Informal Learning in Secondary School Music Classrooms: Exploring Practices, Influences, and Teacher Preparation on the U.S. West Coast

by

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DISSERTATION ABSTRACT

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Doctor of Philosophy in Music Education

Title: Informal Learning in Secondary School Music Classrooms: Exploring Practices, Influences, and Teacher Preparation on the U.S. West Coast

This study examined how secondary school music teachers on the U.S. West Coast understand, implement, and perceive the impact of informal learning strategies in their classrooms using an explanatory sequential mixed-methods design (Creswell & Plano Clark, 2018). An informal learning approach in the music classroom, developed by Lucy Green, emphasizes student autonomy, peer collaboration, and aural learning over teacher-directed instruction. Despite growing international interest, informal learning adoption in U.S. secondary music education has been limited, particularly in ensemble-dominated contexts. This study addressed that gap among secondary music educators in California, Oregon, and Washington, beginning with an online survey of 117 secondary music teachers followed by semi-structured interviews with 20 participants. Survey data were analyzed quantitatively, and interview transcripts were coded thematically, with intercoder reliability established at an average of 86%.

Findings revealed that 65% of respondents were unfamiliar with Green's approach and informal learning before the survey; however, 80.7% reported using selective informal learning strategies, most often encountered through professional networks or classroom experience rather than formal preparation. Implementation varied considerably by teaching context: student agency and peer collaboration were the most widely reported strategies, while ensemble teachers incorporated informal learning strategies selectively rather than as a sustained approach. Personal beliefs about student-centered learning and observed student

response were the primary drivers of informal learning use; time constraints, large class sizes, and limited training were the most common obstacles.

Teachers who used informal learning strategies with formal knowledge of the approach reported higher confidence and perceived stronger student gains in engagement and independence than those using selective informal learning strategies without informed understanding of the approach. While the direction of these relationships cannot be determined from the data, the pattern suggests that the pedagogical awareness meaningfully shapes how informal learning is practiced and what teachers observe. The findings point to structural barriers and gaps in professional preparation, rather than philosophical disagreement, as the primary reasons Green's approach has not taken broader hold in U.S. secondary music education, with implications for teacher preparation programs, professional development, and secondary music program design.

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your experiences are at the heart of every finding in this dissertation. Each conversation taught me something new, not only about music education but about the dedication and thoughtfulness that teachers bring to their work every day. I am grateful for every one of them.

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This dissertation is dedicated to every music teacher who is already doing the work – often without knowing it, always without enough support. This one is for you.

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CHAPTER I: INTRODUCTION

Conceptual Background of Green's Approach

Lucy Green, a music education researcher based in England, developed her approach from an observation that formal music education had largely overlooked: the musicians producing most of the music the world actually listens to had largely taught themselves, outside of any formal classroom, through listening, copying, and playing alongside friends (Green, 2002). Green's core argument was that while formal music education had begun welcoming popular music into schools, the teaching strategies remained rooted in the conventions of Western classical music pedagogy, unchanged and unresponsive to how that music had always been created and transmitted (Green, 2002, 2008). Teaching popular music the same way you teach classical music, she argued, strips it of the very learning practices that make it work (Green, 2002).

Green (2002) was deliberate in her choice of language, describing informal learning as a set of practices rather than methods, because methods imply something conscious and goal-directed, whereas the learning she observed could be both conscious and unconscious, both intentional and accidental. She was equally clear that formal and informal learning are not opposites; they exist on a continuum, and most musicians move between both throughout their lives (Green, 2002). This speaks directly to a tension that both Väkevä (2009) and Mariguddi (2022) identify in the field: whether something can still be meaningfully "informal" once it is brought inside a classroom, a school schedule, and a curriculum. Green (2002) suggests the question is not whether a practice is purely formal or purely informal, but where it sits on the spectrum and how much ownership the learner retains over their own musical development.

Green was also honest about the limits of her own research. Her study drew on a narrow sample, predominantly white, mostly male, Anglo-American guitar-based rock

musicians in and around London (Green, 2002). She acknowledged openly that race, gender, class, and geography shaped both who she interviewed and what she found (Green, 2002). This acknowledgment matters, because it means her findings cannot be assumed to translate equally across all students, contexts, and musical traditions.

Green's work has not gone without criticism, and this study does not engage with it uncritically. Scholars have raised important questions about whether informal learning can remain genuinely informal once institutionalized, and whether its benefits extend equally to all students and contexts (Mariguddi, 2022; Väkevä, 2009). Those questions shaped how this study was designed and how its findings are interpreted.

