—and it's mostly student-led unless there's a section where I know they need my attention more than the other group." Sectional rehearsals emerged as a widely

used strategy, enabling personalized instruction, student leadership development, and small-group pedagogy. While all participants acknowledged sectional rehearsal benefits, some emphasized student-led leadership as the primary driver, while others focused on addressing technical challenges or targeted skill improvements within smaller groups.

In addition to large-ensemble and small-group settings, participants implemented instructional strategies providing individualized learning opportunities for students. Technology enabled personalized learning across multiple contexts. Participant 7 explained, "I now assign theory and individual practice as homework using tools like *MusicTheory.net* and *SmartMusic*, freeing up class time for ensemble work." Participant 6 described, "Tools like *SmartMusic* allow students to practice and submit assignments on their own… freeing up more rehearsal time." Educators employed flipped classroom models for individual instrument practice, allowing students to engage with instructional materials at home and focus on ensemble application during class. Participant 1 connected individual practice to rehearsed repertoire:

> I use an approach focused more on intrinsic motivation, as we work through things or we talk through things in the band. I'll help them identify spots that could be worked on at home. And students are like, yeah, I commit to working on that.

Participant 14 similarly described, "I don't have to tell them to practice. They do it. They just know okay, I gotta make this sound better." Participant 15, experienced in teaching both piano lab and guitar class with combined skill levels, utilized instructional strategies allowing independent and self-paced student work in class or at home:

> A lot of times, once I've shown them what they're going to do and I give them their [in class, self-paced] practice time for the day. In addition to myself, I'll have the more advanced kids help and coach some of their friends and the people in the class that they

> work with. Usually at the end of the class we'll play through whatever I'd assigned that day together to see how far along kids have gotten and if we're gonna need to spend more time on that the next day, or if we can move on to the next section…I don't expect them all to come out of there being concert pianists or concert guitar players. I want them to be able to play at a tempo that suits what they're capable of. And as long as they're putting in the effort and trying, they're going to be fine.

Participants integrated individualized learning strategies alongside large-ensemble and small-group instruction, with technology serving as a critical tool for personalized practice and skill development. Four participants selected digital platforms like *SmartMusic* and *MusicTheory.net* to facilitate independent learning and optimize rehearsal time, representing one common approach. Other participants emphasized intrinsic motivation techniques and self-directed practice systems, demonstrating pedagogical divergence in implementation methods. While all participants valued independent practice as essential for student development, they varied in their approaches to connecting individual practice with ensemble repertoire. Some created explicit assignment-based connections, while others fostered more student-directed practice environments. Despite implementation differences, participants consistently prioritized creating opportunities for students to progress at individualized rates both within classroom settings and through at-home practice activities.

Ten participants utilized self-assessment and reflection as instructional strategies for classroom and at-home activities. Recording technologies facilitated reflective practices, enabling students to critically evaluate their practice and performances. Educators integrated listening exercises and reflective activities to develop students' analytical and evaluative skills. Participant 6 remarked, "We do a lot of informal checks during rehearsals … listening to

individuals or small groups." Similarly, Participant 9 emphasized feedback-driven learning, explaining, "I think that, for me, the most valuable tool was that listening, feedback, communication with the student where you develop the student's capability to self-assess." Audio recording and playback enhanced students' personal and ensemble reflection capabilities, as Participant 13 described:

> When we get closer to concerts, I will do recording Fridays where we record everything and then we listen back to it and everybody has a pencil in their hand and is taking notes on the music of things that they. It's always fun to do that with kids for the first time because they don't realize that recordings don't lie, that our ears lie to us and fudge over things and that recording won't lie.

Similar ideas appeared among all 10 participants in their use of technology-enabled assessment methods, particularly audio recording, and playback. However, implementation varied across participants, with some emphasizing informal in-rehearsal feedback while others established structured reflection protocols. Collectively, participants consistently valued developing students' self-evaluation abilities, recognizing it as an essential skill for musical growth and independence.

Fifteen participants integrated visual and audio tools, including videos and multimedia resources, to clarify musical concepts and support diverse learning transcending printed music and method books. Participant 8 used video learning as a preparatory set, "I try to show them as much as humanly possible on a screen…so that they can kind of get the idea of what's happening and how." Participant 6 explained, "Students watch videos or complete theory lessons at home…freeing up more rehearsal time in class." Participants selected technology tools strategically to facilitate deeper understanding of musical concepts while accommodating different learning preferences. Participant 10 emphasized using varied instructional elements:

> The shift in students' attention spans is real. I mean, you can feel it, right? Students seem less willing to sit passively for a 50-minute class, especially if it's just someone lecturing or running a rehearsal the old-school way. So, making lessons more interactive and student-centered has almost become a necessity, not just a choice. I think the move toward more visual stimulation, like using slides and videos, is brilliant. It's not just about catering to shorter attention spans, though that's part of it. It's also about meeting students where they are, in terms of how they're used to consuming information. They live in this highly visual, digital world, so bringing that into the classroom makes the content feel more engaging and relevant.

Fifteen participants used multimedia tools to enhance instruction, though their implementation approaches varied. Most utilized videos and digital platforms strategically to clarify musical concepts and accommodate diverse learning styles. Others focused on adapting to changing student attention patterns through visually engaging, interactive content. Despite implementation variety, participants consistently used technology to maximize instructional effectiveness, diverse learning styles, and student engagement.

Ensemble rehearsals, small-group work, and individualized practice emerged as core instructional strategies for developing student musicianship across participant experiences. Participants emphasized differentiated instruction, student leadership, and technology integration to enhance learning and engagement. Repertoire selection functioned beyond technical and musical growth, serving as a vehicle for cross-curricular learning, SEL development, and cultural inclusivity.

Theme 2: Non-Performance Musical Development and Exploration. Thirteen participants incorporated diverse non-performance learning activities to reinforce musical

knowledge and skill development. Educators selected project-based strategies to enable students' engagement in research, critical thinking, and interdisciplinary connections. Participants emphasized listening exercises, self-assessment, and creative exploration to deepen musical understanding. Critical listening and analytical discussions fostered evaluation skills, while composition and interdisciplinary projects provided opportunities for problem-solving and innovation.

Ten participants utilized listening-based instructional strategies for various learning activities. Participant 5 implemented guided critical listening, "Listening to professional recordings of their repertoire is also a teaching tool. It gives students a sense of style, phrasing, and dynamics, which can be hard to grasp just by reading the sheet music." Participant 15 allocated time for expanding known genres through listening:

> I try to do like a 'Future Friday,' where we listen to a non-traditional string performance or a more contemporary string performance; something that's hopefully more connected with a lot of the music they may be listening to. The Metropole Orchestra is a group that does a ton of stuff with R&B, rock, and jazz artists. We also do hip-hop listening as a way to incorporate elements of cultural diversity into the curriculum. Since orchestra, in particular, tends to be very Eurocentric, I try to balance that by integrating a variety of listening examples. We also do listening to more traditional orchestral ensembles as well.

When faced with ensemble rehearsal limitations, Participant 8 relied on critical listening activities:

> A lot of the time it's listening, like we'll listen to especially during marching season, like we'll watch marching shows[...]or we're listening to music that we're working on and we're kind of saying, okay, clarinets, can you hear your part up here?

Participant 10 concurred:

> Another strategy that's been effective is integrating music theory and listening exercises into our work. I might assign students to analyze a professional recording of a piece we're playing and then discuss what they noticed. It helps them connect the dots between what they're hearing and what they're playing. Ultimately, I try to create a balance between rigorous skill development and fostering a love for music. If they're not enjoying the process, the instruction won't stick.

Participant 2 indicated similar uses for classroom technology:

> We use *GarageBand* quite a bit because it's part of our school's one-to-one technology initiative. I show students *Audacity* as well, since I know it better, and then they show me some tricks in *GarageBand*, so we learn from each other. We've done projects using *Canva*, where students create digital portfolios with music selections that they analyze and justify. I also recently found a great site called *Music and Math*, which shows how digital audio and sound wave analysis work, and I plan to integrate it into my sound wave lesson. I want my students to see that music is not just playing an instrument but that there are other ways to engage with it using technology.

Participant 15 deployed numerous technology tools for non-performance activities:

> I use a lot of digital tools to facilitate creative projects. We regularly use *Logic Pro*, *Pro Tools*, and *GarageBand* in my orchestra and music technology classes. For collaborative work, I use *Padlet* and *Trello*. I've also been managing a music innovation team, where we work on building curriculum for innovative music pathways, things like career prep in

> the music industry. For projects that involve publishing or design, we use *Canva* and *Adobe InDesign* […] Music tech is embedded in every part of my instruction.

The implementation of listening-based instructional strategies demonstrated strong agreeance among participants, with educators consistently utilizing critical listening activities to enhance student understanding, develop cultural responsiveness, and maintain instructional momentum during rehearsal limitations. However, divergence emerged in technology integration sophistication, ranging from basic *GarageBand* and *Canva* usage to advanced professional software implementation including *Logic Pr*o and *Adobe InDesign* for holistic curriculum development.

Five participants adapted non-instrument-based strategies for remote learning and extension opportunities. Participant 10 underscored instructional flexibility, "If we're ever in a situation where physical instruments aren't available, I'm prepared to shift to body percussion, digital music creation, or music theory and history projects." Participant 5 reflected on preparation for remote learning transitions:

> For remote or at-home learning, many of us rely on strategies and tools developed during the COVID-19 pandemic. Platforms like *Zoom* or *Google Meet* support live, synchronous classes, while tools such as *SmartMusic*, *Soundtrap*, and *Flipgrid* allow students to work asynchronously, submitting recordings, receiving feedback, and even participating in virtual ensemble projects, if we have to…Also effective in remote or hybrid setups, enabling students to complete theory lessons, listening activities, or individual practice at home while using live sessions for discussions, feedback, or sectional work. Giving assignments like researching musical styles or creating compositions with notation software or those digital audio workstations (DAW), or even *Chrome Music Lab*

> encourage deeper learning and creativity. Projects students can work on at home can, and should, in my opinion, be used to keep students actively learning and loving music, regardless of where they are in the world. Isn't that the ultimate goal as a music teacher, after all?

Participant 6 implemented a flipped classroom model to enhance music theory instruction, "Students watch videos or work through theory exercises at home, so when they come to class, we can focus entirely on playing and applying that theory to our rehearsals." Notation and sequencing software and web-based programs served as valuable tools for student engagement and skill-building, with Participant 17 highlighting *Chrome Music Lab* as an effective application and Participant 4 recommending gamified music theory platforms for reinforcing musical skills. Participant 2 described a composition lesson, "I found a lesson where all they had to do is just take the music and just recreate it. And then once they started doing that, then they started experimenting, creating their own music." Similarly, Participant 18 underscored the interconnectedness of music history and theory, emphasizing the importance of digital resources in reinforcing cyclical musical concepts. Collectively, participants recognized technology as a powerful tool for fostering creativity, independent learning, and deeper theoretical understanding in the secondary instrumental classroom. Eight participants emphasized technology integration to facilitate composition, arranging, and music theory instruction, leveraging DAWs, notation software, gamified platforms, and flipped classroom models to enhance creativity and interdisciplinary connections.

Theme 3. Performance and Assessment: Evaluation, Motivation, Validation, and Reflection. Live performance opportunities were universally recognized by all 19 participants as a vital component of secondary instrumental music instruction, functioning simultaneously as

motivational tools and assessment strategies. Performances fostered student confidence, professionalism, and goal-setting while strengthening community engagement. Reported opportunities ranged from solo adjudications to large-scale community concerts, each fulfilling distinct instructional purposes, validating the music program in the eyes of students, parents, and school-community stakeholders, and providing milestones that connected learners with both programmatic goals and stakeholder communities.

Adjudicated festivals represented the most frequently discussed performance context, cited by ten educators. Participant 6 explained, “We work to keep sight-reading skills sharp, especially leading up to contests or festivals that include sight-reading.” Participant 9 described targeted small-group instruction made possible during festival preparation, and Participant 1 observed, “It feels like you're jumping through hoops, but at the same time, it's goals that motivate the students that knowing they're going to have a special event.” Such value was so significant that Participant 15 created mock-festival opportunities specifically to provide students with external assessment, critique, and feedback:

> I bring in professional string clinicians. They give qualitative feedback. They do both a written form where they give kids qualitative feedback they can read later. And then they also have a 15-minute session, much like a solo and ensemble, where the kids perform for them and then get feedback.

Ten participants identified adjudicated festivals as a valuable performance opportunity and emphasized their role in student motivation, skill refinement, and technical growth through both feedback from adjudicators and sight-reading components. Additionally, festival preparation encouraged small-group instruction, allowing for more focused assessment and skill development.

Tailoring performances to address specific student or community needs was reported by three educators. Participant 14 described hosting a "Connections Concert" when the school had suffered flood damage and all students were learning from home:

> You could do anything you wanted; it was like, you could play whatever you wanted… All they had to do was to. the music had to have some kind of connection to you. And how do we connect to each other when we can't be present? So really of music that's meaningful for you. And it was amazing what the kids came up with during that time.

Participant 12 illustrated the use of live public performances to reinforce a core instrumental skill, like posture and position, stating, "I always tell my bands one of the first things that your audience is going to see is your playing position. So, make sure your playing position is set, putting your feet flat on the floor." Participant 7 addressed the potential to target performances for an audience by sharing how their groups created "benefit concerts to help us collect more funding for our extra-curricular activities." Five participants highlighted public performances as vehicles for student achievement, community engagement, or program advocacy. Participant 17 illustrated advocacy during concerts, indicating, "We try to do a lot of music advocacy." Participant 2 described outreach concerts, reporting, "We have an outreach group that performs there at least every month or every other month." Customized performance approaches allowed participants to address immediate educational needs while maintaining meaningful connections with their communities.

Four participants underscored post-performance reflection as a tool for continuous learning. Participant 3 indicated reflective practices following concerts and class sessions, sharing, "I focus a lot on reflection normally after concerts, but oftentimes after, individual class sessions." Participant 14 supported reflection as well, indicating, "We do a lot of reflection…I

have them reflect on performances." Participant 15 agreed, "We always listen back to our own performance and reflect." Participant 18 underscored the importance of designing a more structured written reflection, contending, "We need to focus on them responding and writing more to what they hear or, even different, they need to reflect upon what they've learned and how they've learned it." Reflective practices were employed by four participants, with Participant 18 distinguishing their approach by emphasizing formal written reflection over informal discussion methods.

Three participants indicated offering graded assignments for field-trip or concert attendance experiences to encourage live analysis, building musical connections, develop concert etiquette, and support local performing groups. Participant 14 shared community performance opportunities with students regularly, observing, "Pretty much anytime anyone sends me a link that there's this orchestra or there's this concert, I'm putting it in *Google Classroom* as a resource." Participant 2 required tangible proof of attendance, sharing, "If they go to a concert at the high school and get the high schoolers to sign their programs…so I know they actually showed up." Participant 8 organized visits to professional concerts to expose students to high-level musicianship, explaining, "I do a lot of field trips with the kids because I feel that they need to experience professional musicians. A lot of my kids have never gone to a concert. We're fortunate, we're by [a professional] Symphony." Strategies reported by the three participants included disseminating local concert links, verifying attendance through signed programs, and arranging field trips to professional performances.

Live performance opportunities, both as performer and as attendee, served as a critical instructional and assessment tool for all 16 educator participants, providing students with experiences that foster confidence, professionalism, and musical growth while also engaging the

broader community. Adjudicated festivals, cited by ten participants, reinforced goal setting, technical precision, and sight-reading skills, while three participants highlighted the flexibility to tailor performances, such as benefit concerts or student-driven events, to meet specific student or community needs. Beyond the stage, participants leveraged performance opportunities as a platform for music advocacy, audience engagement, and reflective learning, with several educators incorporating post-performance critiques and concert attendance assignments to deepen students' analytical skills. Live performances remained a universally valued component of secondary instrumental music education, serving as both a milestone for achievement and a vehicle for meaningful musical experiences.

Research Question 2

What are the competencies that secondary instrumental music educators and arts administrators believe that secondary instrumental music educators must have to be effective in the contemporary secondary instrumental music classroom? Data analysis data for RQ2 yielded in 204 individual competencies becoming codes for further analysis. I categorized codes based on literature-derived schema focusing on musical, pedagogical, professional, and personal competency domains. The categorization process produced 32 competency areas, which I enhanced with definitions to ensure consistent application across the dataset and facilitate reader understanding of each category's scope and boundaries.

Through continued analysis, I discovered seven cross-cutting skill categories applying across all domains, as identified by Andrade (2020). The codes and categories led to five themes representing comprehensive competencies required for effective secondary instrumental music educators addressing evolving educational demands, responding directly to RQ2. Table 3

displays the analysis of secondary instrumental music educator themes, categories, and code numbers. Appendix G contains detailed category descriptions and individual codes.

Table 3

Thematic Analysis of Competencies in Secondary Instrumental Music Education

Theme	Categories	Number of codes
Critical Cross Cutting Skills	Effective Communication, Judgment, and Diplomacy	12
	Initiative and Entrepreneurial Spirit	6
	Critical Thinking and Analytical Decision-Making	4
	Adaptability and Growth-Oriented Mindset	10
	Holistic Leadership	8
	Emotional and Interpersonal Intelligence	5
	Professional Integrity and Ethical Conduct	8
Musical Skills: Exemplary Musicianship and Comprehensive Subject Matter Knowledge	Musical Mastery and Broad Instrumental Skills	8
	Advanced Ensemble Leadership and Musical Solutioning	14
	Comprehensive Music Theory and Creative Practice Integration	7
	Knowledge of Resources and Repertoire	6
	Comprehensive Music Theory and Creative Practice Integration	7
Pedagogical Skills: Leadership, Instruction, and Student Management	Classroom Management and Instructional Pacing	7
	Curriculum and Instructional Design	7
	Assessment and Data-Driven Practices	6
	Group and Collaborative Learning	8
	Student-Centered Engagement	7
	Leveraging and Integrating Technology	10
	Facilitating Remote and Self-Paced Learning	5
	Individualized and Adaptive Learning Design	8
	Leading Collaborative and Creative Projects	7

Table 3 (continued)

Theme	Categories	Number of codes
Personal Skills: Disposition, Character, and Mindset	Reflective and Growth-Oriented Practices	5
	Creativity and Passion for Music Education	4
	Sustaining Energy, Balance, and Self-Motivation	4
	Adaptability and Resilience	4
Professional Skills: Multifaceted Music Program Leadership	Organizational and Problem-Solving Skills	7
	Innovation and Community Awareness	5
	Coordination and Resource Management	9
	Recruitment, Marketing and Promotion	5
	Public Relations, Crisis Prevention and Management	5
	Technical and Digital Competencies	9

Theme 1: Critical Cross Cutting Skills. In response to RQ2 and supported by participant data, 53 individual codes represented cross-cutting competencies, defined as foundational skills spanning multiple domains, enabling individuals to perform effectively across diverse roles and tasks (Jugănaru & Moraru, 2020). The seven categories associated with Theme 1 encompass communication, entrepreneurship, critical thinking and decision-making, adaptability, leadership, emotional intelligence, and integrity and ethical conduct. The following data demonstrate how competencies operated as connecting threads throughout participants' musical, pedagogical, professional, and personal teaching practices, justifying their identification as truly cross-cutting skills.

Communication competencies related to judgment and diplomacy appeared universally across all 19 participant interviews and focus group. Participant 2 emphasized educators' need for thorough and discerning communication skills when discussing a student teacher who, when

composing a family letter about an upcoming event "didn't put the time […] didn't put the date […] just getting that communication part that's also really hard." Participant 4 highlighted judicious communication:

> You have to know when to keep your mouth shut. If there are bothering you that you really can't do anything about, there's no need to complain about them, and especially no need to complain about them to people that can't help you solve problems.

Participant 5 agreed:

> Communication skills are also vital. Not only do teachers need to communicate effectively with their students, but they also need to build strong relationships with parents, administrators, and other educators. This is especially important when it comes to things like concert preparation, securing resources, and advocating for their program.

Participant 8 emphasized communication skills across multiple domains, including diplomacy and advocacy:

> You have to show why […] your program is important, why you are doing what you're doing, explaining, using your public speaking skills to and politics skills to explain why.
>
> Why you do more than just wave your arms around and hope that it works.

Effective communication, sound judgment, and diplomatic skills emerged as essential for music educators navigating relationships with students, parents, administrators, and communities to ensure program success, secure resources, and advocate for music education value.

Nine participants emphasized entrepreneurship and initiative. Participant 12 highlighted mindset as a necessity, confessing, "You have to be entrepreneurial. Sometimes it feels like running a small business. You're managing resources, advocating for your program, and

constantly finding creative ways to make it all work with the tools you have." Similarly, Participant 3 noted:

> I think as a music educator, you're always trying to find creative ways to solve problems because every day brings something new. Whether it's figuring out how to make a tight budget work or coming up with a solution when half the trombone section is out sick, you just have to think on your feet.

Participant 9 reflected, "Nobody tells you how much innovation you'll need just to keep things afloat. I've had to create fundraisers, build new rehearsal schedules, and even figure out how to repair instruments myself because resources are so limited." Participant 11 further explained, "There's no manual for half the things we deal with. Whether it's troubleshooting technology or creating a last-minute program for a concert, you have to be resourceful and inventive." Participant 13 succinctly expressed, "Initiative is what keeps a program alive. You have to see what's needed, whether it's in the classroom, the community, or the broader school culture, and take the steps to make it happen." Participants identified resourcefulness, creativity, and entrepreneurial initiative as fundamental for sustaining successful music programs, requiring educators to problem-solve, advocate, and innovate in response to the changing challenges and limited resources.

Nine participants identified critical thinking and decision-making as essential competencies empowering educators to assess complex classroom dynamics, make informed instructional choices, and adapt strategies in real-time for diverse student demands. Participant 13 stated, "You have to look at everything with a critical eye: what the students are playing, how they're responding, and what's happening in the moment. Every decision build on the last one." Participant 16 elaborated, "You have to assess situations constantly. Is this the right time to push

for more precision, or do I need to step back and focus on motivation? It's a lot of real-time decision-making." Participant 4 remarked, "Teaching music is like solving puzzles every day. You're constantly analyzing the ensemble's sound, figuring out where the problems are, and deciding how to address them right then." Participant 6 noted, "Critical thinking isn't just for rehearsals. It's in everything: choosing repertoire, designing lesson plans, even figuring out how to handle conflicts within the ensemble." Of the 58 individual codes representing cross-cutting competencies, communication, entrepreneurship, critical thinking, and decision-making emerged as foundational skills, with all 19 participants emphasizing communication and diplomacy, while nine participants highlighted entrepreneurial initiative and critical thinking necessity for navigating music education complexities.

Seventeen participants cited adaptability and growth-oriented mindset as vital cross-cutting competencies empowering educators to navigate the evolving music education challenges. Participant 6 articulated:

> You come into the classroom with a mindset to grow, but resilience is tested when managing the complexities of a music program. Balancing classroom expectations with administrative duties can feel overwhelming, but adaptability and growth help you get through it.

Participant 5 emphasized, “Adaptability and problem-solving are critical. Schedules shift, students struggle, or equipment fails … being flexible and ready to troubleshoot under pressure is essential. Pivoting to remote learning during the pandemic was a prime example of how much flexibility is required." Participant 2 remarked:

> You need to have a backup to your backup. Technology doesn't always work, and the lesson plan you thought was perfect might fail. Can you adapt to changes quickly without

> frustration? That's what I saw with a student teacher—the importance of being ready to adjust and not just stick to one plan.

Participant 15 indicated instrumental educators must understand “where your program is and where you want it to go and having some means and method by which you assess that on a regular basis and whether you're meeting your goals or not. I think that's really big." Participant 7 illustrated continuous learning as an essential competency:

> Educators need to be role models for continuous learning, which means staying up-to-date with best practices and trends in music education through workshops, conferences, or professional organizations. Seeking out mentorship from more experienced educators and offering guidance to those newer to the field helps build a strong, supportive professional network.

Participant 1 illustrated the necessity of having a growth-oriented mindset:

> As you walk into a classroom, you have an idea of what it's going to feel like and be like, and you don't realize the magnitude of how much it is. That's why people don't last as long in this profession. But at the same time, with support and with just having a growth mindset is a huge one for me, being willing to change and to grow with the profession. It definitely makes it most interesting. It's not the same job. I'm not doing the same thing each year. My job changes every day and every year.

Participant 15 agreed:

> Being really flexible and having a growth mindset that I can teach anything, like, I'm a capable teacher. And yes, it might be hard and yes, it might put me out of my comfort zone, but I can do this, and I will reach kids I wouldn't otherwise reach, and that is a net positive.

The 17 participants indicated resilience, flexibility, and problem-solving importance in managing the unpredictable music education challenges, from adjusting lesson plans and troubleshooting technology to balancing instructional and administrative responsibilities.