Contemporary Context for Music Education

The rapidly evolving technological landscape has transformed how music is consumed, distributed, and experienced. From the early phonograph to today's digital recording tools, landmark technologies have changed both the creative process and listening habits, lowering barriers to music consumption and creation and empowering more individuals to engage in music-making (Katz, 2010; Miller, 2012; Théberge, 1997; Waldron, 2013). These advancements not only transformed how music is consumed but also expanded opportunities for active participation, fostering a landscape where skills in digital production, online distribution, and community building have become increasingly valuable (Green, 2006; Ryan, 2016).

Success in today's music landscape increasingly depends not only on musical talent but also on practical skills, professional networks, and diverse learning experiences (Bennett & Bridgstock, 2015; Parkita, 2021). K–12 school music programs must evolve in response, moving beyond traditional, formalist models that often fall short in fostering the creativity, adaptability, and autonomy students need (Green, 2008). More flexible, student-centered approaches offer valuable alternatives that emphasize real-world relevance, peer

collaboration, and cultural diversity, which are qualities that better reflect both students' musical lives and the realities of the modern music profession (Allsup & Westerlund, 2012; Bennett & Bridgstock, 2015; Coulson, 2010).

Statement of the Problem

Despite growing international interest in student-centered approaches to music education, U.S. schools have been slow to adopt the informal, student-directed learning described by Lucy Green (2002, 2008) in secondary music classes, in which students choose their own music, learn through peer collaboration, and take increasing ownership of their musical development. This approach, referred to throughout this dissertation as informal learning (IL), stands in contrast to traditional, teacher-directed music instruction in which the educator controls repertoire selection, pacing, and musical decision-making (Green, 2008).

Teacher preparation represents a second area of concern. Many preservice music education programs offer limited or inconsistent exposure to student-centered and informal approaches to music teaching (Waldron, 2013). When teachers are trained exclusively within traditional, conductor-led models, those models become the default lens through which they understand what music teaching is and what it can be. Without exposure to alternative approaches, teachers may have little reason to question existing structures, experiment with student-centered practices, or recognize the possibilities that lie beyond the pedagogical models they inherited.

Purpose of the Study

The purpose of this mixed-methods study is to examine how secondary school music teachers on the U.S. West Coast understand, implement, and perceive the impact of IL strategies within their instructional settings. Specifically, the study examines how teachers have come to know about Green's approach and what has shaped that awareness; how IL strategies are integrated into classroom practice and what contextual factors influence those

decisions; and how teachers perceive IL's impact on student engagement and musical development. Findings from this study are intended to inform music teacher preparation programs, professional development initiatives, and broader conversations about inclusive and student-centered approaches to secondary music education.

Significance of the Study

This study holds significance for several interconnected stakeholders in music education. For classroom teachers, it offers empirical insight into how IL strategies are currently understood and practiced in U.S. secondary settings, providing a more grounded picture of what implementation actually looks like in contexts that prior research has not fully examined. For teacher preparation programs, this study examines how and where preservice teachers encounter IL or Green's approach to identify opportunities for more experiential and sustained engagement with the approach in coursework. For the field more broadly, the study contributes to ongoing conversations about equity in music education, particularly the need for approaches that reach students whose musical identities and learning styles are not well served by traditional instruction. At a time when secondary music programs face declining enrollment and growing calls for curricular relevance, understanding how teachers engage with student-centered approachs like IL is not simply an academic question but a practical one with real implications for which students feel welcomed and supported in school music.

Definition of Key Terms and Concepts

Green's approach. Refers to the approach documented and applied to classroom contexts by Lucy Green (2002, 2008), grounded in her observations of how popular musicians learn outside formal settings. Green herself did not coin this as a fixed term or framework, but rather described a set of naturally occurring learning practices that she observed, documented, and adapted for school use. Its defining features include student choice of personally meaningful repertoire, learning by ear rather than notation, peer-directed and self-directed

exploration, and fluid movement between listening, performing, and creating (Green, 2008). In classroom application, the teacher repositions from director to facilitator, stepping back to allow students increasing ownership of their musical development while intervening only when necessary.

Informal learning (IL) strategies. A collective term used in this dissertation to refer collectively to the range of instructional practices associated with Green's (2002, 2008) music classroom research, including student choice of personally meaningful repertoire, learning music by ear from recordings, peer-directed and self-directed learning in small groups, and the integration of listening, performing, improvising, and composing. When used broadly, IL strategies encompass the full range of ways teachers in this study engaged with these practices, whether intentionally and with awareness of Green's work, or selectively and intuitively without formal knowledge of the approach.