Thirteen participants explicitly discussed holistic leadership skills related to RQ2. Leadership as a core competency encompasses guiding students during rehearsals, collaborating with school peers, demonstrating leadership among professional organization colleagues, and recognition as program leader by various stakeholders. Participant 16 illustrated, "You're not just leading students, you're often leading their families too. Managing parent expectations and fostering their involvement in the program is a critical part of the role," and added, "Being a strong leader means knowing what your vision is, whether it's short-term or long-term, and then managing the tools and resources required to help others do their jobs effectively." Participant 7 agreed:

> You have to lead by example, not just with your students, but with your staff too. If you're not organized, passionate, and committed, it’s hard to expect that from everyone else…Leadership is also about mentorship. Whether you’re guiding assistant directors, student leaders, or younger staff members, you need to know how to develop their skills and support their growth.

Participants consistently reiterated the importance of guiding students, collaborating with colleagues, mentoring future educators, and engaging with parents and stakeholders. The participant perspectives illustrated leadership's multifaceted role in sustaining and advancing successful music programs.

Six participants cited emotional and interpersonal elements as vital for successful secondary instrumental music educators. Participant 4 suggested secondary instrumental

educators must have "strong interpersonal skills to work effectively with teenagers, other faculty members, administrators, and parents." Participant 11 agreed, citing the ability to "work with students who are difficult or maybe don't care, and being able to show them why they should care." Participant 15 supported relationship-building importance with students:

> Finding inroads with kids and building relationships with kids, I think is huge. Probably the single most important thing that kind of comes before everything else. And if you can't do that it's really hard to teach the kids at a high level and get them to play and do things at a high level.

Participant 19 exemplified emotional intelligence, stating:

> I think teachers are more cognizant of the level of student anxiety and more cognizant of backing off on some of the levels of expectation that they have in some classes in order to keep students from having a sort of tougher or more adverse reaction.

The six participants who identified emotional intelligence and interpersonal skills as essential emphasized the importance of building strong relationships with students, colleagues, and parents. They highlighted the roles of empathy and awareness in addressing student challenges and creating supportive learning environments.

Six participants illuminated codes linked to integrity and professional conduct. Participant 12 indicated student-related integrity importance, "I just be really honest with 'em. I'm gonna screw it up, so don't yell at me if I call you the wrong thing. And I always say I'm sorry and try to switch that." Participant 13 agreed:

> We tell our kids it's okay to make mistakes, but for some reason, when we come out of college, we think we have to be perfect and we have to have perfect instrumentation and

> perfect concerts and perfectly programmed, our kids make all the mistakes you want, but I have to be perfect. And I think that's an unhealthy, unreal standard to set.

Participant 9 modeled ethical mindset:

> I am very leery of uses of generative AI [artificial intelligence] from the standpoint of some, not all models, most models are not respective of copyright law. And so personally, I have an issue with it until I know that every human being that contributed to that data set has been properly compensated.

Participant 11 included "Maintaining a perception of professionalism." The participants illustrated honesty, accountability, and realistic expectations importance, while emphasizing ethical decision-making, maintaining professionalism, and navigating the emerging challenges like technology ethics in music education.

Theme 2: Musical Skills: Exemplary Musicianship and Comprehensive Subject Matter Knowledge. Reflective thematic analysis generated Theme 2 from 35 codes organized into five categories. Universal among all 19 participants was the identification of musical mastery and broad instrumental skills as essential competencies. Participants consistently emphasized capabilities in modeling, instruction, troubleshooting, transposition, and providing extensions across all instrumental families, particularly musical instruments not considered the educator’s primary instrument.

Eighteen participants emphasized advanced proficiency on the educator's primary instrument, while particularly underscoring extensive instrumental knowledge as a necessity, including abilities to teach, model, and address the technical challenges for the various musical instruments. Participant 14 emphasized strong musicianship skills as a requirement, referring to student-teacher placement experience thusly:

> I think what I've discovered is number one: that they need to be a good musician. I don't have time to teach you how to play your instrument. I don't have time to teach you, you know, that Andante is this tempo or that. I had once had a student teacher that was totally conducting the wrong tempo […] It was just, in my mind, appalling that they didn't know what that tempo was […] But if there's one competency you need to be a, like, a really strong musician.

Participant 5 agreed, "First and foremost, they need strong musicianship. It's essential that they have mastery over their own instrument or instruments, but they also need a deep understanding of other instruments, especially in an ensemble setting." Participant 12 illustrated the importance of being competent on non-primary instruments as well:

> Focus on secondary instruments. As a percussionist, I've been doing that all my life, but I think that really makes a difference. You can obviously show off what you can do on your own instrument and use that as much as you can but I think it means some more to the kids when they can see you do it on their instrument or at least show them videos of people that can play their instrument at a high level.

Participant 17 stated clearly, “I think the ability to model and demonstrate on all of the instruments is very important.” Participant 1 concurred, describing how graduate school experiences provided vital skills for classroom effectiveness, emphasizing how continuing education supported diagnostic and prescriptive musicianship competencies, particularly through developing error detection abilities and expanding instrumental knowledge beyond their primary instrument:

> Something I got to do as a grad student that I wish had existed when I was an undergrad. I was working on a secondary instrument within a “zoo” band. I just wish we'd had

> something like that where the kids or the students that we are all playing secondary instruments. So, we have real struggles because we don't know the instruments as well as our primary instruments. We also had opportunities to teach each other. I just wish that had existed [in my undergraduate program], not only for me to be able to teach the instruments, but also so I'm working on error detection within the group going, "Something's not right," and working on how to recognize and to identify and get to the right to the source but also at the same time learning other instruments as I'm going about it. That experience made me a much better teacher, having had to work through those experiences on a different instrument.

Participant 16 reinforced secondary instrument skills and transposition importance, "The ability to transpose and just…switch to B♭ trumpet and go and, okay, the flutes need this, and then go to [the key of] C. I pride myself in being a good transposer from trumpet to all instruments." Participant 12 described learning secondary instruments for classroom competency and performative transposition skills necessity:

> When I was student teaching, whenever I was not in front of the ensemble, my band director made me play clarinet, and he said, "Every band's going to have a clarinet. You need to know how to play this thing because there's so many different fingerings and stuff like that." A lot of times, I'll play [in class]. I usually play the clarinet, trumpet or trombone with my students. I'm primarily a percussionist, but I spent a lot of time working on those [other instruments] cause it just helps. Cause I can, I can look at a saxophone part and transpose it and play it as if it's in bass clef. I use my trombone for that, or I'll use my trumpet and just pretend I'm reading bass clef…I think being able to model for the students and help them out [is a musical competency].

All 19 participants identified musical mastery as a foundational competency, establishing predominance for secondary instrumental music educators. Eighteen indicated proficiency importance on primary and secondary instruments, while five highlighted transposition skills, error detection, and cross-instrument family modeling and instruction abilities for enhanced student learning and ensemble development.

All 19 participants described abilities to lead ensembles and deploy varied musical solutions. Participant 12 exemplified advanced rehearsal skills:

> I think the other, the bigger the group, I think the faster the pacing I think a lot of young people coming out of college is their pace is too slow. And so just keeping in mind, I know you really want to fix this one thing with the clarinet section, but the trumpets have been waiting to play for five minutes. And they're starting to bounce off the walls. An easy way to deal with classroom management is just trying to keep things moving and just tell your players, okay, I know we didn't quite get that all fixed. We're gonna come back to that tomorrow, but we need to move on. And so let them know that you're going to come back to things.

Participant 3 articulated the diagnostic aspect of musical solutioning stating, “Exceptional listening skills are always important. Being able to find not necessarily the mistake, but being able to pinpoint where things are coming from. So, sort of a spatial awareness, isolating without distracting from the rest in the room.” Building on diagnostic abilities, Participant 8 described the prescriptive response within ensemble settings, indicating:

> If there's that trouble spot in your band music, you have to repeat it. You have to slow it down. You have to chunk it. Who cares if it's a four-measure phrase? Take it one

> measure at a time and go really slow, and make sure that the fingers are correct, and the valves are all that.

Participant responses effectively illustrated the iterative rehearsal process of identifying problems and applying specific corrective strategies. Participant 6 further described the process:

> Error detection is another area where I see newer teachers still honing their skills. They're often good at hearing big mistakes or glaring issues, but the ability to detect and quickly correct subtle errors, like slight intonation problems or phrasing that's just a little off, is something that gets better with experience. This also ties into how well they can give feedback in a way that's clear and helpful without overwhelming students.

Participant 4 also supported instrumental musical competency necessity for secondary instrumental music educators:

> They need to have enough, um, instrumental skills that they can teach concepts and identify where the problems are and come up with solutions for those problems. They need to be creative enough that they can that they can think outside the box that they existed in when they were in high school than they were in college. Because this game is always changing, and we always need to try to keep up with what might work better than what we've already done.

Participant 13 reiterated similar points, addressing diagnostic and prescriptive process competencies and primary instrument competency:

> I think one thing that you really have to be able to do is explain the same thing about 15 different ways. And because you're going to say it one way, that's crystal clear to you. And there's going to be that one kid in the back row, holding the trombone that looks at you like, you've got to be able to say the same thing in a different way, To give the kids

> an approach of something attainable to them…The other thing that I think you really need to have to do is you really have to be an expert on at least one instrument for them to see. That you can model and play…you have to be able to model for them so that they can have that option to hear exactly what it is you're going for.

Musical mastery emerged as foundational among all 19 participants, who emphasized proficiency on primary and secondary instruments. Several participants specifically highlighted transposition skills, error detection, and the ability to model and instruct across instrument families.

All 19 participants cited diverse and contemporary repertoire and resource knowledge as a core competency. Participant 17 emphasized inclusive selection practices, stating clearly, "I think being able to select repertoire that's inclusive. I think that's important to keep themselves aware of that all the time." Participant 2 demonstrated the importance of culturally responsive repertoire selection, explaining, "I know when certain Ceremonies are happening so that I can select music that will be appropriate at that time." Participant 6 illustrated how repertoire and resource knowledge must align with student skill development:

> Another big [competency] is the ability to select repertoire and materials that challenge students while being appropriate for their skill levels. You have to know what will push them musically without overwhelming them, and you also have to keep in mind what will engage them. Choosing the right music can be tricky, but when it's done well, it makes a huge difference in both student motivation and overall performance quality.

Participants highlighted aligning repertoire with student skill levels, as Participant 1 explained, "I work hard on choosing my repertoire and based on the students that I have in the class. And I feel like every year is a new challenge for every single class." Cultural awareness emerged as

another priority, with Participant 8 noting, “It's also about choosing repertoire and teaching methods that reflect a diverse range of musical traditions.” Additional considerations included enhancing student engagement and adapting to class dynamics.

Ten participants emphasized thorough understanding of music theory and creative practices as essential competencies. Participants emphasized multifaceted approaches that seamlessly connected theoretical knowledge with practical application. For example, Participant 7 utilized creative opportunities to engage and challenge students:

> I always mix in something that gets them excited, like letting my jazz kids noodle around with improvisation or challenging my concert band to play a section faster. The key is keeping it light while still drilling those core skills.

When describing competencies, Participant 17 explicitly stated the need for robust music theory and composition knowledge:

> I think being able to write out music - like I make adaptive parts for students that are not able to play the music, even the simpler version of the songs that they're playing. So, to have a strong enough theory background to figure that out a little bit. I think that's an important competency.

Ten participants identified music theory, analysis, and composition skills as core competencies, emphasizing the integration of theoretical knowledge with practical application. As Participant 18 observed, “Everybody I've run into is very prepared as far as knowledge, composing, music theory, music history.” Additional competency elements included improvisation, adaptive arranging, and ensuring accessibility for diverse student needs.

Theme 3: Pedagogical Skills: Facilitation, Instruction, and Student Management. The third theme responding to RQ2 encompassed nine categories representing 65 individual

codes. Participants identified essential pedagogical competencies spanning classroom management and instructional pacing, curriculum and instructional design, and assessment and data-driven practices. Additional competencies included group and collaborative learning strategies, student-centered engagement approaches, and technology integration for both traditional and remote learning environments. Participants also emphasized individualized and adaptive learning design alongside leadership skills for collaborative and creative projects.

All 19 participants universally identified classroom management and instructional pacing as critical competencies for effective secondary instrumental music instruction. Participant 18 stated, “Classroom management is huge especially in a band. Because you're giving them all noisemakers.” Participant 5 agreed:

> Classroom management is such a key skill for leading a band or orchestra, especially when you're working with secondary students in a big group. Keeping things productive, organized, and running smoothly can definitely be a challenge. You’ve got to set clear expectations for behavior and participation while managing all the different personalities that come with a large ensemble. It’s all about creating an environment where everyone can stay focused and make the most of rehearsal time.

Participant 12 also concurred, and reiterated the necessity of effective instructional pacing:

> I think a lot of times you can take care of a lot of the behavior stuff with just pacing and just trying to make sure that you're keeping a pace moving fast enough to keep the kids going and keep them engaged. Because I think that's a big one. It's hard to learn classroom management without being in a classroom.

During the focus group, Participant 13 further reinforced the need for educators to master pacing:

> Time management is huge, especially in the secondary music classroom. For middle schoolers, where I spend most of my time, you're dealing with raging hormones. Sweet kids one day, and the next, you're ready to hang them up by their toenails. In high school, it's a different challenge. You're up against their short attention spans—what is it now, like a minute and a half for a TikTok video? You could have the best momentum going in rehearsal, and then one kid smarts off, a disruption happens, or a student with special needs has an outburst for no apparent reason. Suddenly, you're scrambling to minimize the distraction and get back on track without having to rebuild the entire lesson from scratch.

Similarly, Participant 3 concluded that classroom management is "Absolutely important. The classroom management aspect with cell phones and wanting the kids to have tuners but not be distracted by their cell phones is one thing, but I think that's a little bit beyond that." Participant 5 illustrated the critical nature of mastering classroom management and student behaviors:

> Managing a large ensemble can be quite different from a general classroom. While many new teachers are used to leading smaller sections or individual lessons, dealing with 50 or 60 students at once in a band or orchestra rehearsal can be overwhelming at first.

Participant 12 further discussed the essential nature of effective management and pacing:

> Try to think. I think the other, the bigger the group, I think the faster the pacing I think a lot of young people coming out of college is their pace is too slow. And so just keeping in mind, I know you really want to fix this one thing with the clarinet section, but the trumpets have been waiting to play for five minutes, and they're starting to bounce off the walls.

All 19 participants emphasized the importance of classroom management and instructional pacing, with five highlighting the unique challenges of managing large ensembles and four stressing the role of pacing in maintaining student engagement and minimizing disruptions. Participants identified structured practice time adapted to individual student needs, maintaining adolescent focus, and establishing clear behavioral expectations as essential elements for effective middle and high school ensemble instruction.

Eighteen participants identified curriculum design and foundational instructional design abilities as essential competencies. One focus group participant captured the autonomous nature of music education curriculum and instructional design: “I guess you could say a curriculum, though in many cases you're doing that on your own and you're building your own.” Participant 2 expanded on the instructional design theme by emphasizing alignment between material selection and curriculum design:

> Being able to find resources to build a curriculum that matches your students' backgrounds and interests is so important. It’s also about being comfortable exploring different methodologies or textbooks and combining them to create something that truly resonates with your students.

Participant 15 illustrated an alternative perspective:

> When I'm thinking about instructional strategies, there's a lot of technique nested into that. It's really not sufficient for me to just focus on repertoire, but that technical development has to be a key part of my curricular planning […] I'm doing a lot of work around building curriculum for the future for innovative music pathways around career prep and things like that.

An administrator participant indicated the importance for admin to offer curricular support, "I'm providing professional development, providing guidance about curriculum, helping them with curriculum development, etc." Participant 17 discussed the ability to adapt curricula and design instruction responsive to student and community demands, stating, "I think that culturally responsive curriculum is here to stay, making an effort to include underrepresented voices." Of the 18 participants who addressed curriculum design and instructional planning, three emphasized the importance of aligning materials with student backgrounds and interests, while others highlighted the need to incorporate technical skill development, career-oriented pathways, and culturally responsive approaches to ensure meaningful and adaptable learning experiences.

Thirteen participants discussed the necessity for secondary instrumental educators to create and perform formal and informal assessment of individual student and ensemble progress. Participant 5 summarized:

> Teachers need to assess students' progress in a way that is both fair and helpful, which could be through formal methods like playing tests or informal. Like, we're always observing and constantly assessing during rehearsals. Being able to give constructive feedback that motivates students to improve without discouraging them is a real skill. It's important that they know how to use rubrics, and video submissions, or even peer assessment to provide students with a clear sense of where they're excelling and where they need more practice.

Participant 6 described various assessment methods as well:

> Assessment is constant, but it's not always formal. We do a lot of informal checks during rehearsals, listening to individuals or small groups, but we also schedule regular playing

> tests, both live and recorded. This helps us keep track of how everyone is doing, especially since not every student gets the same level of attention in a large class setting.

Five participants indicated the use of digital assessment tools, some of which provide automated grading. Participant 7 illustrated, "I still go in and give more personal feedback, but having that first layer of automated assessment helps me catch things I might not have time to listen for in every single submission." In contrast, three participants focused specifically on peer-based assessment practices. Participant 8 indicated, "I do believe in, and I tell the kids this too, if your partner next to you doesn't know what's going on, take the time and help them." Of the 13 participants who underscored the value of both formal and informal assessment, five cited the use of digital tools, while three emphasized peer-based assessment to enhance student learning. Participants underscored the importance of balanced and constructive evaluation methods, including playing tests, informal observational assessments, rubrics, and video submissions, to provide students with clear, actionable feedback that supports their musical development.

All 19 participants discussed specific skills related to facilitating group and collaborative learning. Participant 2 emphasized the importance of diversification and contingency planning: “diversify what you can do or having a plan of action if you have to do [something aside], do you have a student leader or something that you can put up in front?” Participant 7 addressed the imperative for educators to be culturally aware in group management settings, noting:

> It’s important to understand and be sensitive to the diverse backgrounds and experiences of your students. Being culturally aware and creating an inclusive classroom environment helps students feel valued and supported, especially in a community where there may be economic or social challenges.

Participant 17 agreed:

> They [teacher education programs] often focus on traditional pedagogies, but there may be, like, not enough emphasis on the diverse learning styles and abilities and strategies that teachers need to teach students, all students, whether it's with disabilities, cultural backgrounds, varying skill levels.

Participant 7 similarly supported the value of being able to differentiate instruction as part of group facilitation and collaboration:

> A competent music teacher knows how to differentiate instruction, whether that's through small group work, individual feedback, or customized practice assignments. It's about finding ways to challenge advanced students while giving the less experienced ones the tools they need to succeed without feeling overwhelmed.

Group and collaborative learning emerged as a shared priority among all 19 participants, with eight further emphasizing the necessity for culturally responsive and inclusive classroom management practices. Likewise, seven participants explicitly addressed the importance of differentiating instruction to accommodate diverse learning styles, abilities, and skill levels, ensuring that all students receive the appropriate challenges and effective support within the ensemble setting.

Sixteen participants underscored the value of student-centered engagement skills. Participant 19 indicated the requirement for rehearsal planning to include student-centered skills, "A lot of it has to be very student engagement driven." They continued:

> I think that that connecting with students has always been something that all teachers strive to do, but I think it's much more intentionally a strategy that they employ to keep the kids engaged. […] If your kids seem to be paying less attention in the classroom, it's because they're paying less attention in the classroom. It's not that you have lost the

> ability to engage them. It's that they're much harder to engage. So, there's a bigger push for, I think, that's definitely a competency that they've got to be able to create flashier and more engaging instruction.

Participant 12 illustrated the importance of rapidly establishing group rapport through shared experiences and identity, stating, “We're all band people. Let's just be band people and focus on being together and part of an ensemble. I really try to just build the kids as a group to be respectful to each other.” When addressing the requirement for educators to be responsive and adaptable to learning differences, Participant 10 observed:

> Educators might be prepared to teach students with different skill levels, but what about students with disabilities or those from underrepresented backgrounds who may not feel like they belong in a traditional ensemble setting? Finding ways to adapt instruction, repertoire, and even ensemble formats to make music education more accessible is something that takes intentionality and practice; and it’s often not emphasized enough in teacher preparation programs.

Student-centered engagement emerged among 16 participants, who emphasized several key approaches. Three participants stressed purposeful strategies for sustaining student interest, while four highlighted inclusive and adaptive methods for affirming every student's ensemble membership. Across responses, participants underscored fostering group rapport, responding to diverse individual needs, and creating accessible environments that build meaningful connections and ensure active participation.

While participants did not explicitly identify technology integration as a distinct competency, their discussions about using various technological tools implicitly demonstrated abilities to strategically select, combine, and utilize both general ICT and music-specific

technologies. All 19 participants provided insight into instructional uses of technology tools. Participant 9 discussed the critical questions educators must address when selecting technology: "What kind of equipment we would use what sorts of online materials would be approved for use? How would we deal with student accounts and personal security information security?" Participant 6 provided a characteristic example of the types of tools most participants chose to utilize:

> *SmartMusic* allows students to practice their parts at home with a digital accompaniment, and it gives them instant feedback on things like pitch and rhythm accuracy. Students can record themselves, submit those recordings to me or my staff, and we can review and give feedback. It's especially helpful for individual assessments and keeping track of student progress. We use *Sight Reading Factory* to keep sight-reading skills sharp, especially leading up to contests or festivals. It generates customized sight-reading exercises based on the skill level and instrumentation of the students. *YouTube* is a fantastic resource. We use it regularly to show students professional performances of the pieces we're working on. Sometimes I'll even find masterclasses or technique videos to supplement what we're working on in rehearsal.

Participant 12 provided an example of the types of technology tools provided by the school and how they leveraged them in the classroom, "We use *Canvas* to post assignments and share recordings. It's really helpful for students who miss class because they can find all their materials in one place. We also use *Schoology* for discussions and quizzes." Participant 14 indicated:

> *Harmony Director* is one of the most valuable tools I use in my classroom. It helps students hear tuning in a way that's difficult to replicate otherwise. I also rely on *TonalEnergy* [tuner] for individual practice assignments. It makes students more aware of

> their intonation and helps them make adjustments without relying on me all the time." Participant 4 used similar strategies, "Of course we have the projected tuners, the, uh, the tonal energy tuner with the smiley faces, all those things. I think probably everyone is doing these days."

Participant 6 also illustrated the judicious use of recording and playback technologies:

> Recording rehearsals is another big part of how I use technology without overloading students with homework. We record full ensemble rehearsals or sectionals, and then I upload the recordings for students to listen back to on their own time. This allows them to hear the group's sound and reflect on how their part fits in. It's not graded or required, but it's highly encouraged. Most of my students really enjoy hearing themselves play in the context of the ensemble, and it helps them develop a better ear for balance, tone, and phrasing.

Participant 12 indicated a similar use of recording technology:

> Sometimes I'll record the ensemble. I have a Zoom video recorder. So, I use that to record the ensemble, and then I can plug it into my computer and play it through the speakers. This is what you actually sound like. And then we're like, 'Oh, it's awful.'

Participant 2 makes recording and listening back a regular instructional strategy, "I do at least one or two audio-video recordings of them performing per 9 weeks." The judicious selection and integration of technology emerged as an implicit competency among all 19 participants, with examples that illustrate the competency required for educators to discern which tools enhance instruction while maintaining balance between innovation and pedagogical efficacy.

Six participants stressed the importance of being competent in multiple teaching approaches to meet diverse student learning styles. The focus on individualized, self-paced, and

remote learning strategies directly aligns with competencies in adaptive instruction. Participant 7 was clear about the competency, stating:

> A competent music teacher knows how to differentiate instruction, whether that's through small group work, individual feedback, or customized practice assignments. It's about finding ways to challenge your advanced students while giving the less experienced ones the tools they must have to succeed without feeling overwhelmed.

Participant 17 agreed, “There's so many various ability levels in the ensembles from anywhere from beginner to more advanced students and then balancing how to meet all of those challenges.” Participant 5 illustrated opportunities for individualized remote instruction: “When it comes to at-home practice, teachers often personalize assignments to each student's goals, focusing on their individual strengths and weaknesses.” However, other participants described significant barriers to individualized practice. Participant 18 offered a divergent perspective:

> We encourage individual practice, but we don't require it. […] I'd say 90 percent of our kids use a school-owned instrument—they don't have their own. It might be even more than that. So, we encourage them to practice, but it's difficult. We try to provide opportunities for them to play outside of class, but it's not always easy.

Participant 4 described a similar situation:

> At-home practice is difficult for my kids. The ones who aren't involved in a sport have a job and work to do on the farm. So, we have practice time here in class. I will set aside a three-minute chunk and say, 'Okay, you need to practice this thing right now,' and I'll wander around the room and redirect or help them with that. I've had to come to that over the past decade because you tell kids to go home and practice, and they don't.

Six participants emphasized competency in multiple teaching approaches, particularly differentiated, self-paced, and remote learning strategies. Participants illustrated how educators must adapt instruction to accommodate varying student learning styles, resource limitations, and external commitments while balancing individualized support with realistic expectations for practice outside the classroom.

Thirteen participants implied the competency of being able to lead creative projects by reporting a diverse range of project-based learning activities to reinforce musical skill development, research, and critical thinking. Projects extended traditional performance-based instruction, supplementing and reinforcing learning by incorporating listening exercises, self-assessment, composition, interdisciplinary exploration, and cultural diversity as key instructional strategies. Ten participants emphasized the role of critical listening in student learning. For example, Participant 5 illustrated the use of guided listening strategies, stating, “Listening to professional recordings of their repertoire is also a common teaching tool. It gives students a sense of style, phrasing, and dynamics, which can be hard to grasp just by reading the sheet music.” Similarly, Participant 15 highlighted the importance of expanding students' familiarity with non-traditional genres through structured listening sessions, “I try to do like a 'Future Friday,' where we listen to a non-traditional string performance or a more contemporary string performance; something that's hopefully more connected with a lot of the music they may be listening to.” Participants incorporated research-based projects as an instructional strategy to deepen students' engagement with music history, composers, and cultural traditions. Participant 14 required students to conduct composer research and program note writing as part of a chamber music unit, “We do a chamber music unit where they have to write program notes. They do background research on the composer and explore why the piece was written.” Participants

described projects designed to connect music with other academic disciplines, fostering interdisciplinary learning. Participant 2 described incorporating science-based projects to illustrate the connections between music and scientific concepts, “One week, we'll do an experiment, and the next, we'll explore how science and music go together.” Further demonstrating cross-disciplinary integration, Participant 2 described a bird call composition project designed to merge music with natural sciences and notation skills, “We did a project where we used *Noteflight* to transcribe bird calls, helping students make connections between pitch, rhythm, and sound analysis.” Five participants leveraged technology tools to facilitate composition, arranging, and music theory instruction, which facilitated opportunities for independent experimentation and creative exploration. “We've done projects using *Canva*, where students create digital portfolios with music selections that they analyze and justify.” Several participants designed projects aimed at fostering student autonomy and collaboration in composition and music creation. Participant 2 described an approach that encouraged students to develop original compositions through guided experimentation, “I found a lesson where all they had to do was recreate a piece of music, and then they started experimenting, creating their own music.” Participant 18 further underscored the value of historical and theoretical integration through composition-based projects, illustrating, “We explore music history and theory through projects that require students to research and analyze musical styles before composing their own.” Five participants discussed strategies for adapting project-based learning for remote instruction, leveraging technology to ensure continued student engagement. Similarly, Participant 10 emphasized the importance of adaptability in project-based instruction, “If we're ever in a situation where physical instruments aren't available, I'm prepared to shift to body percussion, digital music creation, or music theory and history projects.” The range and

complexity of projects described by participants underscore their ability to effectively design, manage, and facilitate multifaceted instructional strategies. The projects outlined in the study required competencies ranging from group facilitation to leading students in composing and integrating diverse perspectives.

Theme 3 encompassed a broad range of instructional competencies identified by all 19 participants, including classroom management, instructional pacing, curriculum design, assessment, and student engagement. Participants emphasized the necessity of differentiating instruction, incorporating culturally responsive teaching, and leveraging technology to enhance learning experiences, with six intentionally highlighting the need for adaptive teaching strategies in self-paced and remote learning environments. Notably, project-based learning, critical listening, and interdisciplinary connections emerged as key instructional strategies, reinforcing the importance of fostering creativity, autonomy, and deeper musical understanding.

Theme 4: Personal Skills: Disposition, Character, and Mindset. All 19 participants identified individual personal skills and characteristics as essential competencies for secondary instrumental music educators. Five distinct categories emerged from 22 individual codes. Participant 10 explained the importance of personal competencies:

> There's the soft skill of professional resilience. The shift from student teaching, where there's a safety net, to being the sole person responsible for a program can be overwhelming. The demands of the job—balancing teaching, rehearsals, performances, and administrative duties—can lead to burnout if new teachers aren't prepared to manage their workload and prioritize self-care.

Categories included reflective and growth-oriented practices, organization and problem-solving, creativity and passion for music, sustaining energy and balance with self-motivation, and adaptability and resilience.

Ten participants identified having a passion for music and flexing creative skills as essential competencies. Participant 6 stated, “It sets a great example for your students and keeps you energized and passionate about teaching.” Participant 7 indicated, “Many music educators are passionate about their work.” Participant 10 similarly agreed, “In my experience, new educators are eager and passionate.” Participant 1 supported, “I think we all choose this profession because of a passion for music, but it does take the stamina to stick with it.” Participant 4 suggested secondary instrumental educators must creative enough that they can that they can think outside the box, “Because this game is always changing, and we always need to try to keep up with what might work better than what we've already done." Participant 7 illustrated, “When it comes to teaching in a small school like mine, you've gotta be super flexible and creative with your strategies.” Participant 7 continued, “The passion for music and teaching is there, but without good strategies for work-life balance, it's easy to burn out, especially in the first few years.” The 10 participants emphasized how enthusiasm sustains long-term commitment to teaching while adaptability and innovative thinking enable educators to navigate evolving the challenges and engage students effectively.

Thirteen participants illustrated the critical nature of the ability to sustain energy levels, maintain lifestyle balance, and self-motivate. When describing the lifestyle of some secondary instrumental educators, Participant 14 illustrated, “I was going to go back to that life balance thing. If someone wants a partner, you've got to have a partner that understands the demands of a music teacher.” Participant 4 illustrated the importance of managing lifestyle balance, describing

the demands some music educators place on their schedule, “Band directors pride ourselves on being the first one in the parking lot in the morning, the last one to leave and I work so hard and so we don't have a life and then we can't sustain this.” Participant 5 agreed:

> New teachers might not be fully prepared for the amount of personal time the job can take up, especially if they don't have strategies in place to set boundaries and manage their workload. Burnout is a real issue, especially in those first few years.

Participant 11 was explicit:

> The problem is setting boundaries effectively. You're expected to be on call 24/7 for everything. I probably donate 100 hours of labor to my programs, because if I don't, then we won't be able to succeed - 50 minutes, five days a week is not enough.

Participant 7 illustrated the essential nature of effectively setting boundaries, self-nurturing, and energy management:

> With everything you’re juggling, classes, rehearsals, performances, trips, and maybe even extracurriculars like marching band, it’s easy to get burned out. Knowing how to manage your time effectively, set boundaries, and prioritize self-care is super important. Many music educators are passionate about their work, but without good work-life balance, it’s easy to overextend yourself. Setting clear expectations for your time and finding ways to delegate or share responsibilities is key to staying in the game for the long haul.

Participant 8 discussed energy management as well:

> I heard somebody call it bandwidth. I don't have enough bandwidth right now. And I was like, okay, I get that one. If you're using your bandwidth for many other things and to try and manage that one thing is just not enough either.

Participant 8 illustrated the importance of incorporating activities outside of career demands:

> I think that's one of the biggest is unplugging or finding other hobbies, finding other things that you like. If it's fishing, if it's hunting awesome. If it's woodworking, great. Home remodeling, even better. But, you know, finding something that's a hobby or a passion of yours that's not music related so that you have that equal balance of growth. And because you, once you, as you're working on that nonmusical thing, you can find connections to being musical and how do you are able to build up that side of your life while you're doing the other side of your life?

Participant 18 illustrated the importance of boundary setting, even with the self, as being a mechanism for career sustainability when expressing, “Like I don't listen to music in the car. I listen to podcasts or silence. Because I need the break.” Participant 4 offered similar guidance:

> I've been reading a lot about Benedictine, and he said you need to work when it's work time and you need to stop when it's not work time, and you need to have relaxation, and you need to have recreation. We have a real hard time with that. Stopping at the stop. But no one should be so vain to think that they can do it all or what they don't get done really matters that much.

The 13 participants emphasized the necessity of setting boundaries, managing workload expectations, and engaging in nonmusical hobbies to prevent burnout and ensure long-term success in the profession.

Nine participants discussed the requirement for secondary instrumental music educators to be adaptable and resilient. Participant 7 indicated the importance of adaptability, particularly through the dynamic changes in music education since 2019:

> I’d say the biggest changes since 2019 are the integration of technology, the shift toward individual and remote learning options, and the increased focus on flexibility, health, and

> mental well-being. It's made us all more adaptable, and I think the students are better for it—they're more independent and confident in their abilities, and we're all more prepared for whatever comes next!

Participant 17 stated, "I think adapt, being adaptable is really good." Participant 9 indicated, "I have come to believe over the years. It [resilience] is an inherent aptitude. However. I have seen people grow through their career and be able to adopt strategies that allow them to function better." Participant 9 illustrated the need to rapidly adapt at the classroom level:

> As we all know, the moment a lesson plan meets the class, the plan gets changed and it continues to change on the fly. And if you can get to the end of the class and you've met the goals, you set out for yourself. But very often that's not the case that I feel like we don't prepare our students very well to deal with that.

Participant 6 stated, "It's about being proactive and always thinking ahead, so you're not scrambling at the last minute." Participant 9, when talking about addressing program needs with administration, illustrated, "To be successful, you need to constantly be proactive and engage." Participants highlighted the need to navigate evolving educational landscapes, adjust lesson plans in real time, and proactively address both classroom and the programmatic challenges to ensure continued success.

Theme 5: Professional Skills: Multifaceted Music Program Leadership. Professional skills analysis yielded 42 codes representing competencies for secondary instrumental music educators. Six categories emerged based on code application areas, encompassing essential skills participants identified for optimal professional practice in response to RQ2.

Ten participants emphasized organization, coordination, and problem-solving as critical professional competencies. Participant 5 exemplified the importance of logistics and problem-solving skills in secondary instrumental music contexts:

> Organizational skills are essential for managing a successful program. An educator needs to handle a range of tasks, from scheduling rehearsals, performances, and trips to keeping track of inventory, budgets, and student progress.

Participant 18 stated, “I think they [music educators] have to have some organizational skills.” Participant 1 agreed, indicating, “I also think organization is a huge one being and part of that organization is being clear about expectations.” Participant 4 supported the competency, further stating, “They have to be organizationally minded enough that they can manage all the moving parts of being a band director.” Participant 10 illustrated specific reasons why organization is necessary, “Teachers who are well-organized can better manage the complexity of running multiple ensembles, keeping track of instruments and music, and preparing for performances and assessments.” Participant 13 agreed, “You have to be organized and you have to plan.” Participant 4 illustrated the need to be particularly adept at maintaining organization, “You must be a great note keeper. If you have any interaction with parents or kids when you're off the podium, you have to you have to log everything.” Participant 13 directly stated, “Knowing how to problem solve. Period.” Participant 7 addressed the need to be a strategic thinker as part of being a strong program manager:

> How do you plan for future years? How do you grow your program and keep students interested and engaged as they progress from middle to high school? New teachers often aren’t thinking this far ahead, but having a long-term vision is essential for building a strong program. Training in strategic planning and program development could really

> help teachers think more broadly about their role and how to grow their program over time.

Logistical management incorporates time management, scheduling, event management, and elements of the cross-cutting skill of communication. Participant 19 stated, “Teachers have to be able to handle scheduling as well.” Similarly, Participant 16 illustrated, “Just knowing what you have and your time management skill set is extremely important.” Participant 17 pointed out that to effectively manage travel logistics associated with festival performances, tours, field trips, and community engagement activities, educators must have strong communication skills across departments and stakeholders, “Outside of what you deal with your students, whether it's communicating with administration when you're communicating with other teachers, or parents. I think it is super important for the transportation department.” Equally important, secondary instrumental educators must create standard operating procedures for their program logistics, as supported by Participant 17, “Building out a handbook that provides all the answers. Super important.” Participant 8 summarized, “Your principal, isn't going to know that you're basically the CEO of a little, little itty-bitty organization.” Ten participants indicated the demand for secondary instrumental music educators to have a robust program management skill set, in addition to similarly supportive cross-cutting skills.

All 19 participants identified confident and ethical technology use as a professional competency that enables educators to enhance instructional delivery, foster student engagement, and support creative and analytical skill development while navigating the dynamic intersection of traditional practices and modern technological advancements. Participant 9 illustrated:

> I am very leery of uses of generative AI from the standpoint of some, not all models. Most models are not respective of copyright law. And so personally, I have an issue with

> it. Until I know that every human being that contributed to that data set has been properly compensated, I don't feel very comfortable about using it.

Alternatively, Participant 8 found using generative artificial intelligence (AI) as a tool for efficiency:

> I've introduced to some of the teachers […] and how that's not even just for lessons. It's if you want to create communication to parents about blah, blah, blah, you want them to check over an email that you're going to send. I think that those are a good use of AI, and you need a working understanding of it too.

While all 19 participants acknowledged some degree of technology integration, most concentrated on specific tools that facilitated positive student outcomes, with little regard for student privacy concerns. Participant 8 addressed the need to select technology tools based on what will help reinforce student outcomes, "I also used *SmartMusic* during COVID, but now I'm considering apps that provide interactive fingering exercises for homework assignments. This is a way to help students who can't take their instruments home." Participant 11 shared insights regarding the experiences of rural music educators during the period of fully remote learning:

> I live in a very rural, poor area. So, a lot of our students don't have Wi Fi at home…If I would have put up a video and said, write a paragraph about what you've heard, or, either they wouldn't do it, or I would get a sentence if I'm lucky…We don't have the infrastructure here for that much kind of contact virtual contact.

Most participants focused on technology's role in enhancing instruction, supporting student engagement, and facilitating creative skill development, while some emphasized the ethical considerations of emerging technologies and the need to balance accessibility, practicality, and student privacy concerns in technology integration.

Sixteen participants cited community rapport and change management as essential professional competencies. Participant 15 highlighted the interconnection between community engagement and instruction, stating, “So community building, that is instructional as well.” The ability to cultivate a program culture where students, parents, and colleagues feel invested was a recurring theme among participants. Participant 12 noted:

> Building the culture, I think it's a big one, we've talked about that quite a bit there towards the end. And that's a lot of it. Be yourself, and don't try to be somebody else. You are who you are.

Ten participants illustrated the importance of change management, particularly for new educators entering an established program. Participant 14 advised, “In your first year and such it'd be smart to think, okay, don't change anything at first, because you are the change, a different person in that program. So, wait. Don’t do everything at once.” Similarly, Participant 8 warned against making immediate changes, stating:

> I've known a lot of new band directors that go in and force everything to be done their way and the kids start to balk, and they lose everything and then they come calling me asking how to fix everything.

Another throughline in participant data was engaging with the broader school and local community. Participant 10 emphasized the role of parents in supporting music programs:

> Parents and guardians play a significant role in student success, and maintaining open lines of communication with them can be the key to fostering trust and support for your program. This is especially true in music education, where parents are often involved in fundraising, event planning, and even advocating for the program within the school community.

Similarly, Participant 5 reinforced the importance of cultural and community awareness, explaining, “A good secondary instrumental music educator also needs cultural and community awareness. Understanding the backgrounds and experiences of their students helps in creating a more inclusive and supportive environment.” Five participants described specific strategies for integrating their music programs into the larger school community. Participant 4 shared:

> My band students put the flags up every day and take the flags down every day, just as a service to the school. We pick up trash in the hallway. Just as a matter of course, when we see black scuff marks on the floor in the cafeteria, we'll run our shoe over and nobody talks about it, but everybody notices.

Participant 8 noted that music educators often operate in isolation, stating, “Musically getting to know your coworkers also—we, as band directors, live in a bubble, especially if you're the only one.” Significantly, participants acknowledged that music education is evolving, requiring flexibility in program offerings and instructional approaches. Participant 9 noted:

> There are programs that are founded not on just concert band. If that's not the ensemble that serves your population well—mariachi, modern ensemble, mixed ensembles—that kid who transfers into your district and you don't have an orchestra, what do you do?

Similarly, Participant 8 emphasized the shift toward a growth-oriented mindset in music education, explaining, “The growth mindset has changed drastically and we're having to teach growth mindset a lot and not have kids being concrete thinkers.” The nine participants who identified community rapport and change management as essential professional competencies widely agreed on the need for strong program culture, gradual change implementation, school-wide integration, and student-centered program adaptability. However, they differed in perspective on how soon to introduce changes, how deeply music educators should engage

outside of their programs, the role of parents, and whether adaptability should focus more on musical offerings or student development.

Ten participants identified coordination and resource management as competencies, highlighting the complex and multifaceted nature of program administration. Participant 6 emphasized the scope of program logistical demands:

> Running a large music program is like managing multiple projects at once. You've got concerts to plan, trips to organize, uniforms to order, fundraising to manage, and a staff to coordinate. It's not just about teaching—it's about keeping all the moving pieces working together. You have to stay organized, delegate tasks when needed, and still maintain a positive environment where students and staff are enjoying the process.

Seven participants identified financial management as a particularly critical skill, with participants stressing the need for transparency and organizational efficiency. Participant 4 noted, "You have to keep up with finances. You have to make sure you keep up with the receipts. You have to be transparent in every transaction." Similarly, Participant 5 discussed the administrative workload that many new educators may not anticipate:

> Many new teachers don't realize how much administrative work is involved in running a music program. It is not just about teaching music—you're managing a full-fledged operation. That means handling budgets, ordering instruments and music, organizing trips, planning performances, and coordinating with parents and administration.

Participant 7 observed, "Delegating tasks, trusting other people with parts of the program, and guiding students into leadership roles are all skills that many teachers learn on the job." Participant 10 noted that teacher preparation programs often lack sufficient training in essential administrative skills, such as budgeting, inventory management, fundraising, and advocacy,

despite their importance in sustaining successful music programs, particularly in underfunded districts. Five participants underscored the importance of instrument repair skills. Participant 3 expressed frustration at the lack of training in instrument repair, stating, “I will scream, about instrument repair until the day that I die because there are just so many things. I'm still trying to piece together a tackle box that has, water-key corks for all of the brass.” Similarly, Participant 15 stated, “Instrument repair skills, of course, are essential.” Participant 18 highlighted the importance of self-sufficiency in instrument maintenance, describing the challenges faced in rural settings, “As far as instruments go, it's good to be able to repair things on your own so you're not, especially where we live. Our nearest repair shop is over an hour away.” Four participants emphasized the need to balance finances, scheduling, and stakeholder coordination. Participant 6 captured the breadth of the responsibilities, describing music program management as “multiple projects at once,” a sentiment echoed by Participant 5, who noted that new educators may not fully grasp the extent of non-teaching duties. Some participants, like Participants 15 and 17 questioned whether it is a requirement for music education majors to take formal music technology courses, and expressed concern over a “total lack of preparation.” By contrast, other participants, like Participant 10, noted that younger educators are comfortable with basic technology.

Eight participants described various recruitment, promotion, and marketing competencies to support elective and extra-curricular classes. Participant 17 explained, “There are multiple goals that we have for the district, but one of them is always focused on recruitment and retention.” Participant 17 detailed specific efforts, saying:

> A lot of the recruitment and retention happens between high school to middle school or middle school to high school, excuse me, or elementary school to middle school. Say, for

> instance, we do an eighth-grade band day where all of the eighth-grade students go up to the high school, and it's very much student run. […] We also have marching band night where seventh and eighth grade students can come up and they can sit in the stands and they perform with the high school students and attend part of a rehearsal. We perform for the students within our schools. So sometimes we gain new students that way.

In addition to student engagement, participants cited public relations and community outreach as critical elements of successful recruitment and program promotion. Participant 13 highlighted the importance of visibility, "Understanding public relations a little bit more. […] And I've got a motto […] and that is 'If I'm not talking about my program, nobody is.' And I want people to know what's going on and what's happening." Participant 19's perspective aligns with Participant 13's assertion that teachers are "recruiting constantly and they're working constantly on helping students find success in their programs and to make sure that they're happy while they're doing it." In addition to recruitment, participants identified advocacy as a necessary skill to ensure music programs receive appropriate resources and administrative support. Participant 6 explained, "This might mean lobbying for funding, fighting for more rehearsal space, or making the case for hiring additional staff. Without the ability to effectively advocate, programs can struggle to get the resources they need to thrive." Participant 3 illustrated the difficulty of engaging with parents for advocacy and recruitment, "I think that's the biggest hurdle for a lot of music educators is finding a way to engage with parents and get them to see what it is that you're trying to do." While participants generally agreed on the importance of parental support, their perspectives on engagement varied. Some, like Participant 3, viewed it as a significant challenge, whereas others, such as Participant 19, regarded recruitment as a constant but manageable

responsibility. Educators in the focus group actively embraced public relations and promotion, while others, like Participant 6, prioritized financial and administrative advocacy.

Seven participants identified overseeing student safety, preventing crises, and managing people and resources across events as essential professional competencies. They regarded student-management responsibilities as among the most challenging aspects of a career in secondary instrumental music education. Four participants identified ensuring student well-being, both inside and outside the classroom, as a primary concern, especially in high-need school environments. Participant 8 underscored the foundational importance of student welfare:

> Especially in public, especially in an inner-city school. Like if a kid's not sleeping, if a kid's not eating, if a kid doesn't feel safe and cared for and loved, then they're not going to be paying attention to learning.

Four participants described the ability to de-escalate conflicts and maintain a safe, productive learning environment as a necessary skill. Notably, Participant 7 noted that “De-escalation techniques, like using calm language, giving students space, or redirecting their energy, aren't always part of teacher training, but they're super important in keeping a productive and safe classroom environment.” Similarly, Participant 8 acknowledged the importance of projecting positivity and maintaining an engaging presence, even for educators who may naturally be more reserved, “I think also just how to be positive and supportive and how to be that extrovert happy person when you're not an extrovert when you're an introvert.” Two participants specified safety concerns included in off-campus events, such as field trips and performances. Participant 2 emphasized the importance of active supervision, “So if you're taking kids on a field trip, you can't ignore them. You have to engage with them. You have to know where they're at all times because it's a safety thing.” To illustrate, three participants indicated the importance of proactive

documentation and liability awareness. Participant 4 observed, “If you have any interaction with parents or kids when you're off the podium, you have to, you have to log everything. We are such a litigious society that you're going to be called on something.” Though 12 participants did not provide insight into areas of student safety and proactive risk management, seven were descriptive in the need for educators to be prepared to manage the wide variety of student needs. Participant 6 noted that in response to growing awareness of mental health and inclusivity, “Music educators are now more aware of the need to create supportive, inclusive environments where students feel safe and connected.” Similarly, Participant 19 highlighted the importance of student belonging and engagement:

> There's a strong component to their classroom environment work. That involves making sure that the students are there, happy to be there, that they want to be there, that they want to return and that they feel like it's a very successful place for them to be at our high school.

Participant 12 described the diplomatic nature of working with parents, explaining:

> You have to be able to deal with conflict. Sometimes, you just have to sit there and take it as a parent vents and then once they've calmed down a little bit and had said their piece, be able to calmly explain what you're doing with your program and why you chose to do something some way.

Seven participants uniformly identified student safety, crisis prevention, and resource management as essential yet challenging professional competencies, with educators consistently emphasizing the need for de-escalation techniques, active supervision during off-campus events, and proactive documentation for liability protection. However, divergence emerged in the depth and specificity of safety concerns addressed, with some participants focusing on basic classroom

management while others identified complex issues including mental health awareness, creating inclusive environments, and diplomatic conflict resolution with parents in high-need school environments.

Eleven participants discussed the need for secondary instrumental music educators to develop strong digital competence, emphasizing technical proficiency as integral to both instructional and managerial responsibilities. Participant 18 acknowledged the necessity of basic digital literacy, stating, “It helps to have a good knowledge of how to work with a computer.” Similarly, Participant 2 underscored the need for familiarity with everyday tools, explaining, “Formatting a Word document, or creating a program, or writing a formal letter to a family.” For educators responsible for managing resources, Participant 16 highlighted the importance of music library organization, stating, “Music library management requires knowing spreadsheets or how to use the software you're given.” Participant 15 echoed the need for strong organization skills, discussing inventory management systems: “If you're talking about instrumental education, having an inventory management system that works for you. I use a *Google* spreadsheet. Some people use *Charms*.” Participants illustrated how technology plays a key role in instructional delivery, addition to administrative needs. Participant 17 observed, “I see them [music educators] using a slide show what they do now. It's just part of their teaching, their toolkit that they use.” Similarly, Participant 6 noted the integration of digital tools into pedagogy, “The combination of educational technologies and traditional resources helps us cover all aspects of music education—technique, theory, performance, and creative expression.” Three participants discussed the evolving role of AI and automation in music education. Participant 11 shared their experience exploring AI's impact, stating:

> I've done a lot of reading lately on AI and the things that it can do and how to think about AI, and I know I've got several friends who teach at universities across the country, and we're on *Facebook*, and we're always having discussions about what kind of assignment can I generate which will be AI-proof?