Selective informal learning strategies. Classroom practices that incorporate elements of informal learning, such as peer-directed rehearsal, student repertoire choice, or learning by ear, without deliberate reference to or awareness of Green's (2002, 2008) work. These strategies are employed selectively and intuitively, often drawn from teachers' own experience and instincts rather than from conscious engagement with Green's documented approach, and are typically used in isolation rather than as part of a coherent and sustained instructional practice.

Ensemble-based instruction. A model of secondary music education organized around large performance groups, including band, orchestra, and choir, in which instruction is typically conductor-led, notation-based, and oriented toward concert preparation and public performance (Abril & Gault, 2008; Elpus & Abril, 2011).

Student-centered learning. An approach to instruction that prioritizes learner agency, self-direction, and personal relevance, positioning students as active participants in shaping their

own learning experiences rather than passive recipients of teacher-directed content (Allsup, 2003; Green, 2008; Jorgensen, 2003).

Mixed-methods research. A research design that integrates both quantitative and qualitative data collection and analysis within a single study, allowing findings from each strand to complement and extend one another (Creswell & Plano Clark, 2018). In this study, a quantitative survey was administered first, followed by qualitative semi-structured interviews that provided contextual depth to the survey findings.

West Coast secondary schools. For the purposes of this study, the West Coast refers to the states of California, Oregon, and Washington. Secondary schools include public and private institutions serving students in grades 6 through 12, encompassing both middle and high school contexts.

Organization of the Dissertation

This dissertation is organized into five chapters. Chapter 1 introduces the study by establishing the problem, purpose, significance, and key terms. Chapter 2 reviews the relevant literature, examining the philosophical foundations of music education, barriers to student participation, inclusive pedagogical approaches, and the principles and practices of informal music learning, concluding with the study's research questions. Chapter 3 details the mixed-methods research design, including participant recruitment, instrumentation, data collection procedures, and analytical approaches. Chapter 4 presents the findings organized by the study's three research questions, integrating quantitative survey data from 117 participants with qualitative interview data from 20 participants. Chapter 5 discusses the findings in relation to existing literature, addresses the study's limitations, and offers implications for music teacher preparation, professional development, and future research.

CHAPTER II: LITERATURE REVIEW

The Purpose of Music Teaching

At the heart of music education lie fundamental questions: Why do we teach music, and for whom? These questions have shaped the philosophies of influential scholars whose ideas continue to inform how music education is conceptualized and practiced in schools (Jorgensen, 2003). Bennett Reimer (1989) argues that the central goal of music education is to cultivate students' capacity for aesthetic experience, their ability to perceive, respond to, and be transformed by music. David Elliott (1995) challenges this view, emphasizing music as active participation embedded in diverse cultural practices rather than a vehicle for aesthetic contemplation. Building on both, Estelle Jorgensen (1997, 2003) introduces broader considerations of culture, diversity, and equity, pushing the conversation toward more inclusive and context-sensitive models. Together, these differing philosophies provide a foundation for the pedagogical approaches educators draw on today (Elliott & Silverman, 2015).

Reimer's Aesthetic Philosophy

One of the most influential voices in music education philosophy is Bennett Reimer, whose aesthetic framework has shaped curriculum, discourse, and policy in the United States (Elliott, 1995; Jorgensen, 2003). Scholars widely acknowledge his impact, particularly in shaping how music education is conceptualized in formal schooling contexts (Abrahams & Head, 2005).

Central to Reimer's philosophy is the belief that music education should cultivate students' capacity for aesthetic experience; their ability to perceive, respond to, and be transformed by the expressive qualities of sound (Reimer, 1989). For Reimer, music holds intrinsic value as an art form; its worth in education lies in the emotional and intellectual responses it uniquely produces, responses not easily replicated by other forms of knowledge

(Reimer, 1989; Jorgensen, 2003). Rather than utilitarian, technical, or behavioral approaches, Reimer emphasizes the affective dimensions of musical experience, arguing that feeling is central to music's educational purpose (Reimer, 1989). Aesthetic experience, in his view, is not passive but an active process requiring personal investment, students must listen attentively, perform expressively, and engage creatively through improvisation and composition to fully access music's expressive potential (Abrahams & Head, 2005; Jorgensen, 2003; Reimer, 1989).

Equally important in Reimer's framework is the role of the music educator. Rather than transmitting factual knowledge, Reimer positions teachers as guides who lead students toward deeper aesthetic understanding, noting that "the teacher is charged with the responsibility of selecting musical experiences of the highest quality and guiding students toward understanding and valuing them aesthetically" (Reimer, 1989, p. 53). While teachers are not envisioned as authoritarian figures, they play a central role in shaping students' musical experiences toward aesthetic goals (Bowman, 2002; Jorgensen, 2003). Recent scholars have expanded this idea by emphasizing the relational and dialogical aspects of music teaching (Abrahams & Head, 2005; Regelski, 2005), yet within Reimer's vision, the primary aim remains nurturing students' sensitivity to beauty and their capacity to experience music as a transformative form of human expression (Reimer, 1989, 2022).

While Reimer's framework is largely grounded in Western art music traditions, he acknowledges the importance of including a broader range of musical styles. He encourages educators to approach all music through an aesthetic lens (Reimer, 2022). However, scholars such as Regelski (2005) argue that his aesthetic claims risk marginalizing participatory and community-based musical traditions where aesthetic contemplation may not be the central purpose. These critiques highlight the need for music education philosophies that better reflect the diversity of students' cultural backgrounds and musical experiences.

Despite these critiques, Reimer's contributions remain foundational. His emphasis on the emotional, expressive, and artistic dimensions of music has deeply shaped how educators conceptualize the goals of music instruction (Abrahams & Head, 2005; Bowman, 2002; Jorgensen, 2003), and his framework continues to serve as an essential point of reference for both advocates and critics of aesthetic approaches to music education.

Elliott's Praxial Approach

David Elliott is widely recognized as a key figure in contemporary music education philosophy, particularly for challenging aesthetic theories such as Reimer's and offering a praxial alternative. In *Music Matters: A New Philosophy of Music Education* (1995), Elliott proposes a shift away from aesthetic contemplation toward an understanding of music as a form of human action, embedded within diverse cultural practices and social contexts. For Elliott, musical meaning is inherently tied to active creation, performance, and reception within these traditions rather than passive observation (Elliott, 1995; Regelski, 2016).

Elliott (1995) conceptualizes music education as an experiential process, drawing from Dewey's (1938) notion of learning by doing. Students develop musical understanding through performing, composing, improvising, arranging, and critically listening within specific musical communities (Dewey, 1938; Elliott, 1995). This view aligns with constructivist theories of learning. Bruner (1996) similarly emphasizes that learning involves active participation in culturally meaningful activities, framing musicianship as something that grows through authentic involvement in music-making rather than through passive reception of knowledge.

Central to Elliott's philosophy is his conception of the musician as a practitioner. Rather than interpreters of existing works, musicians actively embody technical skills, expressive understanding, cultural awareness, and reflective musical intelligence through their engagement with music (Elliott, 1995; Elliott & Silverman, 2015). This process involves

continuous interaction between doing, thinking, and feeling, where technical mastery and expressive insight develop together within particular musical traditions (Bowman, 2005). Learning music, therefore, is not about memorizing isolated facts or reproducing performances but about participating authentically in living musical practices (Elliott & Silverman, 2015; Jorgensen, 2003). Through this engagement, students develop not only individual technical skills but also social and cultural understanding, making musical learning both a personal and collective endeavor (Karlsen, 2011; Westerlund, 2002).

This redefinition of musicianship transforms the role of the music teacher. Rather than enforcing a single musical standard, the teacher becomes a facilitator who guides students into meaningful participation within diverse musical practices, recognizing that each carries its own ways of knowing, standards of excellence, and forms of musicality (Elliott, 1995; Westerlund, 2002). By adopting this approach, educators empower students to construct their musicianship through doing, thinking, and feeling within culturally situated contexts (Regelski, 2016), positioning teachers not simply as instructors but as mentors who foster inclusive and socially responsive music education experiences (Bowman, 2005; Elliott & Silverman, 2015).

Building on this foundation, Elliott later collaborated with Marissa Silverman (2015) to deepen the understanding of music-making as an ethical, emotional, and social endeavor. They argue that musical practices are inseparable from issues of identity, agency, community, and personal well-being, positioning music education as a means of fostering holistic human development (Elliott & Silverman, 2015). Rather than focusing solely on technical competence, they emphasize nurturing empathetic, reflective, and socially engaged individuals through participation in diverse musical traditions (Jorgensen, 2003; Westerlund, 2006). By embedding music education within broader ethical and cultural contexts, Elliott

and Silverman position it as a transformative force supporting both individual flourishing and communal vitality (Westerlund & Karlsen, 2017).

Jorgensen's Contextual and Democratic Vision

Estelle Jorgensen's work has been influential in shaping contemporary discussions of music education, particularly through her emphasis on critical, contextual, and democratic approaches (Jorgensen, 2003; Regelski, 2005). Building on earlier frameworks by Reimer and Elliott, Jorgensen (2003) critiques their limitations and argues for a more socially and culturally responsive vision of music education. She emphasizes that music is not a self-contained art form but is continually shaped by broader social, political, and historical forces, and that educators are therefore called to foster critical thinking, equity, and student agency in music learning (Benedict et al., 2015; Jorgensen, 2003, 2007; Karlsen, 2011).