Participant 4 illustrated the administrative usefulness of AI, "Actually, ChatGPT writes most of my letters and then I will edit and augment them." Eight participants stated that holistic technical competence encompassed both equipment maintenance and technical troubleshooting. Participant 4 emphasized the need for music educators to assist with audiovisual management, stating, "We need to help out with the audiovisual in the auditorium." Seven participants indicated technical skill development was informal, as exemplified by Participant 15's experience, "I built our website using *WordPress* and I built an e-commerce platform using *WooCommerce* for our department and our nonprofit. So, I use that stuff all the time." Only three participants clearly addressed levels of awareness or use of AI platforms, while seven indicated the need for competency in a variety of administrative and creative software.

The findings of RQ2 revealed five distinct themes encompassing cross-cutting skills, musical expertise, pedagogical abilities, personal characteristics, and professional capabilities. The comprehensive scope of identified competencies reflects the demanding and multifaceted nature of secondary instrumental music education. Participant responses also provided insights into perceive music educator preparation relative to prescribed competency standards.

Research Question 3

What are the perceived knowledge gaps preventing music educators from being effective in the contemporary secondary instrumental music classroom? Twenty-six codes emerged from participant responses addressing RQ3, grouped into three themes according to their relationship

with secondary instrumental music educator experiences. Table 4 presents the coding schema, descriptions, and codes. To support reader comprehension, I provided detailed theme descriptions that offer holistic understanding of the data for those unfamiliar with secondary instrumental music education contexts. A more comprehensive list of the subcodes, codes, categories, descriptions, and rational for thematic alignment are viewable in Appendix H.

Table 4

Coding Schema of Knowledge Gaps in Secondary Instrumental Music Education

Theme	Description	Codes
Holistic Music Pedagogy	Holistic Music Pedagogy encompasses the comprehensive instructional expertise, technical musical skills, and student-centered approaches that enable educators to develop musicians through integrated teaching methods that address both technical proficiency and artistic expression while nurturing the whole student.	1. Secondary Instrument Knowledge, Modeling, and Transposition Skills 2. Student Behavior and Classroom Procedures 3. Elementary, General, and Vocal Music Pedagogy 4. Teaching Toolbox of Diagnostic and Differentiated Instruction 5. Building Intrinsic Motivation and Student Engagement 6. Comprehensive Ensemble and Genre Pedagogy 7. Ensemble Dynamics and Pacing 8. Nurturing the Whole Student 9. Mixing and Music Production 10. Accurate and Effective Assessments 11. Knowledge of Standards
Program Management and Leadership	Business Professionalism and Management Skills comprise the operational, interpersonal, and organizational capabilities required to successfully administer a music program, including stakeholder relations, resource management, and the administrative infrastructure that transforms musical expertise into a sustainable educational enterprise.	1. Relationships, Rapport, and Community Building 2. Program Logistics 3. Technology Integration 4. Instrument Repair 5. Effective Communication, Judgment, and Diplomacy 6. Budgeting and Financial Management 7. Public Presentation and Professionalism 8. Audio-Video Technical Skills 9. Delegation

Table 4 (continued)

Theme	Description	Codes
Personal Development and Resilience	Personal Development and Resilience encompasses the internal qualities, mindsets, and self-management capacities that sustain music educators throughout their careers, enabling them to balance professional demands with personal well-being while continuously adapting and growing amid the challenges of the profession.	1. Personalized Growth and Learning 2. Work Ethic, Grit, and Embracing Innovation 3. Emotional Readiness and Self-Identity 4. Flexibility, Adaptability, and Resilience 5. Boundaries and Balance 6. Honestly and Humility

Theme 1: Holistic Music Pedagogy. All 19 participants provided data related to perceived knowledge gaps in music education pedagogy. Table 4 displays the prevalence of each code within the data set, ranking the most frequently discussed knowledge deficits at the top of the theme. The theme encompasses 11 knowledge gap areas within Holistic Music Pedagogy, representing deficits in comprehensive instructional expertise, technical musical skills, and student-centered approaches.

Twelve participants identified secondary instrument knowledge, modeling, and transposition skills as the most significant preparation gap, particularly when working with instruments outside an educator's primary instrument family (e.g., brass, woodwind, percussion, strings). Participant 4 noted:

> One more instructional thing that I think we could focus on more is transposition. I have gotten to where I can play any line in the method book on whatever instrument I have in my hand and play the right pitches.

Participant 9 illustrated the gap in musical skills, stating, “My [partner] just got done with a student teacher who did not understand that not all the saxophones read the same music.” Nine participants identified declining proficiency in piano skills and sight-singing as a common

knowledge gap. Participant 19 indicated, “One of them is the expectation for piano skills: it’s something that's gone by the wayside.” Participant 16 reinforced the importance of singing competency, stating, “Even for instrumental classes, I think singing is majorly important.” Participant 14 emphasized that aural skills, while emphasized in coursework, often lack connection to practical teaching:

> The connection from when you have to take your ear training class to how that's important in your future career, really, when you're teaching beginners, and you sing ‘Row, Row, Row Your Boat’ or ‘Hot Cross Buns’ and sing in the key that they're playing in.

Offering a contrasting view, Participant 15 stated, “I think we're, from a traditional music ed standpoint, I think we're preparing people really well. But when it comes to all the other stuff that comes up, I think that they are not super well prepared.” Participant 19 illustrated how vocal skills have been deprioritized, sharing, “Honestly, the expectation for sight reading and sight singing has gone by the wayside, too.” Thirteen participants reported perceived performance skill deficits in instrumental or vocal areas. Performance skill deficits emerged as widespread preparation concerns, affecting educators' abilities to model, demonstrate, and teach across diverse instrumental and vocal contexts.

Eleven participants identified classroom management as an area where new teachers lack preparation. Participant 7 reflected on the unique challenges of managing an ensemble, illustrating, “Most have a basic understanding of classroom management, but when they're faced with 50+ students, all playing different instruments, managing that can be a lot more overwhelming than they expected.” Participant 17 agreed, emphasizing inadequate preparation for real-world classroom disruptions, sharing, “I don't think anyone really ever prepares you for

classroom management strategies enough." Participant 13 described the unpredictability of student behavior and the need for quick problem-solving:

> And suppose one kid smarts off or causes a disruption, or you have that one sped kid that just blows up for no reason in the middle of your thing. In that case, you're going to spend more time trying to figure out, okay, how can I minimize that distraction and get back to what we were doing without having to start the entire lesson and build it back up.

Nine participants identified differentiation as an underdeveloped skill among new educators, particularly in managing diverse skill levels within an ensemble. Participant 5 explained, "Where I sometimes see challenges, though, is in differentiated instruction. It's one thing to teach a whole ensemble, but it's another to address the varying skill levels of individual students." Participant 6 noted educators often enter the field with strong musicianship but struggle with tailoring instruction, indicating, "They often have the musical knowledge but haven't yet refined the strategies for how to teach specific skills—whether that's breaking down complex techniques for beginners or helping advanced students refine their sound." Participant 16 described struggles for early-career professionals specifically:

> You still need to reach all the kids in the classroom, so having strategies to be able to differentiate from your highflyers to your students who might just be beginners or maybe they are like second- or third-year players but hadn't had previous success, so they're slightly disengaged.

Seven participants cited student motivation and engagement as essential skills requiring additional development. Participant 13 described the evolving challenges of student engagement: "You're fighting their attention spans, which is about what? A minute and a half of a TikTok video now." Participant 3 observed a broader cultural change affecting student buy-in, stating, "I

think I've seen a significant drop in student buy-in since then. It's the mindset of 'This isn't fun all of the time, so then it's not fun anymore.'" Eight participants identified perceived shortcomings in pedagogical knowledge related to contemporary music education trends, including non-traditional ensembles and music technology. Participant 9 explained that some music programs are moving into incorporating a wide variety of genres and ensembles:

> There are programs that are founded not on just concert band. If that's not the ensemble that serves your population well—mariachi, modern ensemble, mixed ensembles—that kid who transfers into your district and you don't have an orchestra, are you just going to hand them another instrument and tell them?

Participant 15 emphasized preparing educators for diverse musical settings, stating, "How do you teach music technology? How do you teach mariachi? Mariachi has blown up in my area. Where's the preparation for that?" Participant 17 noted curriculum should incorporate deeper historical and cultural awareness: "I think taking more time to learn about the background of songs and presenting that to students, the background of composers, things like that." Six participants highlighted newer educators often struggle with assessment strategies and curriculum alignment. Participant 17 expressed concern about pre-service teacher training in assessment, sharing, "They might not be adequately trained in effective assessment techniques […] What's a way to assess students that's meaningful? What's a way to assess students that encourages growth?" Participant 9 described the challenges with understanding state standards:

> We'll have discussions about standards, and she doesn't know the standards for her state. Do you deconstruct them? How do you use them in a conversation with an administrator? Why are you teaching this? Why is what you're doing right now important?

Among the 19 participants, 12 highlighted perceived knowledge deficiencies in secondary musical instrument skills, six did not mention the skillset, and only one offered a divergent view. Knowledge gaps within Theme 1 were universally reported across all participant responses. Secondary instrument proficiency appeared most frequently, with 12 participants identifying it as a critical preparation area for instrumental music educators.

Theme 2: Program Management and Leadership. Fourteen participants contributed data about perceived knowledge gaps associated with program management and leadership. Nine distinct knowledge gap areas emerged within the theme, addressing deficiencies in business professionalism and management skills including stakeholder relations, resource management, and administrative infrastructure. The gaps represent preparation deficits in operational capabilities required to transform musical expertise into sustainable educational programs.

Twelve participants identified being able to confidently and effectively manage relationships with stakeholders outside the classroom as a significant gap. The stakeholder management code includes interactions with administrators, parents, and other faculty members, and navigating logistics such as scheduling, budgeting, and advocacy. Participant 5 described a challenge many new educators face thusly, “They often come into the job with solid communication skills when it comes to their students, but navigating relationships with parents, administrators, and the broader community is something they usually learn on the job.” Participant 7 emphasized the learning curve involved in external relationships, stating, “There's a learning curve to managing relationships with stakeholders outside the classroom, especially when it comes to fundraising or dealing with conflicts over scheduling.” Participant 13 underscored effective parent communication:

> You need to inform parents of things more than a week out. You must get it on the family calendar at the beginning of the year. You need to set your schedule and not deviate from it and be wishy-washy.

Ten participants discussed time and logistics management as a perceived knowledge gap. The reality of balancing multiple ensembles, coordinating performances, and ensuring smooth operation of a music program presents challenges for which many new teachers lack preparation. Participant 7 explained:

> Time management becomes a huge issue because running a music program is not just about teaching—it's also about organizing performances, rehearsals, trips, and balancing all those administrative tasks. New teachers aren't always prepared for the volume of non-instructional work that comes with the job.

Nine participants cited financial and resource management as a related gap, including budgeting, inventory tracking, and fundraising. Participant 9 illustrated the responsibility music educators assume as the primary fiduciary for elective and sometimes extra-curricular activities: "You're responsible for thousands and thousands of dollars' worth of equipment. How, if your school system does not actually have an inventory system, how are you going to do it?" Participant 10 pointed out the lack of emphasis on financial skills in teacher preparation programs, stating, "Skills like budgeting, inventory management, fundraising, and advocacy aren't always emphasized in teacher preparation programs." Participant 12 warned about consequences of poor financial management, recalling advice from a professor: "One of the fastest ways to get fired is to screw up the money. So, you have to be able to manage that." The breadth of program management deficits, spanning stakeholder communication, time management, and financial

responsibilities, highlighted the administrative complexity of secondary instrumental music education beyond classroom instruction.

Eight participants identified instrument repair knowledge as a preparation deficit, emphasizing that instrumental music educators need basic skills for diagnosing and repairing common instrument problems. Participant 3 expressed frustration at the lack of preparation in instrument repair: “I will scream about instrument repair until the day that I die because there are just so many things.” Participant 17 agreed, sharing, “Instrument repair is a big one. […] Yeah, they don't do that [in teacher preparation programs]. I think instrument repair would be good.” Participant 13 highlighted the necessity of troubleshooting skills in performance settings, stating, “Problem-checking an instrument, if you will, like before a parade, is a very valuable skill, and being able to know that, okay, I can fix this if I do this. Yeah, that's huge.” Basic instrument repair competencies were identified by participants as essential yet underdeveloped skills necessary for effective music program management.

Ten participants identified technology integration in program management as an area of deficiency. Participant data has suggested that while younger educators often demonstrate proficiency with basic instructional and ICT technology, they may lack experience with administrative and organizational tools. Participant 15 described the perceived gap, stating, “There are just so many tech things that I think people are really unprepared for. And that's a huge disservice being done by collegiate programs because it's the 21st century, and those are skills they need.” Participant 10 emphasized the increasing role of digital tools in education:

> While many younger educators are comfortable with basic tech, like presentation tools or music notation software, they often lack experience with specialized platforms like

SmartMusic or tools for remote learning. Given the increasing role of technology in education, this can be a significant hurdle.

Participant 14 highlighted assumptions about new teachers being tech-savvy: “Technology moves so fast now that I think we've almost given up. We make the assumption that everybody coming out of a teacher prep program understands how to do technology better than we do. And maybe they don't.” Technology integration gaps focused on administrative and organizational applications rather than fundamental instructional technology skills among the ten participants who cited it as deficit.

Six participants discussed leadership and delegation importance, particularly in developing student leaders and fostering collaborative environments within school communities. Participant 7 emphasized the necessity of trusting others with responsibilities, illustrating, “Delegating tasks, trusting other people with parts of the program, and guiding students into leadership roles are all skills that many teachers learn on the job.” Participant 4 reinforced the need for music educators to actively participate in broader school culture: “We need to do everything that we can to be part of the regular school community rather than just the fine arts folks.” Participant 11 emphasized interdepartmental collaboration importance, indicating, “That brings up the sort of cross-departmental or cross-collaboration between teachers and other departments or areas.” Participants identified leadership and delegation skills as preparation deficiencies impacting both student development and school community integration.

Five participants did not contribute to Theme 2, instead focusing on perceived knowledge gaps associated with other themes. Three participants expressly focused on music and pedagogy skills, omitting contributions to program management and leadership areas. Program Management and Leadership preparation gaps were thus identified by 14 of the 19 participants.

Theme 3: Personal Development and Resilience. Data from 14 participants contributed to the development of Theme 3, encompassing six codes illustrating elements of personal development and resilience as perceived knowledge gaps for secondary instrumental music educators. The Personal Development and Resilience theme represents deficits in internal qualities, mindsets, and self-management capacities that sustain music educators throughout their careers. Six knowledge gap areas emerged, addressing preparation deficiencies in balancing professional demands with personal well-being while continuously adapting and growing amid professional challenges.

Ten participants noted self-awareness and a growth mindset as frequently cited inadequacies in music educator preparation. Several participants emphasized recognizing personal strengths and limitations while continuously working toward improvement. Participant 16 stated:

> I suppose the most important thing is self-awareness. You need to know what you know and what you don't know. And know what you're going to need to know, which is also sometimes hard cause you don't necessarily know, going into your first position, exactly what you're going to be doing.

Nine participants identified professional resilience as a major challenge, noting new educators often struggle with job pressures. Participant 10 stated, "Perhaps the most glaring gap is in professional resilience and emotional readiness." Participant 6 elaborated:

> Resilience really gets tested once they're managing all the complexities of a full music program. Things like balancing classroom expectations with administrative duties or handling large and diverse groups of students can feel overwhelming, so while they come

> in with the mindset to grow, they often need time to build up the resilience and coping strategies to manage the demands effectively.

Participant 15 noted a flexible, adaptable mindset as essential for maintaining professional confidence:

> I think being really flexible and having a growth mindset that I can teach anything. And yes, it might be hard, and yes, it might put me out of my comfort zone, but I can do this, and I will reach kids I wouldn't otherwise reach, and that is a net positive.

Eight participants cited work ethic and time management as another perceived critical gap, highlighting the demanding nature of the profession. Participant 19 stated:

> One of the biggest things that I think our program needs to re-instill is that work ethic. It's really creating an awareness, not only of the rigors involved in the day-to-day work of instruction in music but also the needs in, especially in the early years, of plugging in the extra time to be fully prepared for instruction every day.

Participant 4 echoed the challenges associated with work-life balance, indicating, "Band directors pride ourselves on being the first one in the parking lot in the morning, the last one to leave. We work so hard that we don't have a life, and then we can't sustain this." Participant 7 noted many new teachers struggle with boundaries, leading to exhaustion: "Many new teachers throw themselves into the job, but they often find it hard to set boundaries and manage their own time effectively, which can lead to burnout." Six participants highlighted emotional intelligence and professional boundaries, emphasizing difficulties new educators face establishing authority while maintaining positive student relationships. Participant 13 stated, "And I think understanding that you're a teacher, not a friend. At least in my experience with newer teachers, that has been a struggle—having that authority without really having the life experience to back

it up." Participant 18 emphasized effective music educators must focus on whole students rather than just musical outcomes:

> I teach children. I don't teach music. […] I do that through music, but once I made this switch in my head, as far as I care about what these individual children are learning, I need to be better than that.

Five participants identified handling failure and embracing mistakes as necessary yet often unaddressed aspects of personal development in music education.

Among the 14 participants who provided data for Theme 3, several contributed multiple quotes, and perspectives, with Participant 15 offering five vivid quotes about perceived knowledge gaps in personal development and resilience. Participant 14 highlighted unrealistic expectations for perfection in contemporary teaching environments: "Being okay with failing. There's so much perfection nowadays that everything's got to be perfect." Four participants highlighted problem-solving and adaptability as essential skills many new educators lack upon entering the profession. Participant 2 shared an example of a student teacher struggling to pivot when faced with unexpected challenges, stating, "I had a student teacher who could not deviate from the plan. If something happened, they could not pivot, and I'm like, okay, what could you have done?" Participant 17 noted adaptation abilities as crucial for running successful programs: "If you want to be able to have some oboes or bassoons in your program, you need to do that yourself." Fourteen participants were united in identifying underpreparation in personal development and resilience, particularly emphasizing the need for adaptability, problem-solving skills, and acceptance of imperfection as essential competencies that new educators often lack, with some participants providing multiple examples of student teachers and novice educators

struggling to pivot when faced with unexpected challenges, reflecting the pervasive personal development deficiencies identified throughout the study findings.

The descriptive design study findings provided a comprehensive picture of contemporary secondary instrumental music education through a three-part framework encompassing teaching strategies, professional competencies, and knowledge gaps. The research revealed how educators successfully integrated traditional teaching methods with student-centered approaches, reflecting an evolution in the music educator's role from conductor to coach and facilitator. The competency framework outlined essential skills across cross-cutting, musical, pedagogical, personal, and professional domains, establishing a foundation for comprehensive teacher preparation programs. The identified knowledge gaps highlighted specific areas requiring attention in music teacher preparation programs, particularly in holistic pedagogy, program management, and personal development. Collectively, the findings provided a substantive foundation for evaluating alignment between current preparation programs and the actual demands faced by secondary instrumental music educators in contemporary educational settings.

Evaluation of the Outcomes

The qualitative descriptive study explored instructional strategies in secondary instrumental music classrooms (Grades 6–12), competencies required to enact those strategies, and perceived preparation gape that remain. At its core, the study's conceptual framework illustrates the need to enhance music teacher preparation, particularly through the lens of recent educational changes. The Conceptual Framework guided the analysis, with Millican’s (2008) knowledge-and-skills model, Kugelman’s (2021) critique of undergraduate programs, and instructional-design principles that begin with learner needs and eliminate superfluous content (Piskurich, 2006). Recent scholarship on technology, culturally responsive teaching, and

pandemic-era shifts supplied contemporary context (Hash, 2021; Joseph & Merrick, 2021). Instructional design methods emphasize initiating learning design by analyzing learner needs and focusing preparation on required knowledge, skills, and competencies while eliminating unnecessary elements to aid effective skill development (Piskurich, 2006). Thematic findings are presented below, structured in alignment with each research question.

Research Question 1

The findings of RQ1 revealed four fundamental transformations in how secondary instrumental music educators approach contemporary instruction, collectively demonstrating an evolution from traditional conductor-centered models to holistic, student-centered educational experiences. The first finding revealed that secondary instrumental music educators have fundamentally transformed their instructional approach by integrating extended pedagogical strategies into traditional rehearsal settings, with participants expanding rehearsal instruction to enhance musical understanding while emphasizing long-term growth, reflection, and social-emotional support, supported by research validating holistic musicianship, technology integration, and culturally responsive pedagogical models (Crawford, 2017; Daly, 2024; Joseph & Merrick, 2021; Mantie, 2024; Piskurich, 2006; Salvador & Culp, 2022; Váradi, 2022; Zhao et al., 2021).

The second finding established that contemporary music educators have fundamentally expanded their pedagogical scope by intentionally incorporating non-performance instructional components to develop comprehensive musicianship through listening assignments, digital music creation, and interdisciplinary projects, consistent with literature documenting broader instructional variety including written assignments, technology creation, performance observation, and musical analysis (Cayari, 2018; Hatch, 2023; Lewis, 2020; Spieker, 2020;

Urbaniak & Mitchel, 2025). Comprehensive approaches to musicianship development indicate that contemporary music education has evolved to encompass the full spectrum of musical understanding and creative expression (Jonassen et al, 1990).

The third finding revealed that music educators have fundamentally reconceptualized performance events by transforming them from singular showcases into multifaceted instructional experiences serving as assessment, motivation, validation, reflection, and community connection purposes, with findings supported by Daly (2024) while diverging from dominant literature positioning performance as the primary organizing element (Cayari, 2018; Mantie, 2024; Miksza et al., 2010; Powell, 2019) and reflecting pandemic-accelerated transformations that forced reconsideration of concert centrality.

The fourth finding demonstrated that music educators have deliberately evolved their role from authoritative "conductor" models to student-centered facilitators who prioritize collaboration, coaching, and shared leadership, supported by research from Edgar (2017), Orzolek (2021), Đurđanović et al. (2018), Hatch (2023), de Bruin (2021), and Calderon-Garrido and Gustems-Carnicer (2021), with participants describing how pandemic developments shifted power dynamics toward student agency and equity, illustrating the conceptual framework's emphasis on redefinition as essential for preparation programs developing competencies aligned with the new paradigm.

Research Question 2

The RQ2 findings revealed contemporary competencies for effective educators across five domains, exposing extensive skill sets and illuminating the multifaceted nature of secondary instrumental music education careers. The first finding showed how cross-cutting skills are integral for music educator success, supported by Hill et al. (2023) and Conway (2023) while

diverging from earlier categorizations (Millican, 2008; Robinson, 2020) and aligning with literature advocating expanded teacher preparation (Blackwell, 2018; Denis & Stavrou, 2020; Hanson, 2019; Miksza et al., 2010), with the conceptual framework highlighting the necessity of programs synthesizing personal and professional competencies (Millican, 2008; Kugelman, 2021). The integration of cross-cutting skills with musical expertise indicates that effective music education programs can no longer rely solely on performance-based training but must embrace a more holistic developmental approach.

The second finding illustrated how musical competencies remained foundational but must expand to include broader, more adaptable skills, with participants emphasizing fluency across multiple instruments, repertoire diversity, and applied music theory to support inclusive instruction, as documented by research confirming modern educators must blend classical competencies with contemporary applications (Kladder, 2020; Kugelman, 2021; Rohwer & Henry, 2004; Sorenson, 2021). The third finding showed how pedagogical skills were increasingly essential for supporting diverse student needs, integrating technology, and designing adaptable learning experiences, with participants describing digital platforms, project-based learning, and non-performance assessments, supported by research identifying pedagogy, motivation, and classroom management as enduring pillars (Matthews & Johnson, 2019; Reigier, 2024; Rohwer & Henry, 2004), technology integration benefits (Hanny et al., 2021), and pandemic-era synchronous and asynchronous strategy requirements (Calderon-Garrido & Gustems-Carnicer, 2021; Millican, 2008; Hash, 2021). The fourth finding established that personal skills function as critical foundations for instructional effectiveness and career success, resonating with research by Denis and Tucker (2021), Miksza et al. (2010), Haning (2021), Hanny et al. (2021), Robinson (2020), and Stavrou (2020), with the conceptual framework

recognizing personal competencies as increasingly critical after pandemic disruptions requiring unprecedented adaptability. The fifth finding showed how professional competencies encompassed entrepreneurial skills and program leadership, with participants emphasizing organization management as essential for sustainability, representing a more expansive competency set than previously explored (Blackwell, 2018; Denis & Tucker, 2021; Miller et al., 2017) and requiring heightened complexity in administrative demands, particularly financial literacy, supported by research acknowledging organizational skill criticality (Demirbatir, 2021; Haning, 2021; Hanson, 2019; Millican, 2008; Rohwer & Henry, 2004) and the conceptual framework's expanded view of entrepreneurial necessities (Millican, 2008; Kugelman, 2021).

Research Question 3

The three findings of RQ3 illustrated how pedagogical preparation gaps in secondary instrumental music education continue to undermine teacher effectiveness despite years of research identifying specific deficiencies, revealing three critical areas where preparation programs fail to adequately prepare educators for contemporary practice demands. The first finding revealed music pedagogy shortfalls in secondary instrument proficiency, classroom management, and pedagogical knowledge, supported by research from Denis and Tucker (2021), Millican (2008), Miksza et al. (2010), Rohwer and Henry (2004), Sorenson (2021), Powell (2019), Kugelman (2021), and Kim (2020) showing music education programs often prioritized primary instrument skills at the expense of secondary instrument proficiency and comprehensive subject matter knowledge. The continued existence of documented deficiencies suggests that despite extensive research identifying preparation shortcomings, systemic changes in music teacher education have not adequately addressed contemporary classroom realities.

The second finding showed how entrepreneurial and administrative competency deficits remain in preparation programs, with participants describing struggles with budgeting, logistics coordination, instrument maintenance, stakeholder communication, and administrative technology, consistent with literature by McNeill and McPhail (2020), Denis (2019), Groulx (2016), Blackwell (2018), and Miller et al. (2017) highlighting insufficient preparation in professional and administrative competencies, while entrepreneurial skills remain an emerging research area (Cheng & Lam, 2021). The persistence of administrative preparation gaps indicates that music teacher education must evolve to address the full spectrum of professional responsibilities that contemporary educators face beyond classroom instruction.

The third finding illustrated potential personal development and resilience knowledge inadequacies, with participants emphasizing shortcomings in self-guided growth practices, emotional readiness, and work ethic (Denis & Tucker, 2021; Millican, 2008), viewing personal traits as foundational to long-term success rather than peripheral, supported by Robinson (2020), Denis and Tucker (2021), Haning (2021), Matthews and Johnson (2019), and Stavrou (2020) who found music educators often graduated with limited readiness for multifaceted professional roles, highlighting the conceptual framework's need to address personal skill development in teacher preparation as competency requirements evolve for contemporary classroom effectiveness.

Overall, the study findings illustrate the alterations in secondary instrumental music education over recent years and how the changes have contributed to the need to reconceptualize the instructional strategies and competencies required for teacher effectiveness in the contemporary classroom. In addition, the findings exposed specific areas of potential shortfalls in

music educator preparation. The implications emerging from the findings further reveal opportunities for improved educational practice in secondary instrumental music education.

Implications and Recommendations for Practice

The study findings carry important implications for music educator preparation, professional learning, and instructional practice in secondary instrumental classrooms. Drawing on the conceptual framework—which situates music educator competencies, preparation, and effectiveness within the evolving contexts of social change, technological integration, and post-pandemic education—the following section outlines actionable recommendations grounded in participant insights. The convergence of traditional pedagogical models with innovative, student-centered strategies revealed a pressing need for more adaptive, practice-based teacher preparation programs. Furthermore, recurring themes across participant interviews suggest that university programs and professional development initiatives must reorient toward experiential learning, reflective practice, and culturally responsive instruction. The recommendations that follow are intended to bridge existing knowledge gaps and support the development of effective, resilient music educators equipped to meet the diverse demands of modern secondary instrumental music settings.

Research Question 1

What instructional strategies do secondary instrumental music educators and arts administrators believe can aid secondary instrumental music educators to help their students effectively acquire musical skills and knowledge in the secondary instrumental music classroom? While traditional large ensemble rehearsals continue to anchor instruction in secondary instrumental music classrooms, educators are increasingly incorporating modern pedagogical strategies to enhance student engagement, personalize learning, support remote instruction, and

deliver a more comprehensive musical education. Study participants used modernized instructional strategies, including formal and informal individualized assessment and feedback, peer collaboration, and self-paced learning, to deepen musical understanding and elevate individual musicianship, thereby enhancing ensemble performance without compromising rehearsal quality. Recent literature supports the transition from an ensemble-driven focus toward greater emphasis on individual student growth. For example, Mantie (2024) emphasized the importance of integrating personal musical development within organized instruction, while Hatch (2023) and Scherer (2021) indicated peer analysis, expressive interpretation, and democratic rehearsal methods as effective instructional strategies, all which participants reflected in their-responses. Similarly, Piskurich (2006) and Daly (2024) described rehearsal as a multidimensional learning environment, pointing to the importance of integrating expanded pedagogical approaches that develop technical skills, musical understanding, and individual expression within ensemble settings. Therefore, shift in educational focus to a more holistic educational experience signals the end of students being mere cogs in an ensemble machine and the beginning of cultivating independent musicians who can think, create, and express themselves, fundamentally transforming music education from performance factory to artistic incubator. The alignment between participant practice and scholarly literature underscores a meaningful shift in ensemble pedagogy that extends naturally into the thoughtful curation of materials designed to engage students as individuals.

Consistent with the first finding, modernizing the instrumental music classroom entails fostering student engagement through strategic selection of repertoire and instructional resources responsive to students' individual needs and culturally relevant experiences. Study participants implemented individualized approaches by incorporating carefully chosen technology tools,

culturally responsive repertoire, adaptive instructional materials, and social-emotional learning activities. Furthermore, participants described instructional decisions as a commitment to meeting students where they are—academically, culturally, and emotionally—while still maintaining ensemble rigor. Research by Salvador and Culp (2022) and Váradi (2022) affirmed the effectiveness of culturally responsive pedagogy and social-emotional strategies in supporting student musical development, reinforcing the participants' efforts to create inclusive and student-centered ensemble environments. Overall, music educators are recognizing that one-size-fits-all repertoire and rigid teaching methods have been systematically excluding students, and by embracing culturally responsive, technologically enhanced, and emotionally intelligent approaches, they are not just improving engagement, they are democratizing musical excellence (Salvador & Culp, 2022; Váradi, 2022). The transformation from exclusionary traditions to inclusive excellence represents nothing less than a fundamental reimagining of what instrumental music education can and should be—proving that rigor and accessibility are not opposing forces, but complementary pathways to musical democracy. To further support individualized learning, many educators also leveraged technology to facilitate self-paced, differentiated, and remote instruction (Crawford, 2017; Henriksen et al., 2020; Joseph & Merrick, 2021; Zhao et al., 2021).

Music technology has played a significant role in the first finding, playing a role in expanding educators' capacity to deliver individualized, self-paced activities that support the development of musicianship, creativity, and technical skill. Participants described leveraging carefully selected digital tools and platforms to create differentiated learning experiences, allowing students to progress at their own pace while engaging in creative, relevant, and emotionally supportive instruction. Recent scholarship validates these practices, affirming the importance of integrating technology to enhance instructional effectiveness (Ismail et al., 2022).

Joseph and Merrick (2021) identified technology as a foundational component of 21st-century teaching and emphasized its capacity to strengthen educator-student connections—an approach reflected in participant strategies involving information and communication technologies. Similarly, Zhao et al. (2021) and Crawford (2017) highlighted the potential of classroom technology to increase engagement and foster creativity, reinforcing participants' efforts to adopt tools that stimulate individual expression within ensemble contexts. Although Henriksen et al. (2020) supported the creative potential of music technology, the researcher's findings also acknowledged the challenges of widespread implementation, mirroring participants' concerns about access, training, and scalability. The intersection of research and participant experience exemplifies the study's Conceptual Framework, which emphasizes the evolving relationship between educator competencies, preparation, and effectiveness in the face of ongoing technological and social change. Overall, technology implementation is giving every student the tools to discover and develop their unique musical voice, even if they do not fit the traditional mold. Therefore, when educators strategically blend traditional ensemble practices with individualized, tech-integrated approaches, they are not just improving instruction, they are fundamentally expanding who gets to succeed in music education. Building on the findings of RQ1, several recommendations for practice emerge to support educators in navigating the demands of modern music instruction.

Recommendations for practice based on the first finding underscore how music educators must be prepared to be effective in the modern secondary instrumental music classroom. Educator preparation programs must ensure they equip future educators with a wide variety of instructional strategies that embrace the traditional model of ensemble-centric classrooms. Additionally, educators need a wide variety of holistic, individualized, self-paced, and peer-to-

peer activities (Crawford, 2017; Hatch, 2023; Henriksen et al, 2020; Lv & Lou, 2021; Scherer, 2021). Music educator preparation programs could adapt curricula to reflect the updated pedagogical model, ensuring that future educators graduate with both mastery of foundational strategies and fluency in modern tools and student-centered methodologies, and in-service educators may adapt instruction more effectively. Ideally, the outcome should be pre-service educators who can confidently integrate ICT for classroom and remote learning environments. Furthermore, they should be able to implement individualized learning and assessment strategies alongside ensemble development, and be prepared to facilitate creative activities through technology. Finally, training providers could teach educators to incorporate critical thinking, cross-curricular, and culturally responsive activities into their instructional methods (Crawford, 2017; Henriksen et al, 2020; Joseph & Merrick, 2021; Lv & Lou, 2021; Váradi, 2022; Zhao et al., 2021). Similarly, educational institutions could further address future educator needs by reconsidering educator preparation curricula to provide well-designed hands-on opportunities for pre-service educators. For instance, they could offer dedicated coursework in technology setup, delivery, management, and troubleshooting. Additionally, institutions should provide practical experience in implementing student-centered instructional materials and activities simultaneously with ensemble instruction. As a result, novice educators would enter the field equipped with the dual competencies necessary for effective 21st-century music instruction (Hatch, 2023; Louth, 2022; Scherer, 2021). Additionally, professional development providers could offer supplementary learning to in-service educators targeted at incorporating a wider variety of modernized approaches. By incorporating a wider set of instructional tools, and preparing educators to use modernized methods within the large ensemble classroom setting,

students reap improved educational outcomes and elevated motivation within the rehearsal setting (Weidner & Skolar, 2021).

The second finding of RQ1 revealed an expanded use of non-performance instructional strategies and learning activities designed to support holistic student development, particularly through the integration of music theory knowledge and creative competencies delivered alongside traditional ensemble performance skills. Participants emphasized the importance of multimodal listening, peer and professional performance observation, and non-performance tasks as foundational to fostering student independence in interpretation, analysis, and music creation. Specific instructional practices included guided listening, visual mapping, score analysis, and reflective prompts—strategies that encouraged deeper musical understanding beyond technical execution. Research literature supported pedagogical expansion: Hatch (2023) and Urbaniak and Mitchell (2025) noted significant gains in student agency, engagement, and comprehension when educators embed non-instrumental strategies into instruction. The National Core Arts Standards (NCAS) further validate the inclusion of activities that emphasize selecting, analyzing, interpreting, and evaluating music as a means of cultivating meaningful individual connections. Similarly in alignment with the findings, Lewis (2020), Urbaniak and Mitchell (2025), and Hatch (2023) all underscored the effectiveness of multimodal, analytical, and reflective learning experiences in developing comprehensive musicianship. Conversely, scalability remains limited by insufficient educator preparation, assessment models, and structured guidance for implementation (Culp et al., 2024; Louth, 2022; Scherer, 2021). Therefore, by expanding beyond the narrow confines of performance preparation to embrace analytical, creative, and reflective learning experiences, music educators are dismantling the false dichotomy between "playing" and "understanding" music, proving that authentic musical excellence requires both technical

proficiency and intellectual engagement, thereby elevating the entire discipline from craft instruction to comprehensive artistic education. The instructional strategies described by participants suggest a shifting pedagogical emphasis that moves beyond performance outcomes toward a more diversified framework involving cross-curricular exploration, student-driven projects, and critical thinking.

The instructional strategies described by participants, also illustrate the second finding, indicated a deliberate pivot from a sole emphasis on performance outcomes toward a diversified pedagogical model encompassing cross-curricular exploration, individual projects, and critical thinking. Educators selected non-performance strategies designed to foster well-rounded musicianship and increase student motivation, with examples including reflective listening exercises and interdisciplinary projects designed to build conceptual understanding, research abilities, and emotional engagement. Participants noted that such approaches deepened students' connections to music while also encouraging broader cognitive and social development. Similarly, Váradi (2022) supported the second finding by demonstrating that culturally reflective musical experiences foster empathy, social understanding, and interpersonal growth among students. Additionally, Daly (2024) and Edgar (2017) also affirmed the relevance of integrated instructional practices in promoting social-emotional learning and cross-curricular engagement—dimensions that closely mirrored participant practices. However, implementation of expanded instructional strategies remains uneven due to persistent challenges, including limited instructional time, financial constraints, performance pressures, and lack of professional preparation in interpretive or creative pedagogy (Conway, 2022; Kladder & Lee, 2019). Essentially, music educators are rejecting performance-only training as educational malpractice and embracing holistic, culturally responsive teaching that demands critical thinking, empathy,

and real-world engagement, transforming music classrooms into powerful engines of human development. Therefore, the inclusion of diverse, student-centered strategies exemplifies how the modern instrumental classroom requires expanded teacher competencies beyond ensemble performance to encompass comprehensive musical and cognitive development, thereby informing several key recommendations for practice emerging from the second finding.

Recommendations for educational practice derived from the second finding include the requirement to incorporate instructional design for non-performance activities into teacher preparation and ongoing professional development. Both educators and literature indicated limited training in areas such as design, analysis, reflection, and student-centered instruction (Cheng & Lam, 2021; Conway, 2022; Matthews & Johnson, 2019). Similarly, focus areas could include guided musical analysis, critical listening, and interdisciplinary curriculum planning, especially within ensemble contexts where performance has traditionally dominated instructional time (Daly, 2024; Hatch, 2023; Lewis, 2020). As seen in the literature, teachers benefit from structured opportunities to develop and implement strategies that engage students in interpretive and reflective tasks alongside technical rehearsal (Edgar, 2017; Urbaniak & Mitchell, 2025). Furthermore, greater attention to modernized instructional dimensions may enhance student learning outcomes and support broader educational goals related to creativity, agency, and cross-disciplinary competence (Daly, 2024; Mantie, 2024). Further research could examine effective sequencing and implementation of non-performance strategies within secondary ensemble curricula, including how to scaffold components developmentally and assess learning in valid, reliable ways (Hatch, 2023; Kladder & Lee, 2019; Spieker, 2020). The adaptations in pedagogical emphasis of secondary instrumental music education toward a more holistic view of

student development, with and without performing on instruments, is a bellwether of a similar pivot away from ensemble performance as the central measure of success.

The third finding of RQ1 revealed that music educators are actively redefining performances as instructional tools with multiple purposes rather than treating them as isolated, culminating events. Participants described how they used concerts to assess student progress, inspire motivation, foster reflection, and engage the broader community. For example, participants emphasized the value of adjudicated festivals, where students received external benchmarks and opportunities to measure their performance against recognized standards. Additionally, participants indicated intentionally using technology to expand performance access, allowing families and community members to engage with student work beyond the physical concert hall. Kao (2021), Hash (2021), and Spieker (2020) supported diversified approaches to public performance, illustrating how educators can leverage digital platforms to increase student engagement and modernize assessment practices. Similarly, Daly (2024), Hatch (2023), Lichtensztajn (2022), Louth (2022), and Urbaniak and Mitchell (2025) further argued that concerts serve as powerful public-facing platforms to advocate for music education, especially amid rising concerns about funding and curricular relevance. Accordingly, participants exemplified the third finding by designing performances that demonstrate student learning while building program visibility and community investment. Overall, by shifting perspectives on culminating events, educators have transformed concerts into dynamic, multidimensional experiences that serve instructional, motivational, and strategic functions. Therefore, not only do performances fulfill musical objectives, but they also advance programmatic and stakeholder goals within the broader educational ecosystem.

The third finding exhibits the pivot to integrated performance approaches proved significant as educators moved beyond viewing concerts as isolated events, instead crafting them into comprehensive educational experiences with multiple instructional, reflective, and advocacy-oriented outcomes. Participants described shifting away from performance as the sole organizing element of instrumental music education, instead treating it as a vehicle for technical development, artistic expression, public engagement, and program visibility. The reconceptualization of concert performances reinforces broader calls within the field to redefine what constitutes success in secondary instrumental music. For example, Millican (2008) argued that music educators must cultivate instructional flexibility and contextual awareness—competencies echoed by participants who reimagined performance as both process and product. Similarly, Daly (2024) similarly proposed a broader framework of success that centers on student growth, creativity, community connection, and inclusivity rather than technical mastery alone. Overall, the third finding highlights a critical shift: educators are transforming concerts from isolated events into rich, multidimensional experiences that support instruction, reflection, and advocacy. Performance is now viewed as both process and product—fueling student growth, community connection, and program visibility. Therefore, music educator preparation must extend beyond rehearsal techniques and concert logistics to include pedagogical training in reflective assessment, advocacy, and community engagement (Daly, 2024; Hatch, 2023; Lichtensztajn, 2022; Urbaniak & Mitchell, 2025). In response to the third finding, the recommendations for practice emerge with actionable strategies for educator preparation programs, school leaders, and professional development providers to better support the multifaceted demands placed on today's instrumental music educators.

The recommendations for practice stemming from the third finding intended to further support modernizing the rationale behind musical performances. Therefore, educator preparation programs could incorporate dedicated coursework in alternative performance models, such as virtual ensembles, interactive performances, and technology-enhanced concerts. The literature by Joseph and Merrick (2021) and Eren and Öztuğ (2020) support the incorporation of expanded performance models, and emphasized the requirement for fluency in digital performance formats alongside traditional approaches. Building on Hatch's (2023) recommendations, programs might also guide pre-service educators in developing robust instructional strategy alignment portfolios, helping develop connections between performance preparation and concert execution. Collectively, the recommendations ensure novice educators enter the profession equipped to transform performances into powerful, multifaceted learning experiences that serve students, communities, and advocacy goals simultaneously (Daly, 2024; Hatch, 2023; Louth, 2022; Millican, 2018; Urbaniak & Mitchell, 2025). Modernized preservice preparation also supports music educators in adapting to the broader redefinition of their role in today's classrooms, an element that emerged from the RQ1 cohesion of findings.

The fourth finding, emergent from all RQ1 outcomes, revealed a major shift in instructional practice, as instrumental music educators moved away from a conductor-led performance-dominated model toward student-centered approaches that emphasize collaboration, cultural responsiveness, and multimodal learning. Participants described using peer-to-peer learning and small-group instruction to build individual musical growth, assigning leadership roles to promote collaboration, and selecting repertoire that addressed emotional, cultural, and interdisciplinary goals. Additionally, participants incorporated technology to deliver content outside of rehearsal time, which allowed in-person instruction to focus more deeply on student

coaching and differentiated support. Instructional choices described by participants were supported by pedagogical recommendations of Salvador and Culp (2022), who advocated for culturally responsive and trauma-informed practices that center student identity, reduce hierarchical classroom structures, and foster emotional connection. Similarly, repertoire decisions made by participants further echoed the work of Đurđanović et al. (2018) and Orzolek (2021), whose studies highlighted how inclusive repertoire builds cultural empathy, encourages personal reflection, and engages students in conversations around identity and belonging. Pandemic-era disruptions served as a catalyst for the subsequent pedagogical shifts, requiring educators to reimagine instruction in ways that prioritized flexibility, access, and individual learning trajectories (de Bruin, 2021; Calderon-Garrido & Gustems-Carnicer, 2021). Subsequently, the pandemic exposed rather than simply disrupted music education, laying bare the authoritarian limitations inherent in traditional conductor-podium models while accelerating necessary evolution toward democratized, culturally responsive classrooms. Transformed learning environments cultivate students as empowered artistic collaborators rather than silenced participants, deconstructing hierarchical paradigms that have persistently inhibited creative expression and cultural inclusivity. Therefore, the sustained emphasis on adaptability, reflection, and student agency marks a significant departure from traditional rehearsal-centered teaching and sets the foundation for the evolving educator identity explored in the next section.

The fourth finding revealed a significant shift in professional identity, as music educators increasingly viewed themselves not as conductors but as facilitators who support students' holistic development through culturally responsive, emotionally attuned, and collaborative instruction. For example, participants described implementing SEL-informed strategies, selecting inclusive repertoire, and redistributing authority in the classroom to foster agency, engagement,

and growth. Furthermore, practices reflect Edgar's (2017) advocacy for embedding SEL in music education and Daly's (2024) emphasis on equitable, student-centered design. Similarly, findings from Đurđanović et al. (2018), Orzolek (2021), and Regier (2024) further support the efficacy of flexible, culturally responsive teaching, directly aligning with participant efforts to adapt instructional methods. However, transformative shifts are not without resistance. Participant narratives diverge from literature by Louth (2022) and Scherer (2021) which documented widespread hesitation among educators who cited time constraints, concert pressures, and doubts about student maturity as barriers to shifting classroom dynamics. In contrast to the hesitation documented in existing literature, participant narratives illustrated how intentional adaptation enabled them to overcome many structural and philosophical challenges. Consequently, the era of the music educator as dictatorial conductor wielding a baton like a scepter is passing, replaced by facilitators who understand that true musical leadership means empowering students to find their own voices rather than forcing them into silence, fundamentally transforming music education from a hierarchy of compliance into a democracy of artistic expression. The disparity between evolving classroom realities and outdated preparation models signals the need for a systemic realignment in music educator development. Recommendations emerging from the fourth finding propose concrete strategies for reorienting teacher preparation and professional learning toward collaborative leadership, repertoire pluralism, and inclusive, student-centered practice.

Recommendations for practice emerging from the fourth finding support the call to realign undergraduate music education programs toward an “educator as facilitator” model that cultivates shared decision-making, culturally responsive teaching, and technology integration. To advance the educators modernized role, preparation programs could introduce studio-lab

sequences where candidates experiment with small-group leadership, peer-assessment routines, and culturally responsive repertoire curation (Daly, 2024; Salvador & Culp, 2022). Additionally, programs should incorporate technology-integrated practicum experiences that familiarize candidates with notation apps, loop stations, and digital audio workstations for student-led projects (de Bruin, 2021; Powell, 2019). Collaborative instructional strategies, reflective coaching models, and redistributed classroom power dynamics are designed to cultivate habits of shared decision-making and professional reflection. As a result, these instructional approaches might enable novice music educators to view themselves, and be perceived by students, as partners in learning rather than hierarchical conductors (Edgar, 2017; Salvador & Culp, 2022). Furthermore, educational institutions could address the gap between progressive practice and systemic preparation by requiring methods courses to include annotated-score audits where preservice teachers evaluate repertoire through social-emotional learning and community-relevance lenses (Đurđanović et al., 2018; Orzolek, 2021). Additionally, institutions should provide lesson-planning seminars that model the adaptation of materials for diverse readiness levels and SEL outcomes (Calderon-Garrido & Gustems-Carnicer, 2021; Regier, 2024). Subsequently, the intentional modernization of music educator preparation, through alignment with expanded role expectations and current pedagogical needs, may narrow the persistent gap between educational research and classroom practice (Conway, 2022). Furthermore, modernization may ease the transition of early-career teachers into progressive instructional environments (Denis & Tucker, 2021; Kugelman, 2021). Finally, it may support the sustainability of ensemble programs within an educational context that increasingly prioritizes personalized, culturally responsive instruction tailored to 21st-century students (Daly, 2024; Đurđanović et al., 2018; Orzolek, 2021; Turhan & Demirci, 2021). The alignment of

contemporary preparation models with emerging competency frameworks, including culturally relevant pedagogy, adaptive teaching strategies, and digital fluency, clarifies the evolving expectations facing future music educators as they navigate increasingly complex classroom environments (Conway, 2022; Miksza et al., 2010).

Research Question 2

What are the competencies that secondary instrumental music educators and arts administrators believe that secondary instrumental music educators must have to be effective in the contemporary secondary instrumental music classroom? The first finding of RQ2 revealed that cross-cutting skills serve as foundational elements of music educator effectiveness, enabling teachers to meet the layered demands of instruction, administration, and interpersonal engagement. Participants consistently described how competencies such as communication, adaptability, and responsiveness were not isolated to instruction, but essential across all aspects of effectiveness in the role, including student support, project management, and professional collaboration. Participant experiences aligned with Miksza et al. (2010) and Stavrou (2020), who identified emotional intelligence and interpersonal responsiveness as central to music education leadership across domains. Participant emphasis on relationship-building as a tool for instructional success reflected Denis's (2019) assertion that rapport is critical in fostering meaningful student engagement. Similarly, Reiger's (2024) findings on the importance of cultivating stakeholder relationships were evident in participant reflections on the community-facing aspects of their roles. Additionally, Hash's (2021) framing of adaptability and growth mindset as core professional traits was also mirrored in participant narratives of adjusting to shifting instructional demands. Collectively, participant accounts and literature converge on the conclusion that integrated, transferable competencies underpin success in all facets of music

education. The myth that music educators need only master their instrument and basic teaching techniques has been shattered, true excellence demands sophisticated integration of emotional intelligence, adaptability, and interpersonal skills that current preparation programs too often fail to develop (Reiger, 2024; Denis, 2019; Miksza et al., 2010; Stavrou, 2020). Recognizing pedagogical misalignment calls for a redesign of music educator training, further explored in the following recommendations for practice (Blackwell, 2018; Cheng & Lam, 2021; Laidlaw, 2023; Regier, 2024).