Central to Jorgensen's framework is the argument that music is not a neutral art form but one that embodies and reflects social structures, power relations, and cultural meanings (Jorgensen, 2003). Music educators, in her view, have a responsibility to help students critically examine whose musical traditions are privileged and whose are marginalized in the curriculum, moving beyond surface-level inclusion of diverse musics toward a deeper interrogation of the cultural and political forces that shape musical experiences (Bradley, 2007; Jorgensen, 2007). This critical approach is reinforced by Regelski (2005), who emphasizes the importance of addressing cultural power dynamics within music education.

A strong commitment to equity and social justice lies at the core of Jorgensen's philosophy. She critiques Reimer's aesthetic philosophy for its tendency toward elitism and abstraction, arguing that aesthetic ideals often fail to account for the lived realities of diverse student populations (Jorgensen, 2003; Regelski, 2005). She similarly challenges Elliott's praxial philosophy, questioning whether focusing solely on musical practices is sufficient without critically examining the broader social and political contexts in which those practices

occur (Benedict et al., 2015; Jorgensen, 2007). For Jorgensen, music education must actively confront structural inequalities and foster critical consciousness about power, access, and representation, creating environments where all students feel seen and heard (Benedict et al., 2015; Jorgensen, 2003; Regelski, 2005).

Jorgensen's vision also emphasizes dialogue, democracy, and student participation. Drawing from Deweyan ideals of democracy in education, she argues that classrooms should serve as spaces for negotiation, ethical inquiry, and collective meaning-making, where students are positioned as co-creators of musical meaning rather than passive recipients of knowledge (Jorgensen, 2003, 2007; Westerlund, 2002). This approach deepens students' musical understanding while cultivating broader skills of empathy, collaboration, and ethical reflection (Jorgensen, 2003; Regelski, 2005).

Finally, Jorgensen emphasizes the importance of teachers as reflective practitioners. She argues that music educators must continuously examine their assumptions, biases, and pedagogical choices in response to the diverse and evolving needs of their students; asking critical questions about which genres or traditions they privilege, how they structure classroom interactions, and whose ways of knowing they affirm or neglect (Jorgensen, 2003; Regelski, 2005). Such reflection, grounded in social and ethical awareness rather than private self-evaluation, is key to realizing a more equitable and responsive vision of music education (Benedict et al., 2015; Jorgensen, 2007).

Expanding Visions of Music Education Philosophies

The foundational ideas proposed by Reimer, Elliott, and Jorgensen continue to shape contemporary music education scholarship, with later scholars extending these frameworks to emphasize democratic participation, cultural relevance, and student agency. Allsup (2003) and Karlsen (2011) contribute meaningfully to this evolving dialogue, highlighting the importance of collaborative, contextually grounded, and learner-centered approaches.

Allsup (2003) proposes a vision of music education rooted in democratic pedagogy, investigating the concept of democracy as a "community-in-the-making" within a band setting. Working with nine high school band students over a semester, Allsup engaged participants in a project emphasizing student agency and collaborative decision-making, where students formed their own ensembles, selected their instruments, and composed original music. His findings indicate that when students are given autonomy over their musical activities, they develop deeper connections to both the music and to each other. Allsup concludes that such democratic practices not only enhance musical learning but also cultivate a sense of shared authority and community within the classroom.

Karlsen (2011) similarly emphasizes the social, participatory, and meaning-making aspects of musical learning, proposing the concept of musical agency as a framework for examining music education from the learner's experiential perspective. Drawing on DeNora's (2000) sociological framework and Green's (2002) approach on informal learning, Karlsen argues that musical learning must be understood within its social and cultural contexts, shaped by the identities and communities learners bring to musical participation. Her study of a community choir illustrates how collaborative music-making builds social bonds and personal connections, highlighting learning as a communal and identity-affirming process. Karlsen's findings demonstrate that informal learning processes can occur even within structured environments, suggesting that the principles underlying student-centered, peer-directed learning are not limited to informal settings alone.

Together, the philosophical frameworks of Reimer, Elliott, and Jorgensen, extended by the empirical work of Allsup and Karlsen, illuminate a growing shift toward student-centered, socially responsive, and participatory models of music education. Before examining how these principles are realized in practice, it is important to understand the structural and institutional landscape that shapes what is possible in U.S. secondary music education.