Recommendations stemming from the first RQ2 finding suggest preparation programs could rework educator training away from siloed technique courses to an integrated-competency framework to better nurture cross-cutting skills. For example, coursework may braid robust communication, entrepreneurial initiative, emotional intelligence, and analytical decision-making into rehearsal technique and methods classes, thereby strategically improving cross-cutting skill areas while maintaining rigorous musical and pedagogical training (Hanson, 2018; Miksza et al., 2010; Stavrou, 2020). Similarly, field experiences, like student teaching, could pair existing curricula with stakeholder-engagement projects so candidates practice diplomacy, judgment, and community outreach in authentic contexts, answering Conway's (2023) call for training that mirrors 21st-century complexity. Additionally, critical thinking, adaptability, and a growth-oriented mindset may be cultivated through action-research cycles and reflective journaling (Hash, 2021), while seminars on professional ethics and relationship-building could strengthen interpersonal intelligence (Reiger, 2024; Denis, 2019). Essentially, integrating modernized competency frameworks is likely to enhance program viability, support teacher retention, and boost student engagement in the dynamic landscape of secondary instrumental music education. What is more, the competency framework revealed through participant descriptions and

supported by relevant literature provides the basis for future mixed-methods studies that could quantitatively validate and rank the importance of cross-cutting skills while qualitatively exploring their contextual application across diverse educational environments. While the importance of cross-cutting skills is an important finding, similar expansions emerged in relation to musical skills and competencies.

The second finding of RQ2 indicates that while foundational musicianship remains essential, contemporary music educators require a broadened and adaptable skill set to meet evolving instructional demands. Participants emphasized the need for multi-instrumental competency, fluency in culturally diverse repertoire, and real-time application of music theory skills such as transcription, transposition, and arrangement—capabilities critical for supporting both traditional ensemble teaching and more personalized, flexible instruction. Converging with participant data, Rohwer and Henry (2004) identified a wide range of musical competencies—including error diagnosis, sight-reading, performance, conducting, and piano proficiency—as essential for classroom effectiveness. Similarly, Denis (2019) highlighted the importance of cross-instrument proficiency for practical teaching, which participants also described as necessary for adapting instruction across varied learning contexts. Additionally, Kladder (2020) and Sorenson (2021) pointed to music technology and popular music ensemble facilitation as increasingly relevant, aligning with participant experiences of shifting away from exclusive reliance on traditional band and orchestra formats. Therefore, today's diverse, technology-driven classrooms demand musical polymaths who can seamlessly transition between instruments, genres, and cultures, exposing the dangerous obsolescence of narrow specialization that leaves educators professionally stranded and students culturally shortchanged (Blackwell, 2018; Denis, 2019). Preparing music educators for modern instructional contexts will require intentional

reforms that emphasize cross-functional musicianship and pedagogical flexibility (Cheng & Lam, 2021).

Second finding implications point toward specific recommendations for enhancing professional training in music education. First, preservice curricula could introduce comprehensive secondary-instrument technique modules covering all major instrument families, reflecting participant reports of multi-instrument demands and Denis's (2019) emphasis on practical classroom application. For example, music educator preparation programs could embed integrated theory-and-arranging laboratories that require candidates to transpose and adapt repertoire in real time on various instruments, aligning with participant accounts of on-the-spot modification and the comprehensive skill set ranked essential by Rohwer and Henry (2004) and reinforced by Blackwell (2018). Similarly, coursework could normalize music technology and popular ensemble facilitation, addressing participant use of modern pedagogical resources and the preparation gap documented by Kladder (2020) and supported by Sorensen (2021). Additionally, repertoire studies could be broadened to include culturally diverse and genre-inclusive materials to support inclusive selection practices, as indicated by participant emphasis on cultural responsiveness and recommendations in Kladder (2020). Finally, programs could implement competency-mapping audits to ensure that each broadened skill is introduced, reinforced, and assessed across the curriculum, thereby reducing the misalignment between preparation and professional requirements identified in study findings and documented by Kladder (2020). Overall, the finding shows that preparation programs must blend traditional musical training with multi-instrument competency, diverse repertoire understanding, and technology integration to address the complex challenges of modern secondary music education.

With strong cross-cutting skills and musical knowledge in place, educators must also be equipped with the pedagogical competencies to ensure effective instruction.

The third finding of RQ2 identified the need for robust, creative, and adaptable pedagogical skills as essential for effective music instruction, especially when engaging digital-native students. Participants emphasized increasing demands on instructional adaptability due to evolving student behaviors, diverse learning needs, and technological expectations, illustrating the study's Conceptual Framework, which positions competency development, educator preparation, and instructional effectiveness as interdependent, particularly in contexts shaped by social change and digital learning. Early research by Rohwer and Henry (2004) emphasized classroom management, pacing, questioning, and organization as critical instructional skills; elements that participants also described as essential to successful teaching. Similarly, Regier (2021, 2024) linked self-efficacy in classroom management with improved instructional outcomes and teacher retention, reinforcing participant descriptions of needing robust student behavior management skills. Expanding on Regier's foundation, Đurđanović et al. (2018) and Orzolek (2021) showed that differentiated instruction and technology integration are essential in meeting modern learner needs, further validating participant accounts of evolving instructional demands, particularly around digital competence. Overall, the diverse range of pedagogical strategies used by participants reflects a shift in educator responsibilities that now include individualized adaptations and digital fluency. Therefore, the one-size-fits-all pedagogy that once defined music education has been obliterated by digital-native students who refuse to be silenced into submission, demanding educators develop sophisticated instructional arsenals that blend traditional musicianship with cutting-edge technology and individualized learning approaches (Denis, 2019; Kugelman, 2021).

Recommendations for practice emerging from the third finding emphasize the urgency for music educator preparation programs to reflect the growing importance of robust, adaptable pedagogical skills in contemporary teaching. Programs should rebalance the traditional emphasis on musical content by prioritizing technology integration, non-performance project facilitation, and individualized instructional design, equipping graduates to meet the demands of digital-native learners (Denis & Tucker, 2021). Curriculum redesign could incorporate app-based tools, digital recording devices, and adaptive platforms that support differentiated instruction, reflecting both participant success and Armstrong and Gale's (2025) validation of empirically grounded models for remote instruction. In addition, applied coursework should address core classroom competencies—such as lesson pacing, sequencing, guided questioning strategies, and organization—identified by Rohwer and Henry (2004) as essential for instructional effectiveness. Similarly, Regier's (2021, 2024) findings support the integration of comprehensive classroom management training to build self-efficacy and improve retention. Also, institutions should also embed culturally responsive and collaborative instructional approaches, including project-based learning and flexible, student-centered strategies, to prepare educators for increasingly diverse and dynamic classrooms (Millican, 2008; Miksza et al., 2010; Orzolek, 2021). Beyond technical and instructional skills, effective teaching increasingly depends on the personal competencies that allow educators to respond to shifting expectations with empathy and flexibility.

The fourth finding was that personal attributes such as disposition, character, and mindset are fundamental to effectiveness and career longevity in secondary instrumental music education. Participant responses identified specific core personal competencies including artistic enthusiasm, adaptability, energy regulation, creative problem-solving, boundary-setting, wellness

maintenance, and educator identity development. Participants described traits such as adaptability, boundary-setting, and wellness maintenance as essential for managing day-to-day demands, sustaining motivation, and delivering high-quality instruction. Likewise, Miksza et al. (2010) found that perseverance, patience, and long-term vision were stronger predictors of teaching effectiveness than musical skill alone. Similarly, Hanny et al. (2021) emphasized adaptability, experimentation, and growth mindsets as critical to overcoming instructional challenges, an observation in alignment with participant descriptions of flexibility and reflective resilience. Additionally, Haning (2021) reinforced the participant descriptions of how personal identity development is a frequently overlooked but vital factor in sustaining careers, particularly in music education, where educators must simultaneously fulfill roles as instructors, logistical coordinators, and artistic leaders. Therefore, excellence and effectiveness in music education requires more than musical mastery—it demands the personal fortitude to navigate complex human dynamics, maintain creative energy, and build sustainable professional practices. Insights from the fourth finding inform strategic recommendations for improving the scope and structure of educator development programs.

The recommendations for practice stemming from the fourth finding center around a reconsideration of music educator preparation programs to address the unique dual-role demands facing contemporary practitioners. Drawing from participant examples, which revealed personal competencies as embedded in daily teaching practice, preparation programs could elevate artistic enthusiasm, adaptability, energy regulation, problem-solving, boundary-setting, wellness, and identity formation to core curriculum components (Cooper et al., 2017). Embedding adaptive resilience, emotional regulation, and identity formation into teacher preparation would better reflect the lived realities of teaching and support long-term professional well-being (Denis,

2019). For example, educational institutions could address the unique demands of music educators' dual roles as instructors and program administrators by implementing reflective practice components that develop intrinsic motivation and artistic enthusiasm (Haning, 2021). Similarly, programs should foster personal identity formation through mentorship relationships, guided self-assessment, and professional vision planning. For example, preparation programs could incorporate the growth mindset development and adaptability training identified by Hanny et al. (2021) as primary success predictors, while addressing the perseverance, patience, and long-term vision competencies that Miksza et al. (2010) found surpassed musical skills in importance for effectiveness. Accordingly, strategic curricular restructuring must recognize personal competencies as core success indicators rather than peripheral elements, ensuring graduates enter the field equipped with holistic personal skill sets necessary for managing the unique demands of secondary instrumental music education (Denis, 2019; Denis & Tucker, 2021; Laidlaw, 2023; Teasley & Buchanan, 2016). Additionally, support systems must extend beyond graduation into early career mentoring to ensure sustained professional development. Overall, the embedding of personal skill development throughout preparation programs recognizes that music educator career sustainability depended on comprehensive competency frameworks that addressed both professional and personal dimensions of practice (Culp et al., 2024; Ginsborg, 2025; Regier, 2021).

The fifth finding of RQ2 revealed that entrepreneurship and professional skills are essential for ensuring program sustainability in secondary instrumental music education. Participants described a wide range of professional responsibilities extending beyond artistic direction, including budget management, grant writing, event coordination, and logistical operations—skills they considered critical to both job placement and long-term success.

Educators and administrators alike emphasized the necessity of administrative competencies to meet the complex demands of the role, particularly noting that early-career teachers often experience heightened stress and rely heavily on on-the-job learning. Additionally, Miller et al. (2017) analyzed Strategic National Arts Alumni Project (SNAAP) data and found that music educators consistently identified financial and business management, project coordination, leadership, and interpersonal communication as essential competencies. Participant narratives reflected those same needs, frequently likening the operational demands of their programs to the responsibilities of running a small business. Similarly, Haning (2021) concluded that music educators must cultivate broader skill sets than their peers in other disciplines, due to their dual responsibilities as instructors and program administrators. In an era of increasing accountability, resource constraints, and advocacy pressures, music programs remain vulnerable when led by educators who lack the strategic and operational skills required to justify, sustain, and promote their programs (Blackwell, 2018; Conway, 2022; Denis, 2019). Therefore, Music educators are discovering they are not just teachers—they are program directors, financial managers, and strategic advocates whose artistic vision means nothing without the entrepreneurial skills to sustain and grow their programs. The fifth finding gives rise to specific recommendations for improving music educator preparation and professional training programs, ensuring that secondary instrumental music educators are equipped not only for job placement, but also for sustained teaching effectiveness and long-term career success.

Several recommendations for practice emerge from the fifth finding of RQ2, pointing to opportunities to comprehensively develop educators' entrepreneurship skills, which are vital for program sustainability and educator success in the contemporary secondary instrumental music classroom. For example, music educator preparation programs must incorporate practical

training in coordination, resource management, community engagement, recruitment strategies, and crisis prevention, areas currently underrepresented in many preparation curricula and identified as critical competencies (Culp et al., 2024; Ginsborg, 2025; Hanson, 2018; Regier, 2021). Similarly, programs can cultivate a more well-rounded professional skillset as identified by both participants and Miller et al. (2017), by integrating formal instruction in budget management, grant writing, and operational logistics as core competencies, acknowledging the central role of financial and administrative acumen in music educator effectiveness. Effectively, educational institutions could address the unique administrative demands identified by Haning (2021) and study participants by acknowledging that music educators require more divergent professional competencies than teachers in other content areas. Furthermore, institutions should acknowledge the vitality for effective program administrators beyond classroom instruction. Therefore, programs should incorporate entrepreneurial skills, project management, technological skills, interpersonal relations, networking, and leadership development into existing coursework (Blackwell, 2018; Demirbatır, 2021; Hanson, 2018; Miller et al., 2017). For example, preparation programs could opt to provide comprehensive training that prepared graduates to function as both artistic directors and program managers with business-oriented perspectives, addressing the multifaceted nature of contemporary roles that required simultaneous mastery of artistic, educational, and administrative responsibilities (Denis, 2019; Groulx, 2016; Haning, 2021). Overall, comprehensive entrepreneurial preparation not only reduces on-the-job learning stress and supports program sustainability, but also mitigates burnout and attrition among music educators who lack essential administrative competencies (Hanson, 2019; Laidlaw, 2023; Robinson, 2020).

Research Question 3

What are the perceived knowledge gaps preventing music educators from being effective in the contemporary secondary instrumental music classroom? The first finding of RQ3 revealed a widespread perception among participants that novice music educators are underprepared in key areas of comprehensive musicianship. Participants described how early-career teachers often struggled with modeling, transposing, and diagnosing errors on instruments outside their primary area of study. Additionally, participant responses emphasized gaps in secondary instrument proficiency and non-instrumental content areas such as general music, music technology, elementary music, and choral instruction. Educators also expressed difficulty when assigned to instructional roles that required fluency across non-specialty domains—such as band educators teaching guitar or general music classes—leading to feelings of praxis shock and inadequacy. The accounts provided by participants corroborate research by Culp et al. (2024) and Regier (2021), which identified sustained challenges stemming from the comprehensive content requirements of music education practice. Converging with participant perceptions, Sorenson (2021) found that while preservice teachers acquired some skills related to popular music ensembles, many remained underprepared for culturally relevant and non-traditional ensemble instruction. Similarly, Powell (2019) and Kugelman (2021) identified music technology and popular music pedagogy as marginal in preparation programs despite their increasing importance. Overall, music education programs are graduating musical specialists into a world that demands musical generalists—creating a generation of educators who struggle when asked to teach outside their narrow expertise, exposing the persistent mismatch between conservatory-style training and classroom reality. The alignment between participant perspectives and literature underscores a fundamental issue: preservice training programs may inadequately

prepare educators to meet the musical diversity and adaptability now required in secondary settings.

In addition to content-area underpreparation, the first finding points to persistent pedagogical training gaps as a major barrier to classroom readiness. Novice educators, according to participant reflections, often entered the field lacking sufficient grounding in classroom management, differentiated instruction, and foundational pedagogical methods. Notably, participants connected undertraining to a broader pattern of preservice coursework prioritizing primary instrument proficiency over applied teaching strategies. Literature confirms participant perceptions and illustrates the longevity of similar findings. For example, Denis (2019) contended that specialized pedagogical competencies do not emerge organically through experience and therefore require deliberate, explicit instruction within preparation programs. Similarly, Kugelman (2021) documented a disconnect between pedagogical emphasis in preparation programs and the practical demands of real classrooms, while Robinson et al. (2021) and Conway (2022) advocated for expanded pedagogical training to support inclusive, relevant, and sustainable instruction. Participants similarly reported that insufficient pedagogical preparation inhibited their ability to adapt instruction effectively, implement culturally responsive teaching at scale, and address the needs of diverse learners. As participants noted, gaps in pedagogical preparation not only hinder individual educator success but may also perpetuate inequities by limiting access to meaningful musical learning experiences for all students. Therefore, music programs are graduating artists who excel in practice rooms but fail in classrooms, lacking the pedagogical tools to create inclusive environments where all students can experience musical success and growth. Without targeted coursework in instructional design, behavioral management, and inclusive curriculum development, novice educators struggle to

meet student needs and compromise long-term program viability. The multifaceted first finding elements point to improvement opportunities in music educator preparation and continuing education.

Recommendations for practice emerging from the first finding—centered on perceived undertraining in comprehensive musical and pedagogical competencies—underscore the need for music educator preparation programs to significantly expand their curricular scope. Programs must strengthen preservice training in non-instrumental content areas, secondary instrument proficiency, and diverse instructional methodologies to ensure graduates can meet the demands of modern classrooms (Sorenson, 2021; Powell, 2019; Daly, 2024). Foundational preparation should treat instrument pedagogy, technology integration, popular and non-traditional ensemble instruction, and culturally relevant teaching strategies as essential core competencies rather than peripheral additions. Embedding student-centered instructional design alongside traditional ensemble coursework offers future educators practical experience with flexible, inclusive practices reflective of contemporary classroom realities (Đurđanović et al., 2018; Orzolek, 2021). To address the persistent misalignment identified by Kugelman (2021), institutions could integrate simulated or field-based experiences allowing preservice teachers to balance performance and non-performance learning approaches. Targeted coursework in digital literacy—including technology setup, delivery, management, and troubleshooting—would address confidence disparities documented by Kim (2020) and support preservice educators in implementing creative, individualized instruction (Crawford, 2017; Henriksen et al., 2020; Joseph & Merrick, 2021; Lv & Lou, 2021). Moreover, certification programs must prepare music educators to embed critical thinking, culturally responsive practice, and interdisciplinary learning into both in-person and remote instruction (Hatch, 2023; Scherer, 2021; Váradi, 2022; Zhao et

al., 2021). Through comprehensive and integrated pedagogical development, preparation programs can mitigate educational inefficiencies that shorten career longevity, diminish student outcomes, and threaten program sustainability, ultimately equipping novice educators with the dual competencies required for effective, future-ready music instruction.

The second finding of RQ3 revealed that participants perceived entrepreneurship and operational competencies as significantly underdeveloped in preservice music educator preparation, contributing to gaps in essential professional skills upon entering the field. For example, participant responses described underpreparation in areas such as stakeholder communication, logistics, administrative technology, instrument repair and maintenance, project management, and fiduciary responsibilities. Additionally, educators indicated that entrepreneurial abilities are not supplementary, but instead represent core, cross-cutting competencies necessary for effective program operation. Of note, participants particularly emphasized communication skills as foundational to every role-specific element, especially program management, leadership, and advocacy. Consequently, entrepreneurial development, though essential for contemporary music educators, remains insufficiently emphasized in preparation programs, representing a critical domain requiring strategic enhancement (Denis & Tucker, 2021; Penaluna & Penaluna, 2022; Regier, 2021). Similarly, participant perceptions align with Groulx's (2016) findings, in which early-career music educators questioned the relevance of certification coursework and identified administrative responsibilities as inadequately addressed.

Further supporting the second finding, Blackwell (2018), Denis (2019), and Miller et al. (2017) confirmed widespread deficiencies in preparation for non-instructional duties, supporting the concerns raised by participants about institutional shortcomings. Additionally, participants

also described the consequences of administrative gaps, noting significant on-the-job learning curves and increased stress, particularly among novice educators. As noted by Laidlaw (2023), inadequate preparation in areas such as financial oversight and stakeholder relations may result in legal vulnerabilities, burnout, and reduced program stability, especially in elective-based music programs. The participants' perspectives illuminated a disconnect between conventional training models and the complex, entrepreneurial nature of the music educator role (Blackwell, 2018; Haning, 2021; Miller et al., 2017). Thus, music teacher preparation programs produce graduates who must assume leadership of complex organizational systems without sufficient training in fiscal management, stakeholder engagement, or administrative operations. The resulting deficiency positions novice music educators for potential failure in the entrepreneurial dimensions of their roles, as conventional programs neglect the fundamental reality that music teaching encompasses substantial business management responsibilities. Therefore, the perceived absence of entrepreneurial competencies in preservice training underscores the need for targeted reforms to address the full operational scope of music educator responsibilities and informs strategic recommendations for future practice (Demirbatır, 2021; Hanson, 2018; Regier, 2021).

Recommendations for practice emerging from the second finding—which highlights participant perceptions of underdeveloped entrepreneurial competencies—underscore the need for systematic reform in music educator preparation programs to address the operational demands of contemporary teaching. To close the preparation gap identified by both participants and supporting literature, programs could embed targeted training in management, stakeholder communication, fiduciary responsibilities, administrative technology, and project coordination as core curriculum components. Recommendations align with Groulx's (2016) and Denis's (2019) findings that early-career educators experience significant difficulty navigating non-instructional

responsibilities due to inadequate preservice preparation. Similarly, Blackwell (2018) emphasized the importance of operational leadership training to improve retention and reduce burnout—concerns echoed in participant descriptions of stress associated with on-the-job learning. Entrepreneurial competencies must be reconceptualized as foundational elements of music teacher preparation rather than supplemental additions, requiring institutions to provide systematic instruction in budget planning, scheduling, and logistical coordination. Additionally, preparation programs could offer specialized coursework in relationship-building and advocacy, reinforcing Blackwell's (2018) and Miller et al.'s (2017) calls for stronger stakeholder communication strategies as essential to program sustainability. Furthermore, institutions could incorporate instruction in instrument repair, digital administrative tools, and school-based project management, addressing the critical misalignments participants identified. Finally, fostering entrepreneurial and intrapreneurial mindsets—including creativity, initiative, and strategic risk-taking—could mitigate professional stagnation and burnout, as supported by Hanson (2018, 2019) and Demirbatır (2021). By fully integrating entrepreneurial development into preservice training, programs can better equip graduates to navigate the complex operational responsibilities of modern music education, ensuring long-term educator effectiveness, program viability, and student access to high-quality learning experiences.

The third finding of RQ3 revealed participant perceptions that music educator preparation programs underemphasize personal development and resilience, leaving new teachers ill-equipped to manage the emotional, psychological, and physical demands of the profession. Specifically, participants described novice educators as struggling with emotional regulation, work-life balance, and boundary-setting, leading to increased stress, reduced motivation, and lower teaching effectiveness. Furthermore, participants indicated early-career psychological

strain was a predictable consequence of preparation programs that fail to develop resilience, wellness habits, and sustainable professional boundaries. Importantly, participant observations align with Denis and Tucker's (2021) argument that adaptability and self-regulation are as vital as musical expertise for effective teaching, while Robinson (2020) similarly linked the deficiencies in wellness that participants identified to teacher burnout. Additionally, participants' concerns about novice teachers' struggles with identity and boundaries are reinforced by Ginsborg's (2025) findings that new music educators frequently experience imposter syndrome, poor time and financial management, and difficulty balancing personal creative pursuits with full-time teaching responsibilities—the very challenges participants described as predictable outcomes of inadequate preparation. Moreover, the targeted instruction in time management, personal wellness, and stress regulation that supporting research advocates (Blackwell, 2018; Miller et al., 2017; Stavrou, 2020) directly addresses the specific skill deficits participants identified in novice educators. Consequently, the convergence of participant perspectives with established literature reveals that preparation programs are graduating musicians who have mastered complex compositions but who insufficiently managing their own emotions, work-life balance, or professional boundaries, and lack the foundational skills necessary to navigate its psychological demands (Denis, 2019; Laidlaw, 2023). Therefore, preparation programs risk contributing to the very burnout and attrition they aim to prevent by not addressing the fundamental areas of teacher readiness that both participants and scholars recognize as essential.

Recommendations for practice emerging from the third finding underscore the need for music educator preparation programs to treat personal development and resilience not as peripheral traits but as foundational competencies essential to professional success. Preparation curricula should systematically integrate emotional regulation, energy management, boundary-

setting, and reflective self-awareness as core learning outcomes, rather than relying on informal acquisition through post-graduation experience. Participant data and supporting literature from Denis and Tucker (2021), Robinson (2020), and Haning (2021) affirm the necessity of embedding wellness training, motivational strategies, and identity development into required coursework. Additionally, Ginsborg's (2025) findings regarding imposter syndrome highlight the importance of cultivating emotional resilience and confidence through structured reflective practices. Programs could also implement the planning, wellness, and stress management strategies recommended by Blackwell (2018), Miller et al. (2017), and Stavrou (2020), reframing non-musical competencies as critical to educator longevity. As music educators navigate uniquely multifaceted roles, resilience and adaptability emerge as equally important as musical expertise (Denis & Tucker, 2021). Therefore, reimagined preparation models must ensure graduates possess the personal competencies necessary to meet the psychological, emotional, and logistical demands of contemporary music education, ultimately addressing systemic attrition and improving long-term educator well-being and effectiveness (Denis & Tucker, 2021; Ginsborg, 2025; Laidlaw, 2023; Robinson, 2020; Stavrou, 2020).

In summary, the findings confirm the conceptual framework's assertion that published perceptions of music educator competencies require revision and do not fully reflect the evolving expectations of contemporary practice (Hash, 2021; Kugelman, 2021). Therefore, institutions could implement curricular modernization in formal educator preparation programs to address the misalignment between accrediting body requirements focused on musical performance skills and the practical realities of modern classroom demands, while professional development providers could offer targeted learning opportunities to mitigate training shortcomings (Culp et al., 2024; Daly, 2024; Kugelman, 2021; Sorenson, 2021). The study's comprehensive

documentation of instructional strategies, competencies, and knowledge gaps provides a foundation for informing improvements to music educator preparation and professional training programs, as envisioned by the conceptual framework's analytical approach to enhancing teacher preparation effectiveness (Blackwell, 2018; Denis & Tucker, 2021; Regier, 2024).