Barriers to Musical Development in Youth

Younger generations are increasingly engaged with music in their everyday lives, yet enrollment in school music programs has declined across multiple contexts. In the U.S., the Arts Education Data Project (2022) finds that while 92% of students have access to music education, only approximately 50% participate, and millions remain without access entirely. These disparities have been further compounded by the COVID-19 pandemic, which disrupted music programs nationwide and produced participation declines that many schools are still working to recover from (Stefaniak, 2023). Research further suggests that students' musical self-efficacy tends to weaken without consistent, meaningful engagement in music education (Zelenak, 2020).

This decline may stem from several interrelated factors. Reduced access to school-provided music education disproportionately affects students in lower-income and rural communities, where funding constraints and teacher shortages limit program quality and availability (Arts Education Data Project, 2022; Bauer, 2014; Whitt, 2024). Perceptions of limited institutional support further compound the issue when schools prioritize core academic subjects over the arts. Music programs face scheduling conflicts, reduced resources, and diminished visibility, contributing to students feeling that their musical interests are not valued by their school community (Culp & Clauhs, 2020; Zelenak, 2020). A disconnect between traditional music curricula and the evolving interests of students represents a third contributing factor, as many programs remain grounded in Western classical models that do not reflect the diverse musical practices students engage with outside the classroom (Aróstegui, 2016; NAfME, 2017b).

Access to music education in the U.S. remains deeply uneven despite broad availability on paper. While Elpus and Abril (2019) report that music education is offered in 94% of elementary and 91% of secondary schools nationally, availability does not guarantee

participation. Limited funding and inadequate resources create particular barriers for lower socioeconomic status communities, with schools in lower-income and rural areas often unable to sustain robust music programs due to financial constraints and shortages of qualified teachers (Bauer, 2014; NAfME, 2017b; Whitt, 2024). These structural disparities mean that students' opportunities to engage in quality music education are shaped as much by their zip code as by their interest, raising significant concerns about equity and access across the U.S. secondary school landscape (Culp & Clauhs, 2020; Whitt, 2024).

Students' perceptions of institutional support also shape their engagement with music education. Many programs, particularly in underfunded schools, lack the materials and equipment necessary for high-quality instruction, outdated instruments, limited access to sheet music, and insufficient practice spaces can all hinder meaningful participation (Bauer, 2014; Culp & Clauhs, 2020). When schools prioritize core academic subjects over the arts, scheduling conflicts further reduce the availability of music programs, leaving students with fewer opportunities to engage (Zelenak, 2020). Beyond resources and scheduling, students often experience a lack of encouragement and recognition from faculty and administrators, contributing to feelings of marginalization and a diminished sense that their musical interests are valued by their school community (Culp & Clauhs, 2020; Youth Music, 2024). These conditions have been associated with declining enrollment in music programs, as students may be less likely to invest in music education when institutional support feels absent (Abril & Gault, 2008; Allsup & Westerlund, 2012; Culp & Clauhs, 2020).

A challenge in contemporary music education is the disconnect between traditional school curricula and the musical interests of today's students (Aróstegui, 2016). Many programs remain grounded in Western classical models that do not incorporate contemporary styles, digital tools, or culturally relevant genres, limiting their appeal to a broader student population (Allsup & Westerlund, 2012; Aróstegui, 2016; Williams, 2012). The dominance

of large ensemble instruction in U.S. secondary schools has been associated with rigid learning environments that prioritize compliance and accuracy over creativity and exploration (Allsup & Westerlund, 2012; Jorgensen, 2003), and may discourage students from experimenting with improvisation, composition, or the modern technologies central to many students' musical identities outside school (Bauer, 2014; Tobias, 2013). As one U.S. teacher observed, music education as a profession tends to be "tradition-bound," often sidelining technology, popular music, non-Western traditions, and the genres students actually listen to and value (Aróstegui, 2016, p. 101). Without opportunities for personal expression and musical agency, students whose interests lie outside the classical canon may become disengaged from school music altogether (Williams, 2012).

The disconnect between school music curricula and students' musical lives is further amplified by technology. Many students are proficient in using digital music production tools to create and share music, yet these tools are rarely integrated into traditional school curricula (Coulson, 2010). This technological divide reinforces the broader gap between how students engage with music outside school and what they encounter in the classroom. Addressing these challenges may require embracing a wider range of musical genres and integrating modern technologies into music education, changes scholars suggest would create more engaging and relevant learning experiences (Allsup & Westerlund, 2012; Aróstegui, 2016; Green, 2008). In response to these challenges, scholars have proposed more inclusive and student-centered pedagogical frameworks as a meaningful alternative, a direction that the following sections examine in depth.