Recommendations for Future Research

Three recommendations for future research emerged from the current study's findings, limitations, and gaps in current preparation approaches that were identified. Recommendations for future research are based on the study's implications, limitations, and the next logical steps for advancing data-driven strategic improvements in music educator preparation. The following section presents recommendations for future research to address preparation inadequacies identified in the current study and suggest directions for expanding and validating study findings across different contexts and competency areas.

The current study explored participants' perceptions of instructional strategies, necessary competencies, and knowledge gaps in secondary instrumental music education. The participant population was limited to a modest sample size, $N = 19$, due to challenges in recruitment and the time constraints inherent in qualitative data collection and analysis. The study focused exclusively on secondary instrumental contexts, not the other content areas where future music educators must also be prepared, such as elementary music, general music, music technology, or choral classrooms. Furthering the research with expanded populations will provide additional insights into how identified competencies apply across varied music education settings. Findings from Hash (2021) and Conway (2023) recommended examining cross-disciplinary approaches to music educator preparation, thus supporting the call to explore competency development across diverse contexts.

The first recommendation for future research is to conduct mixed-methods studies with larger, diverse populations to validate and rank the competency matrices established in the current study. The establishment of integrated competency matrices through RQ2 findings, demonstrating that cross-cutting skills function as foundational elements across musical, pedagogical, personal, and entrepreneurial domains, indicates the necessity for expanded research to confirm, expand, and prioritize updated competency frameworks with broader populations. Future researchers could utilize quantitative instruments to determine which competencies practicing educators rank as most critical while employing qualitative approaches to expand, explain, and contextualize the rankings. Researchers could conduct a large-scale survey followed by focused interviews to understand perceptions around the relative importance of identified competencies in different educational settings. Future mixed-methods studies could continue to use the transformational framework as a conceptual lens, focusing on how the pandemic and social changes have reshaped required competencies. The research outcomes could inform targeted improvements to preparation programs, addressing the most crucial omissions identified by participants.

A second recommendation for future research is to replicate the study across other music education domains, including elementary, vocal, and general music settings. Findings from Blackwell (2018) and Salvador and Culp (2022) recommended examining preparation needs across specialized domains to understand better how to support music educators in diverse teaching assignments, particularly if credentialing continues to encompass elementary and secondary music education. Equally important, the first finding of RQ3 revealed that music educators struggle to teach effectively beyond their primary performance specialty, including elementary music, general music, music technology, and choral contexts due to insufficient

preservice training, indicating the necessity for replicating the current study design across other music education domains to examine how competency requirements and instructional strategies vary by specialization, grade level, and contextual factors. Contextual factors could include grade level, music specialization, school demographics, geographic location, and program resources. Due to the limitation of focusing exclusively on secondary instrumental contexts in the study, future researchers could explore how competency requirements and instructional strategies vary across music education specializations.

A third recommendation is to examine strategies for enhancing under-researched competency areas, particularly administrative technology integration and personal development. With 10 participants emphasizing self-awareness and 13 highlighting energy management as essential yet underdeveloped competencies, future research could identify effective approaches for developing personal resilience, work-life balance, and emotional readiness in music educators. Similarly, participants' concerns about educators' ability to utilize administrative and emerging technologies suggest a need for focused research on developing digital competencies efficiently within preparation programs. The fifth finding of RQ2 established how entrepreneurial competencies including administrative technology, instrument maintenance, and project management were essential for program sustainability yet unsupported in preparation programs, indicating the necessity for research identifying effective approaches for developing under-researched competency areas. Future research into professional domains would provide a better understanding of how to address areas of underpreparation identified in the study outcomes and offer practical guidance for implementing programs to enhance educator sustainability and administrative effectiveness.

Conclusions

Secondary instrumental music education faces unprecedented challenges as educators navigate increasingly complex educational landscapes. The study addressed a critical practice-based problem: misalignment between music educator preparation and contemporary secondary instrumental music classroom demands, a supposition supported by both the current study and relevant literature. Section 3 comprised research study findings, outcome evaluations, implications and practice recommendations, and future research recommendations. The in-depth findings analysis provided rich narrative examination of interview and focus group data, revealing organized matrices of instructional strategies and competencies required for effective secondary instrumental music education alongside explicit knowledge gaps derived from participant perspectives. The outcomes analysis offered additional insights into the study's central challenges and research inquiries, revealing areas of both alignment and contrast with existing literature on music teacher preparation and instructional efficacy.

Effective secondary instrumental music education requires more strategic and integrated approaches to educator preparation than previously recognized. Content expertise, pedagogical prowess, program leadership, and cross-cutting competencies emerged as critical areas requiring immediate attention. Coded thematic analysis illuminated multiple preparation challenges: perceived preparation deficits, content expertise shortcomings, program management inadequacies, and classroom management and technology integration difficulties. Participants' rich descriptions illustrated that musical fundamentals remain consistent with previous literature, while emergent competencies, including cross-cutting skills, technology integration, adaptive teaching strategies, personal mastery, and multifaceted program management, represent expanded skill sets necessary for contemporary secondary instrumental music education.

Thematic analysis revealed that secondary instrumental music educators require complex blends of cross-cutting skills, musical competencies, pedagogical approaches, personal attributes, and program leadership abilities to be effective in contemporary classrooms. Through analysis of study outcomes, I uncovered identified significant disjuncture between formal teacher preparation programs and the multifaceted demands of secondary music education practice, particularly regarding holistic music pedagogy, program management, and personal development competencies. The study generated practical implications that extend beyond identifying deficiencies to offer actionable insights for reforming preparation programs and enhancing professional development initiatives.

Cross-cutting competencies' increased importance in music education expanded existing music educator competency frameworks derived from literature. Strategic communication, comprehensive leadership, and adaptability emerged as fundamental requirements for educator effectiveness. Traditional compartmentalized preparation approaches appeared insufficient for developing integrated professional competencies essential for contemporary classroom success. Improving secondary instrumental music educator preparation is central to increasing teacher retention and effectiveness (Regier, 2024). The study demonstrated that effective music education in contemporary settings requires educators with sophisticated skill sets spanning multiple domains. Success demands extensive musical expertise, sound pedagogical practices, entrepreneurial leadership and management capabilities, and self-management abilities to support career longevity.

I derived additional practice recommendations from study outcomes. Recommendations related to research question thematic analysis and received support from previous literature. Practice recommendations include: (a) Implementing simulations and skill-focused workshops to

develop competencies in identified gap areas; (b) Integrating technology training for both pedagogical and administrative functions; (c) Developing explicit training in personal resilience and work-life balance; (d) Expanding practical experience in diverse instructional settings; and (e) Rebalancing performance requirements with applied pedagogy to better prepare educators for classroom effectiveness. Preparation programs must expand beyond antiquated conservatory training models and traditional performance-based approaches to incorporate development of technological competencies, leadership skills, and culturally responsive teaching practices. Professional development initiatives require progressive reform to provide sustained support through incorporating modern instructional design modalities, mentoring relationships, and intentionally-designed collaborative learning communities.

Recommendations for future research include three potential directions further exploring the matrices established through the study analysis and addressing the study limitations. First, mixed-methods studies with larger, diverse populations should validate and rank the competency framework established by the current study to determine which competencies practicing educators consider most critical. Second, the study should be replicated across elementary, vocal, and general music settings to examine how competency requirements and instructional strategies vary by specialization, grade level, and contextual factors. Third, research is needed to identify effective strategies for developing under-researched competency areas, particularly administrative technology integration and personal development skills such as resilience and work-life balance. Such studies would inform targeted improvements to preparation programs and provide practical guidance for addressing the identified deficits in music educator training.

The qualitative descriptive study sought to determine instructional strategies implemented in secondary instrumental music classrooms, competencies required to employ

strategies effectively, and perceived knowledge gaps in educator preparation. As music education continues evolving in response to changing educational landscapes, technological advances, and diverse student populations, preparation programs need to adopt more holistic approaches to developing music educators as evidenced by literature and study results. I developed a matrix from thematic analysis to help reconceptualize music educator preparation, acknowledging the evolution of the field. Despite the current study's research and those of similarly-interested scholars, there remains a significant misalignment between music educator preparation philosophies and the structural realities of secondary instrumental music education (Louth, 2022). By addressing educational shortcomings through strategic implementation of recommended changes, preparation programs and professional development initiatives can better equip educators to meet complex demands of contemporary music education while ensuring sustainable program growth and student success.

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Appendix A

IRB Approvals

Date: 6-10-2024

IRB #: IRB-FY23-24-1198
Title: Secondary Instrumental Music Educator Instructional Strategies, Competencies, and Perceived Knowledge Gaps: A Descriptive Design Study
Creation Date: 5-29-2024
End Date:
Status: Approved
Principal Investigator: Elisa Janson
Review Board: NU IRB
Sponsor:

Study History

Submission Type	Review Type	Decision
Initial	Exempt	Exempt

Key Study Contacts

Member Jennifer Summerville	Role Co-Principal Investigator	Contact jsummerville@ncu.edu
Member Elisa Janson	Role Principal Investigator	Contact e.janson6018@o365.ncu.edu
Member Elisa Janson	Role Primary Contact	Contact e.janson6018@o365.ncu.edu

Appendix B

Eligibility and Consent

Eligibility

To be eligible to participate in this study, you must meet the following eligibility requirements:

Secondary Instrumental Educator

1. You have been continuously teaching at least one secondary (grades 6-12) instrumental music class since March 2020.
2. Your teaching certification was granted by a school accredited by the National Association of Schools of Music (NASM). You may view a list of NASM-accredited schools here: https://nasm.arts-accredit.org/directory-lists/accredited-institutions/

Secondary Fine Arts Administrator or Principal

1. Have been a school administrator with at least one secondary instrumental music educator reporting to you since March 2020.

Interview and Focus Group Consent Form

My name is Elisa Janson, and I am a doctoral student at National University (NU). I am also a group admin for the Music Educators Creating Online Learning Facebook Group.

I am asking you to take part in a research study about the competencies required to be an effective secondary instrumental music educator in the modern music classroom, and the instructional strategies at use in the secondary instrumental music classroom. The name of this research is "**Secondary Instrumental Music Educator Instructional Strategies, Competencies, and Perceived Knowledge Gaps in Preparation for Effective Teaching: A Descriptive Design Study."**

You may be selected to participate in this research if you meet the following criteria:

Secondary Instrumental Educator

1. You have been continuously teaching at least one secondary (grades 6-12) instrumental music class in the United States since March 2020.
2. Your teaching certification was granted by a school accredited by the National Association of Schools of Music (NASM). You may view a list of NASM-accredited schools here: https://nasm.arts-accredit.org/directory-lists/accredited-institutions/

Secondary Fine Arts Administrator or Principal

1. You have been a school administrator or principal in the United States, with at least one secondary instrumental music educator reporting to you since March 2020.

I hope to include 10-15 participants in this research.

Please read this form carefully and ask any questions you may have before agreeing to take part in the study.

What you will be asked to do: If you agree to be in this study and are invited to be a participant, you will be asked to do the following activities:

1. Complete a prescreening form.
2. Participate in a 60-minute 1:1 interview online using Zoom.
3. Participate in a 90-minute focus group with other participants online using Zoom.

During these activities, you will be asked questions about:

- Your current teaching or administrative assignment.
- Instructional strategies being deployed in your secondary instrumental music classroom.
- Your opinions about competencies required to be an effective secondary instrumental music educator.
- Your perceptions about knowledge gaps in music educator preparation for effectiveness in the contemporary classroom.

Risks: There are minimal foreseeable risks or discomforts associated with this research. You can still skip any question you do not wish to answer, skip any activity, or stop participation at any time.

Some possible risks include: Discomfort due to any sensitive responses relating to questions about your experience as a teacher or administrator. To decrease the impact of these risks, you can skip any question you do not wish to answer, skip any activity, or stop participation at any time.

Benefits: If you participate in this research, there may be direct benefits to you. You may learn where there are gap areas in your own knowledge and proficiencies as a teacher. This research may increase the body of knowledge in the subject area of this research.

Recording: Your interview and focus group audio will be recorded and transcribed into text. Audio, text documentation, and software analysis files will be stored in a cloud drive and password protected with only the researcher having access.

Compensation from Third Party: After you complete the focus group, you will receive a link via email to sign up for a free 1-year “Teacher Pass” subscription to MusicProfessor.com. This subscription is donated by Conn Selmer, Inc.

Confidentiality: I will keep the records of this study private and take reasonable measures to protect the security of all your personal information. In any report I make public, I will not include any information that will make it possible to identify you. All data shall remain confidential, and the identities of participants will be excluded from publication. Any information about participants that could be deemed personal in nature will be saved in an encrypted cloud-based storage file for no more than 3 years following the publication of the study.

Taking part is voluntary: Participation in this study is completely voluntary. You may quit at any time.

If you have questions: Please ask any questions you have now. If you have questions later, you may contact me at e.janson6018@o365.ncu.edu or at (801) 884-3534.

If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) via email at irb@nu.edu

Appendix C

Recruitment Materials

Facebook Group Post Text:

Seeking volunteers to take part in a study to explore instructional strategies in use in secondary instrumental classrooms, the competencies required to be an effective music educator, and perceptions of knowledge gaps in music educator preparation. If you fit this criterion, we want you!

[Image of a music educator working with a young guitar student; the National University icon; text reading "Help Guide the Future of Music Teacher Education: Be a study participant"]

Secondary Instrumental Educator

1. You have been continuously teaching at least one secondary (grades 6-12) instrumental music class in the United States since March 2020.
2. Your teaching certification was granted by a school accredited by the National Association of Schools of Music (NASM). You may view a list of NASM-accredited schools here: https://nasm.arts-accredit.org/directory-lists/accredited-institutions/

Secondary Fine Arts Administrator or Principal

1. You have been a school administrator or principal in the United States, with at least one secondary instrumental music educator reporting to you since March 2020.

Participants are selected based on previously determined sampling criteria. I hope to include 10-15 participants in this study.

What you will be asked to do: If you agree to be in this study and are invited to be a participant, you will be asked to do the following activities:

4. Complete a prescreening information form.
5. Participate in a 60-minute 1:1 interview online using Zoom.
6. Participate in a 90-minute focus group with other participants online using Zoom.

If you participate, you will be asked questions about

- Your current teaching or administrative assignment
- Your opinions about the competencies required to be an effective secondary instrumental music educator
- Instructional strategies used in the secondary instrumental music classroom.

Upon completion of the focus group portion of the study, you will be offered a free 1-year Teacher Pass to MusicProfessor.com (a $197 value), compliments of Conn Selmer, Inc. Your teacher pass will be delivered via email within 1 week of participating in the focus group.

This research is completely voluntary. To volunteer for this study, click this link and complete the prescreening form: https://forms.gle/TduZn7Jkigok4LqF8

Questions? Email e.janson6018@o365.ncu.edu

Elisa Janson

National University Doctoral Candidate

Image description: photo of a student and teacher in a guitar lesson with text reading “Help Guide the Future of Music Teacher Education: Be a study participant.”

Participant Prescreening Form

Full Name:

Email Address:

Question 1: Please indicate which classroom courses or subject matter areas you currently teach. Select all that apply.

Options:

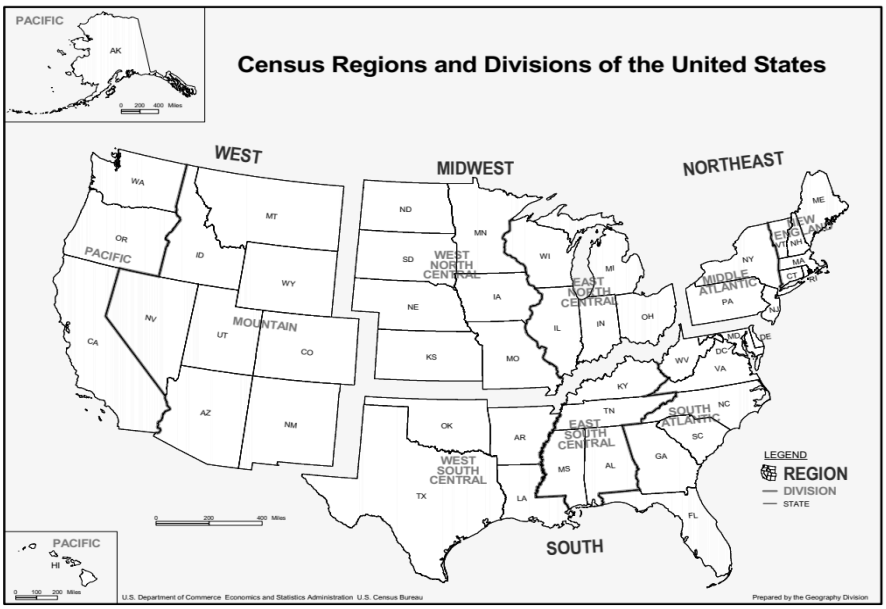
- Guitar/Ukulele
- String Orchestra
- Symphony Orchestra
- Musical Theater Orchestra
- Concert Band
- Marching Band
- Jazz Band
- Modern/Rock/Commercial Band
- Piano
- Digital Music Creation (Music Tech)
- General Music
- Percussion Ensemble
- Cultural Ensembles (ex. Mariachi, Taiko Drumming, etc.)

Question 2: Which grade levels do you have experience teaching secondary instrumental music? Select all that apply.

- 6
- 7
- 8
- 9
- 10
- 11
- 12

Question 3: In which region of the United States do you currently teach? Use the map below for reference.

- West
- Midwest
- South
- Northeast



Question 4: How many students are enrolled at the school where you currently teach?

- Fewer than 200
- Between 200 and 500
- Between 501 and 750
- Between 751 and 1,000
- More than 1,000

Appendix D

Secondary Instrumental Music Educator and Fine Arts Administrator Semi-Structured Individual Interview and Focus Group Guides

Individual Interview Guide

Introduction/Consent

1. Did you receive the consent form and context information I emailed?
2. Did you have time to review the consent form and context information?
3. Do you have any questions about the research or the consent form?
4. Do you consent to participate in this research?

Introduction to the interviewer

Purpose of the research

- To explore the instructional strategies that support and optimize effective teaching in the secondary instrumental classroom
- To discover the competencies required to use the instructional strategies to drive instructional effectiveness in the secondary instrumental music classroom.
- To collect your perceptions of knowledge gaps in your undergraduate preparation to be a secondary instrumental educator

Confidentiality

- This interview is voluntary
- All identifiers are removed
- Information is being recorded
- If you would prefer to turn your camera off, you may
- Transcripts and video are password-protected
- Participants will have access to transcriptions, recordings, and analysis
- Questions?
- What questions does the participant have from the researcher currently?

Interview

1. (RQ1) What instructional strategies are secondary instrumental music educators using to drive effective instruction in the classroom? Consider the lesson plan, student actions, and any at-home or self-paced learning activities.

2. (RQ1) What instructional strategies do secondary instrumental music educators not use regularly but are prepared to use if necessary? Consider alternative class structures, fully remote learning, or other potential adaptations of learning activities.

3. (RQ1) What technologies, resources, and teaching materials are used by secondary instrumental educators to use effective secondary instrumental music acquisition?

4. (RQ2) Considering the instructional strategies already discussed, what competencies must secondary instrumental music educators be optimally prepared to employ?

5. (RQ2) What non-instructional competencies must secondary instrumental music educators have to ensure they are prepared to be effective? Consider personal, professional, and program-management-type competencies.

6. (RQ3) Of the competencies identified so far, both in the list provided and additional competencies you have identified, what are your perceptions of how well secondary instrumental music educators are competent when they enter the classroom as in-service educators?
7. (RQ3) How has secondary instrumental music education instruction changed since September 2020?
8. (RQ3) Are there any other areas where you feel music educators are not prepared to be effective secondary instrumental music educators?

Focus Group Interview Guide

Introduce the researcher

- My role as moderator and researcher
- My background in music education and current interest in the subject

Uses

- The results of this focus group will assist in establishing convergence and divergence in the interview data and be a forum for open discussion on the instructional strategies, competencies, and perceptions of knowledge gaps in educator preparedness.
- Specific elements may be used in published dissertations, research posters, recorded presentations, or live presentations.
- You may request access to both the recordings and data analysis

Confidentiality

- This is being recorded and will be transcribed
- Please keep your cameras on, as this will assist in facilitating the discussion
- Your identities will be concealed

Purpose and Qualification

- To explore the instructional strategies, competencies, and knowledge gaps
- Find areas of convergence (where things are the same) and divergence (where they are different).

Introduce the Participants

- Role and experience level only

Considerations

- Please remember that remote learning may be implemented anytime due to various circumstances.
- There are no right or wrong answers, only points of view.
- Please be respectful of everyone.
- Please turn off devices and notifications now. Close all browser windows to maximize your internet.

SCRIPT

Introduction:

Welcome, and thank you for taking the time to participate in this focus group. Today, we are here to discuss the competencies that secondary instrumental music educators must have to be effective in the contemporary instrumental music classroom. Remember that competency is defined as a skill, knowledge set, attitude, or characteristic that enables an educator to effectively perform the activities and duties of their job to the expected standards (Zoraloğlu & Şahin, 2022). Your input is valuable, and we appreciate your willingness to share your insights with us.

Purpose of the Focus Group:

This focus group aims to gather information and insights from secondary instrumental music educators and arts administrators about the instructional strategies being utilized in the secondary instrumental music classroom, the competencies necessary for music teachers to be effective, and perceptions of knowledge gaps in music educator preparedness.

You have all participated in 1:1 interview and had the opportunity to review your responses. The questions we will discuss are like the ones in the interviews, and this is the opportunity for you to expand on the information you previously gave while exploring other experiences and perceptions in the group setting. Please keep in mind the key terms and contextual information you have been provided.

Questions:

1. Let us talk first about the instructional strategies. Which instructional strategies are the most effective in supporting students' skill and knowledge acquisition? Do you feel that instructional strategies that are ineffective in supporting students' skill and knowledge acquisition are being used in the classroom?
2. What specific skills or knowledge do secondary instrumental music educators need to be able to use these instructional strategies effectively?
3. Aside from instructional strategies, what other skills, knowledge, and aptitudes must secondary instrumental music educators be equipped with to maximize their effectiveness within and without the classroom?
4. In what ways are new secondary instrumental music educators not being prepared to implement these instructional strategies? Are there any areas in non-instructional skills and knowledge where secondary instrumental educators entering the field are unprepared?

Wrap-Up:

Thank you for your participation in this focus group. Your insights will be invaluable as I continue exploring the competencies that secondary instrumental music educators need to be effective in the contemporary instrumental music classroom. Your feedback is appreciated, and I look forward to analyzing and using it to inform my research.

Appendix E

Data Collection Flow Charts

Phase 1: Design

1.Review of Literature and Conceptual Framework
- Develop Research Questions and Methodology

2.Create Interview and Focus Group Guides
- Expand on research questions and anticipate responses.
- Compose Focus Group Script

3.Expert Evaluation of Guides
- Identify Expert Music Education Researchers
- Request Their Assistance

4.Develop Start Codes
- Set up Nvivo
- Create Start Codes in Software

5.Create Recruitment Materials
- Ensure compliance with IRB

PHASE OUTPUT:
- Interview Guide
- Focus Group Guide
- Recruitment Materials
- Start Codes

Phase 2: Interviews

1.Recruit Participants
- •Social Media Post Leading to Information and Consent
- •When consent completed, send Personal Data Form

2.Select Sample
- •Review Personal Data Form submissions and select sample
- •Send email invitations to selected participants

3.Schedule and Perform Interviews
- •Send Calendly link for convenient booking
- •Set up Zoom with appropriate settings (automatic recording and camera off)

4.Transcribe Interviews
- •Upload video to Descript
- •Download transcription and copy into NVivo

5.Begin Coding
- •Use start codes
- •Anticipate coding schemas

6.Test Codes with External Reviewers
- •Request review by expert music education researchers

PHASE OUTPUT:
- •Participant Sample
- •Interview Transcripts
- •Coding Assessment and Process


Phase 3: Focus Group
1.Assign Participants to Focus Groups
• Ensure no connections between participants
2.Schedule Focus Group Sessions
• Use booking tool to determine availability
• Set up Zoom to auto record
• Refine script, if necessary
3.Perform Focus Group Interviews
4.Transcribe Focus Groups
• Upload video into Descript
• Transfer transcription document to NVivo
5.Participant Review
• Offer option of transcript review to participants
6.Coding
PHASE OUTPUT
1.Transcribed Focus Group Interviews
2.Coded data


Phase 4: Synthesis
1.Complete Coding
2.External Review of Codes
• Request assistance from music education researchers
3.Development of Themes and Sub-Themes
• Check to ensure themes are informed by Conceptual Framework and Research Questions
4.Compose Results and Recommendations for Further Research
PHASE OUTPUT:
1.Completed Research
2.Analysis of instructional strategies, competencies, and perceived knowledge gaps
3.Recommendations for Future Study

Appendix F

Codebook of Instructional Strategies

Critical Cross-Cutting Skills

Effective Communication, Judgment, and Diplomacy

The ability to navigate interpersonal, mass, and strategic communication effectively across diverse contexts and audiences to foster collaboration, advocacy, and program success.