Creating an Inclusive Music Environment in Schools

Creating a truly inclusive music classroom requires more than surface-level diversity in repertoire. It requires pedagogical shifts that empower students, reflect their identities, and foster equitable participation (Lind & McKoy, 2016). Drawing from the literature, this review

identifies five interrelated dimensions that collectively characterize inclusive music education: culturally responsive pedagogy, student voice and choice, diverse musical genres, accessible learning pathways, and emotionally supportive environments. Together, these dimensions move beyond token representation toward a more substantive reimagining of how music is taught and for whom.

Culturally responsive teaching enhances inclusivity by integrating students' cultural identities into classroom music-making (Lind & McKoy, 2016). When teachers select repertoire and activities that reflect students' cultural backgrounds, they build musical relevance and equity, fostering deeper engagement among students from diverse communities (Abril, 2009). This approach also challenges the dominance of Western classical music as the curricular default, creating space for a more inclusive and representative range of musical traditions (Aróstegui, 2016).

Promoting student voice and choice in music education increases learner agency and supports more inclusive classroom environments (Allsup & Westerlund, 2012). When students contribute to repertoire selection, classroom discussions, and peer instruction, they develop a sense of ownership over their learning and feel greater investment in the musical process (Green, 2008). This co-constructed approach values each learner's input and nurtures autonomy, qualities that are central to inclusive pedagogy (Lind & McKoy, 2016).

An inclusive music curriculum broadens its scope beyond classical repertoire to include genres such as hip-hop, pop, folk, and world music (Abril, 2009; Aróstegui, 2016). Incorporating these genres affirms students' musical identities and supports participation by reflecting the music they encounter in their daily lives (NAfME, 2017b). Such curricular diversity also advances equity by recognizing non-Western musical traditions as legitimate and valuable forms of knowledge in the classroom (Williams, 2012).

Inclusive music classrooms offer flexible and differentiated learning pathways that meet the needs of all learners, including those with disabilities or limited prior musical experience (Jellison, 2015). Teachers support accessibility by adjusting expectations, using alternative assessments, and providing multiple means for students to engage with music (NAfME, 2017b). This approach acknowledges that students' abilities and needs vary widely, and that effective inclusive teaching must be responsive to that diversity rather than assuming a single pathway to musical participation (Florian & Black-Hawkins, 2011).

An inclusive music classroom is built on a foundation of emotional safety, trust, and positive relationships between students and teachers (Abril, 2013). When students feel respected and supported, they are more willing to take creative risks and participate authentically in music-making (Culp & Clauhs, 2020). Teacher encouragement and a welcoming classroom culture are therefore critical conditions for fostering inclusive engagement (Youth Music, 2024). These relational qualities extend beyond the classroom as well, with meaningful connections with families, local artists, and community stakeholders further strengthening students' sense of belonging and reinforcing the cultural relevance of their musical learning (Abril, 2009; Conkling, 2018).

These dimensions collectively highlight the multifaceted and interconnected nature of inclusivity in music education, each contributing to learning environments that are more equitable, responsive, and empowering for all students (Lind & McKoy, 2016). Achieving this vision, however, requires not only shifts in repertoire and classroom culture but also a fundamental rethinking of the pedagogical structures through which music is taught.

U.S. Music Education: Past and Present

The dominance of ensemble-based music education in the U.S. has deep historical roots. In the early 19th century, Lowell Mason established the precedent for teacher-directed, notation-based instruction grounded in European choral traditions, successfully advocating

for music's inclusion in Boston public schools in 1838 (Mark & Gary, 2007). Throughout the late 19th and early 20th centuries, instrumental ensembles gained prominence alongside choral programs, driven in part by the cultural visibility of military and community bands and the influence of figures such as John Philip Sousa (Hebert & Campbell, 2000). As public schools expanded, band programs became institutionalized fixtures of secondary education, valued for promoting discipline, teamwork, and civic pride and reinforced by their alignment with school athletics, competitions, and community performances (Kelly, 2009; Mark & Gary, 2007).

Several pivotal developments have since sought to broaden the scope of U.S. music education. The Tanglewood Symposium (1967) called for curricula that serve all students and reflect a wider range of musical cultures and styles (Choate et al., 1967), and the Housewright Symposium (1999) reaffirmed these ideals by emphasizing access, diversity, and lifelong engagement (Madsen, 2020). The National Core Arts Standards released by NAfME in 2014 further expanded the focus beyond performance to include creating, responding, and connecting as core artistic processes (NCCAS, 2014). These initiatives reflect an ongoing effort to make music education more inclusive and student-centered, though their implementation in secondary classrooms has remained uneven (Abril & Gault, 2008; Elpus & Abril, 2011).