1. Building strong interpersonal relationships through effective communication with students, parents, and colleagues to create a supportive environment.
2. Communicating clearly and diplomatically in diverse settings.
3. Creating and distributing newsletters, social media content, and community outreach materials.
4. Employing strategic judgment to tailor communication methods to specific audiences.
5. Resolving conflicts diplomatically while maintaining trust and rapport.
6. Advocating for the music program through professional and public presentations and public relations strategies.
7. Managing sensitive or high-stakes communications with clarity and tact.
8. Advocating for student success by addressing academic, social, and emotional needs.
9. Engaging with local organizations and professional networks to expand program resources.
10. Strengthening connections with administrators and community stakeholders to advocate for program needs and to expand program opportunities.
11. Facilitating open and effective communication with all stakeholders.

12. Demonstrating confidence in public speaking in a variety of venues.

Initiative and Entrepreneurial Spirit

Demonstrating proactive resource acquisition and innovative approaches to overcome challenges and sustain program growth.

13. Designing and deploying creative and effective supplemental funding initiatives.
14. Developing creative solutions to logistical and instructional challenges.
15. Introducing innovative repertoire, projects, and instructional strategies.
16. Balancing traditional practices with contemporary methods to enhance program appeal.
17. Cultivating partnerships with local organizations and sponsors to secure resources.
18. Taking initiative to address emerging needs and explore new opportunities.

Critical Thinking and Analytical Decision-Making

Applying critical thinking and data-driven analysis to refine teaching practices, evaluate program outcomes, and make informed decisions.

19. Using observational evidence and performance data to adjust instructional methods.
20. Planning and allocating resources effectively to meet program needs.
21. Reflecting on program successes and areas for improvement through analytical evaluation.
22. Leveraging data-driven decisions to guide improvements and resource allocation.

Adaptability and Growth-Oriented Mindset

A proactive approach to embracing challenges, refining teaching practices, and committing to lifelong learning and improvement.

23. Cultivating resilience and maintaining a positive outlook in the face of challenges.
24. Reflecting on personal teaching practices to identify areas for growth and improvement.

25. Developing cognitive and emotional flexibility to meet the diverse needs of students.
26. Seeking feedback from peers, students, and stakeholders to identify areas for improvement.
27. Maintaining and modeling a mindset of lifelong learning, perseverance, and adaptability.
28. Balancing confidence in expertise with openness to new knowledge and methodologies.
29. Participating in professional development opportunities to stay current in the field.
30. Navigating shifting institutional priorities and adapting program management practices accordingly.
31. Participating in workshops, conferences, and certification programs.
32. Staying informed about new methodologies, technologies, and standards in music education.

Comprehensive Leadership

Leadership in music education involves guiding students, managing programs, and engaging communities.

33. Modeling professionalism, ethical conduct, and collaborative behavior.
34. Fostering student leadership through structured roles and mentoring.
35. Managing conflicts and balancing instructional and programmatic demands.
36. Building interdisciplinary and community partnerships to enhance program impact.
37. Advocating for music education by articulating program value to diverse stakeholders.
38. Developing strategic visions and long-term plans for program growth and sustainability.
39. Mentoring colleagues and promoting professional development.
40. Adapting leadership styles to diverse needs and promoting innovative practices.

Emotional and Interpersonal Intelligence

Building trust and rapport through empathy, collaboration, and effective communication.

41. Demonstrating empathy and understanding to support student and colleague relationships.
42. Fostering collaboration among students, staff, and community partners.
43. Navigating interpersonal dynamics to create a positive and inclusive environment.
44. Resolving conflicts constructively to maintain harmony and focus.
45. Employing emotional intelligence to cultivate a positive program culture.

Professional Integrity and Ethical Conduct

Modeling professional behavior and ensuring accountability in teaching and program management.

46. Demonstrating professionalism in actions, demeanor, and decision-making.
47. Maintaining accountability and follow-through on commitments and responsibilities.
48. Acting as a role model for students and colleagues through ethical conduct.
49. Upholding professional standards in communication and conduct.
50. Managing challenges and conflicts with fairness and transparency.
51. Acting with integrity in decision-making and interpersonal relationships.
52. Demonstrating confidence and poise in high-pressure situations.
53. Building credibility and trust within the school and broader community.

Musical Skills: Exemplary Musicianship and Subject Knowledge

Musical Mastery and Broad Instrumental Skills

A comprehensive instrumental competency enabling effective modeling, instruction, and performance guidance.

54. Demonstrating advanced instrument-specific techniques across instrumental families.
55. Exhibiting proficient rhythmic and musical analysis skills.
56. Utilizing refined aural skills for pitch recognition and phrasing.
57. Applying pedagogical strategies for teaching techniques across band and orchestra instruments.
58. Demonstrating versatile percussion skills including mallets and drum set.
59. Implementing instructional approaches to support diverse student needs.
60. Executing accurate transposition across instrument families.
61. Adapting instruction rapidly to meet ensemble demands.

Advanced Ensemble Leadership and Musical Solutioning

Identifying and addressing musical and technical challenges in rehearsal and performance contexts.

62. Diagnosing tone, rhythm, intonation, and execution issues.
63. Developing multimodal strategies for addressing technical issues.
64. Iteratively refining instructional strategies.
65. Using expressive conducting techniques to communicate musical ideas.
66. Conducting comprehensive score study and rehearsal planning.
67. Tailoring rehearsals to ensemble needs and learning profiles.
68. Orchestrating and arranging to meet ensemble demands.
69. Leading chamber music ensembles toward independence and collaboration.
70. Analyzing performances for precision and artistic quality.
71. Delivering growth-focused, constructive feedback.
72. Cultivating aesthetic awareness in musical interpretation.

73. Facilitating student-led interpretive decisions.
74. Promoting collaborative reflection in ensembles.
75. Encouraging integrative listening that fuses technique and artistry.

Knowledge of Resources and Repertoire

A strategic approach to culturally responsive and pedagogically aligned repertoire selection.

76. Selecting culturally relevant repertoire with historical authenticity.
77. Prioritizing student-centered repertoire that is exciting and challenging.
78. Employing method books and pedagogical tools effectively.
79. Aligning repertoire with curriculum goals and student readiness.
80. Integrating knowledge of global musical traditions and sociocultural context.
81. Facilitating critical and respectful engagement with diverse music traditions.

Comprehensive Music Theory and Creative Practice Integration

Synthesizing music theory with creativity and digital fluency.

82. Teaching composition and improvisation across musical styles.
83. Conducting harmonic and formal analysis.
84. Integrating theory into performance contexts.
85. Guiding students in original composition with structure.
86. Adapting musical ideas through arranging across formats.
87. Using DAWs and MIDI for music production.
88. Blending traditional and digital methods for creative instruction.

Classroom Management and Instructional Pacing

Creating a respectful and efficient learning environment through time management and behavior strategies.

89. Conducting informal assessments while maintaining ensemble cohesion.
90. Establishing routines and expectations to foster consistency.
91. Addressing and de-escalating disruptions constructively.
92. Creating a positive classroom culture that encourages participation.
93. Managing transitions between activities for continuous focus.
94. Balancing technical instruction with musical artistry.
95. Pacing lessons and rehearsals for optimal engagement.

Curriculum and Instructional Design

Designing curriculum that aligns with standards while addressing diverse student needs.

96. Creating curriculum-aligned lesson plans with measurable outcomes.
97. Sequencing instruction for progressive skill development.
98. Selecting culturally relevant and age-appropriate materials.
99. Using differentiation to accommodate varied learning needs.
100. Ensuring inclusivity and equity through curriculum design.
101. Designing interdisciplinary and project-based learning experiences.
102. Aligning creative projects with educational goals.

Assessment and Data-Driven Practices

Utilizing assessment to inform teaching and encourage student reflection.

103. Designing formal performance-based assessments.
104. Providing informal, formative feedback during instruction.
105. Developing rubrics for consistency and clarity.
106. Analyzing performance data to identify learning gaps.
107. Adjusting instruction based on observed student needs.

108. Promoting student self-reflection and ownership of growth.

Group and Collaborative Learning

Fostering ensemble cohesion and peer-to-peer instruction.

109. Leading sectionals and small group rehearsals effectively.

110. Differentiating instruction in heterogeneous group settings.

111. Facilitating group discussions around musical challenges.

112. Encouraging peer feedback and teamwork.

113. Adapting instruction to group dynamics and needs.

114. Building an inclusive and collaborative classroom culture.

115. Encouraging student leadership in peer learning environments.

116. Building trust through collaborative musical experiences.

Student-Centered Engagement

Empowering students through agency, relevance, and emotional safety.

117. Using storytelling and metaphor to enhance learning.

118. Encouraging inquiry and exploration in musical instruction.

119. Connecting content to real-world and personal experiences.

120. Integrating SEL to build resilience and collaboration.

121. Allowing student voice in lesson planning and material selection.

122. Cultivating a safe and supportive environment.

123. Promoting student responsibility and initiative in ensembles.

Leveraging and Integrating Technology

Applying digital tools strategically in music instruction.

124. Aligning technology use with instructional goals.

125. Using LMS to organize content and monitor progress.

126. Integrating digital tools to support student engagement.

127. Troubleshooting tech challenges in instruction and performance.

128. Using recording, playback, and projection tools in class.

129. Implementing video feedback and practice platforms.

130. Using music-specific software like MakeMusic Cloud.

131. Employing general tools like Google Workspace for administration.

132. Staying current with music technology trends.

133. Teaching responsible digital citizenship in music contexts.

Facilitating Remote and Self-Paced Learning

Adapting instruction for asynchronous, hybrid, or flipped environments.

134. Sustaining engagement in virtual learning spaces.

135. Using video lessons and automated platforms for skill-building.

136. Designing hybrid models that maintain musical rigor.

137. Integrating flipped classroom tools to maximize in-class time.

138. Supporting students with technical and instructional needs remotely.

Individualized and Adaptive Learning Design

Creating responsive, student-specific instructional approaches.

139. Designing personalized learning plans.

140. Teaching students how to self-assess and reflect.

141. Differentiating for cultural and cognitive diversity.

142. Applying multimodal strategies for varied learning styles.

143. Implementing equitable and inclusive instructional methods.

144. Diagnosing individual musical challenges effectively.

145. Choosing repertoire to match individual learning trajectories.

146. Providing tailored, growth-oriented feedback.

Leading Collaborative and Creative Projects

Managing student-led, creative, and interdisciplinary group work.

147. Structuring peer feedback to support collaboration.

148. Managing group creative processes for productivity.

149. Facilitating student problem-solving in musical projects.

150. Encouraging teamwork and idea-sharing.

151. Guiding original compositions and improvisation.

152. Supporting interdisciplinary connections in creative work.

153. Offering scaffolding to maintain focus and direction.

Personal Skills: Disposition, Character, and Mindset

Reflective and Growth-Oriented Practices

Commitment to continual personal and professional improvement.

154. Reflecting critically on teaching effectiveness.

155. Seeking feedback from multiple stakeholders.

156. Maintaining curiosity and openness to change.

157. Adjusting practices based on self-evaluation.

158. Embracing vulnerability in the learning process.

Creativity and Passion for Music Education

Infusing teaching with imagination, energy, and authenticity.

159. Designing imaginative and engaging lesson strategies.

160. Demonstrating joy and commitment to music and students.

161. Fostering artistic exploration and innovation.

162. Using creative solutions to navigate challenges.

Sustaining Energy, Balance, and Self-Motivation

Maintaining well-being and commitment over time.

163. Setting professional boundaries to manage workload.

164. Practicing consistent self-care.

165. Demonstrating proactive problem-solving.

166. Using goal-setting to sustain long-term motivation.

Adaptability and Resilience

Persevering through adversity with focus and flexibility.

167. Managing change with preparedness and calm.

168. Remaining patient through slow growth or challenges.

169. Staying focused on problem-solving when plans fail.

170. Sustaining enthusiasm over extended efforts.

Organizational Logistics and Problem-Solving Skills

Managing instructional, administrative, and interpersonal demands with efficiency and foresight.

171. Prioritizing tasks to meet competing demands.

172. Managing schedules, resources, and deadlines effectively.

173. Solving logistical, instructional, and relational challenges.

174. Anticipating potential issues and creating contingency plans.

175. Practicing personal time management for professional balance.

176. Creating a welcoming and inclusive classroom environment.

177. Promoting equitable access to musical opportunities.

Innovation and Community Awareness

Balancing tradition and progress through community-conscious innovation.

178. Honoring program history and traditions through repertoire and culture.

179. Incorporating contemporary teaching strategies.

180. Integrating emerging technologies into music instruction.

181. Supporting community efforts through music education.

182. Building relationships with colleagues and non-instructional staff.

Coordination and Resource Management

Overseeing financial, logistical, and operational components of the music program.

183. Developing and managing program budgets.

184. Scheduling rehearsals, trips, and performances.

185. Planning and producing concerts, festivals, and community events.

186. Managing logistics such as transportation and venue booking.

187. Engaging in strategic planning for long-term program success.

188. Delegating responsibilities to staff, student leaders, and volunteers.

189. Establishing multi-year curriculum and program goals.

190. Overseeing fundraising and donor relations.

191. Maintaining instrument, sheet music, and equipment inventories.

Recruitment, Marketing, and Promotion

Expanding program reach through strategic outreach and visibility.

192. Creating promotional materials and newsletters.

193. Leading presentations to promote the program within the school.

194. Implementing recruitment plans across school levels.

195. Organizing community engagement events for visibility.

196. Celebrating and showcasing student accomplishments.

Public Relations, Crisis Prevention and Management

Managing communication and risk to ensure safety and institutional trust.

197. Addressing emergencies during rehearsals or trips.

198. Managing disruptions with calm and efficiency.

199. Ensuring student safety and well-being in all activities.

200. Preparing and implementing emergency response protocols.

201. Mediating conflicts with fairness and sensitivity.

Technical and Digital Competencies

Supporting instruction and administration through applied tech fluency.

202. Using ICT tools to manage instructional and operational needs.

203. Operating digital systems (AV equipment, cloud storage, spreadsheets, presentation tools, virtual conferencing, etc.) for program support.

Appendix H

Perceived Knowledge Gaps Category Alignment and Detailed Subcodes

Initial Theme (5-domain model)	Original Category	Final Theme
Critical Cross-Cutting Skills	Effective Communication, Judgment, and Diplomacy	Program Management and Leadership
	Initiative and Entrepreneurial Spirit	Personal Development and Resilience
	Critical Thinking and Analytical Decision-Making	Holistic Music Pedagogy
	Adaptability and Growth-Oriented Mindset	Personal Development and Resilience
	Holistic Leadership	Program Management and Leadership
	Emotional and Interpersonal Intelligence	Personal Development and Resilience
	Professional Integrity and Ethical Conduct	Personal Development and Resilience
Musical Skills: Exemplary Musicianship and Subject Knowledge	Musical Mastery and Broad Instrumental Skills	Holistic Music Pedagogy
	Advanced Ensemble Leadership and Musical Solutioning	Holistic Music Pedagogy
	Knowledge of Resources and Repertoire	Holistic Music Pedagogy
	Comprehensive Music Theory and Creative Practice Integration	Holistic Music Pedagogy
Pedagogical Skills: Leadership, Instruction, and Management	Classroom Management and Instructional Pacing	Holistic Music Pedagogy
	Curriculum and Instructional Design	Holistic Music Pedagogy
	Assessment and Data-Driven Practices	Holistic Music Pedagogy
	Group and Collaborative Learning	Holistic Music Pedagogy
	Student-Centered Engagement	Holistic Music Pedagogy

Initial Theme (5-domain model)	Original Category	Final Theme
	Leveraging and Integrating Technology	Program Management and Leadership
	Facilitating Remote and Self-Paced Learning	Program Management and Leadership
	Individualized and Adaptive Learning Design	Holistic Music Pedagogy
	Leading Collaborative and Creative Projects	Holistic Music Pedagogy
Personal Skills: Disposition, Character, and Mindset	Reflective and Growth-Oriented Practices	Personal Development and Resilience
	Creativity and Passion for Music Education	Personal Development and Resilience
	Sustaining Energy, Balance, and Self-Motivation	Personal Development and Resilience
	Adaptability and Resilience	Personal Development and Resilience
Professional Skills: Multifaceted Program Leadership	Organizational and Problem-Solving Skills	Program Management and Leadership
	Innovation and Community Awareness	Program Management and Leadership
	Coordination and Resource Management	Program Management and Leadership
	Recruitment, Marketing, and Promotion	Program Management and Leadership
	Public Relations, Crisis Prevention and Management	Program Management and Leadership
	Technical and Digital Competencies	Program Management and Leadership

Summary

- **Holistic Music Pedagogy** integrates all instructional, content expertise, and student-centered teaching categories.
- **Program Management and Leadership** incorporates operational, administrative, and external engagement responsibilities, including technology.

- **Personal Development and Resilience** encompasses mindset, self-care, flexibility, and professional growth.

Perceived Knowledge Gaps in Music Educator Preparation Subcodes

Content Area Expertise

Specialized knowledge and skills required for effective music education, including instrument repair, secondary instrument pedagogy, repertoire selection, advanced music theory integration, and the adaptive use of music-specific tools to foster technical, creative, and inclusive learning environments.

1. Instrument Repair and Maintenance: Limited skills in diagnosing and repairing student instruments, with insufficient training in preventative maintenance to extend instrument life and reduce costs.

2. Secondary Instrument Performance and Pedagogy: Gaps in performance and pedagogical skills for teaching instruments beyond primary expertise hinder ensemble growth and individual development.

3. Repertoire Selection and Cultural Knowledge: Challenges in selecting appropriate repertoire and applying knowledge of global music traditions and authentic performance practices.

4. Comprehensive Music Theory and Creative Practices: Insufficient integration of advanced music theory concepts in preparation to guide students in creative processes like composition, arranging, and digital music production.

5. Diagnosing and Addressing Musical Challenges: Difficulty identifying and addressing musical challenges with limited diagnostic and prescriptive techniques to enhance performance.

6. Adaptive Use of Music-Specific Tools: Gaps in using DAWs, notation software, and recording technologies, alongside challenges in integrating adaptive technologies for inclusivity.

7. Assessment of Content Knowledge and Skills: Insufficient training in designing assessments and using data to measure and inform student growth in technical, theoretical, and artistic areas.

8. Curriculum Alignment and Instructional Design: Lack of alignment between music curriculum goals and broader educational objectives, with difficulties balancing ensemble-focused and individualized instruction.

9. Dynamic Pedagogical Approaches: Limited ability to adapt instructional plans in real time and insufficient creative strategies for fostering critical thinking and problem-solving in music education.

Teaching and Learning Practices

Effective teaching and learning practices involve strategies for classroom management, curriculum design, student engagement, and culturally responsive instruction, all aimed at addressing the diverse needs of contemporary music classrooms.

10. Classroom and Behavior Management: Insufficient preparation in implementing effective strategies to create a productive and inclusive learning environment.

11. Curriculum Design and Pacing: Lack of training in developing curricula that effectively balance technical, artistic, and cultural goals.

12. Student Engagement Strategies: Challenges in developing innovative approaches to engage and motivate students, particularly in the context of post-pandemic attention spans.

13. Social-Emotional Learning (SEL) Integration: Limited incorporation of SEL strategies to promote emotional well-being and resilience among students.

14. Diverse Repertoire Selection: Difficulties in selecting and teaching repertoire that reflects cultural inclusivity and fosters equity in music education.

15. Equitable Learning Environments: Insufficient preparation for creating learning environments that address the diverse needs of students from various cultural and socioeconomic backgrounds.

16. Developmentally Appropriate Instruction: Need for instructional techniques that align with the developmental and emotional needs of students.

17. Balancing Instructional Approaches: Challenges in effectively balancing group ensemble demands with individual instruction.

18. Diagnosing Instructional Challenges: Difficulty in identifying and addressing technical, musical, and logistical challenges within instructional contexts.

19. Student-Centered Learning Design: Limited skills in designing learning experiences that are innovative and centered on student engagement.

20. Problem-Solving Strategies: Lack of effective strategies for addressing classroom dynamics, rehearsal logistics, and resource constraints.

21. Reflective Teaching Practices: Insufficient reflective practices to evaluate instructional effectiveness and adapt teaching methods for improved outcomes.

22. Analytical Decision-Making: Gaps in applying analytical decision-making to repertoire selection, program development, and assessment strategies.

23. Creative Teaching Approaches: Difficulty in fostering creativity through teaching concepts such as improvisation, composition, and cross-curricular integration.

24. Real-Time Instructional Adaptation: Limited ability to adapt instructional plans dynamically to meet emerging student needs and unexpected classroom situations.

25. Encouraging Critical Thinking: Insufficient preparation to promote critical thinking among students through guided analysis of musical works and collaborative problem-solving activities.

Technology Proficiency and Integration

Technology proficiency and integration involve the effective use, adaptation, and troubleshooting of digital tools and platforms to support instruction, assessment, and program management in modern music education.

26. Designing Remote and Hybrid Learning Models: Limited knowledge of designing and implementing remote, hybrid, and flipped classroom models to enhance accessibility and engagement.

27. Accountability in Virtual Learning: Difficulty maintaining student accountability and fostering active participation in virtual and technology-enhanced learning environments.

28. Troubleshooting Emerging Technologies: Insufficient skills in troubleshooting and adapting to emerging technologies, including artificial intelligence and multimedia tools, for evolving instructional needs.

29. Adaptive Technology for Inclusive Education: Limited understanding of integrating adaptive technologies to support diverse learners and promote inclusive education.

30. Balancing Traditional and Digital Methods: Challenges in balancing traditional instructional methods with digital innovations to enhance program effectiveness.

31. Staying Current with Technology Trends: A need for continuous updating of knowledge about technology trends to ensure pedagogical relevance and program sustainability.

Program Leadership and Management

Program leadership and professional responsibilities involve managing the logistical, administrative, and advocacy aspects of music education programs while fostering communication, sustainability, and growth within diverse educational settings.

32. Budget Management and Event Coordination: Insufficient preparation in managing budgets, organizing events, and coordinating logistics for performances, trips, and competitions.

33. Recruitment and Retention Strategies: Lack of effective strategies for developing and implementing recruitment and retention plans to sustain and grow music programs.

34. Stakeholder Communication: Difficulty in effectively communicating with stakeholders—including parents, administrators, and community members—to align program goals with institutional and community needs.

35. Advocacy for Music Education: Limited skills in advocating for the value of music education through presentations, campaigns, and public relations efforts.

36. Navigating School Politics: Challenges in navigating school politics and addressing issues in rural or low-resource settings to ensure program viability.

37. Program Operations Oversight: Gaps in overseeing program operations, including scheduling, resource allocation, and inventory management.

38. Collaboration with Administrators: Difficulty in building collaborative relationships with school and district administrators to secure support and resources for music programs.

39. Accountability and Transparency: Lack of preparation in fostering a culture of accountability and transparency in program operations to maintain trust and credibility.

40. Mentorship and Professional Collaboration: A knowledge gap exists in providing effective guidance to novice educators, fostering interdisciplinary teamwork, and building collaborative relationships with colleagues, all of which are essential for sustaining professional growth and enhancing program success.

41. Modeling Professional Behavior: Insufficient modeling of professional behavior and ethical practices to set a standard for students and colleagues.

42. Leadership Development Opportunities: Difficulty in creating opportunities for leadership development through projects, rehearsals, and community engagement.

43. Conflict Resolution Strategies: Need for conflict resolution strategies to navigate interpersonal challenges and maintain a positive program culture.

44. Nurturing Stakeholder Relationships: Insufficient capacity for maintaining supportive relationships with community partners, parents, and local institutions.

Adaptability and Resilience

Adaptability and resilience encompass the ability to remain flexible, responsive, and effective in dynamic educational environments while managing stressors and maintaining program stability.

45. Navigating Unexpected Challenges: Gaps in preparation for managing disruptions or unforeseen circumstances effectively.

46. Flexibility in Instructional Strategies: Limited flexibility in adapting instructional strategies to accommodate diverse student needs, shifting schedules, and varying instructional formats.

47. Program Management Flexibility: Difficulty in demonstrating adaptability in program management tasks, including logistics, event planning, and resource allocation.

48. Personal Resilience and Stress Management: Lack of training in cultivating personal resilience through stress-management techniques and maintaining a balanced professional approach.

49. Modeling Resilience: A need for preparation in modeling a positive and resilient mindset to inspire students and colleagues in overcoming challenges.

50. Reflective Practices for Growth: Limited opportunities for reflecting on personal and professional practices to identify areas for improvement and renewal.