Current Realities of Secondary Music Education

Despite these reform efforts, the structural realities of U.S. secondary music education extend beyond curriculum content to shape how teachers, students, and institutions define musical success. Most secondary music classrooms continue to operate within traditional ensemble frameworks where musical success is measured by performance quality and adherence to conductor authority (Davis & Blair, 2011; Jaffurs, 2004). Rigid school schedules, high-stakes performance demands, and community expectations around public

concerts and competitions further constrain curricular flexibility and limit opportunities for student agency and alternative musical practices (Faulkner & Cook, 2006; Tobias, 2013). Educators who adopt more student-centered approaches may encounter resistance from administrators, parents, or peers who equate quality music instruction with formal concert outcomes (Abril & Gault, 2008; Allsup, 2016).

Teacher preparation represents a related structural barrier. Many preservice music education programs continue to prioritize ensemble conducting and large-group instruction, offering limited exposure to informal learning, digital creativity, or culturally responsive pedagogy (Culp & Clauhs, 2020; Jaffurs, 2004). Without access to clear models or mentorship in non-traditional teaching methods, even well-intentioned educators may feel ill-equipped to move beyond established practices (Kastner, 2014; Tobias, 2013). These gaps in preparation contribute to the persistence of traditional methods even as research increasingly supports more flexible and inclusive pedagogical approaches.

Emerging Shifts in Practice

Despite these structural constraints, a growing body of scholarship and institutional practice reflects movement toward more inclusive and student-centered approaches. Some teacher education programs have begun incorporating coursework in IL, popular music pedagogy, culturally responsive teaching, and music technology (Culp & Clauhs, 2020). Professional development workshops and national conference programming have similarly expanded to include sessions on creative music-making, student-led learning, and digital tools (Davis & Blair, 2011; Tobias, 2013). Green's (2008) foundational work has inspired a wave of studies exploring student-directed learning, peer teaching, and popular music ensembles (Karlsen, 2011; Wright & Kanellopoulos, 2010), and more recent scholarship has continued to legitimize informal models within mainstream music education discourse (MacDonald et al., 2017). While these efforts remain uneven across institutions and districts,

they signal a meaningful shift in how the field is beginning to conceptualize the purpose and practice of secondary music education.

Against this backdrop, IL has seen considerably more uptake in countries with British-influenced education systems than in the U.S. (Mariguddi, 2022; Waldron, 2013), reflecting a different set of assumptions about what music teaching and learning look like. A growing number of schools have begun offering alternative programs such as general music, guitar, piano, music technology, and popular music ensembles in the U.S., reflecting efforts to reach a broader range of student interests, yet they are not common across schools (Hebert & Campbell, 2000; Tobias, 2013). The structural realities in each education system raise important questions about equity and access, questions that IL is particularly well-positioned to address.

Green's Classroom Research Project

Green (2008) sought to bring the naturally occurring practices of popular musicians into formal music settings, organizing her research around five core characteristics: student choice of personally meaningful music, learning by ear from recordings, peer-directed learning, unstructured personal exploration, and the integration of listening, performing, improvising, and composing. These characteristics were explored through seven adaptable stages, developed collaboratively with teachers across 21 schools in the U.K. Green (2008) emphasizes that these stages were not conceived as a fixed curriculum or prescribed model but as an approach to teaching and learning that could be adapted to different school contexts, with Stage One forming the core and the remaining stages building outward from it. Throughout all stages, the teacher shifts from director to observer, offering minimal and responsive support only when needed.

Stage One: Independent Group Learning by Ear

In Stage One, students bring music of their own choosing, form small friendship groups, and learn their chosen song by ear from a recording using instruments of their choice, without notation or teacher direction (Green, 2008). The teacher steps back entirely during initial lessons, observing before offering any guidance. While early lessons may appear chaotic, Green (2008) documents how students consistently find their own ways through difficulty, developing musical focus and peer collaboration organically over time.

Stage Two: Modelling Aural Learning with Teacher-Selected Music

Stage Two introduces a pre-selected piece of music in place of student choice, providing more structure while retaining the core informal approach (Green, 2008). Students continue learning by ear in friendship groups, selecting instruments and directing their own learning, while the teacher maintains the standing-back role. This stage allows teachers to introduce curriculum goals without removing student agency or the aural learning process.

Stage Three: Returning to Independent Learning

Stage Three returns to the conditions of Stage One, giving students the opportunity to apply the skills and confidence developed in the first two stages (Green, 2008). Students again choose their own music and learn it by ear without teacher direction. Green (2008) documents that students approach this repetition with noticeably greater musical focus and self-direction, demonstrating how the earlier stages have developed their capacity for independent musical learning.

Stage Four: Informal Composing

Stage Four moves students from copying existing music into original composition, building on the listening and copying skills developed in earlier stages (Green, 2008). No compositional guidelines are provided. Students create their own music, replicating how

popular musicians naturally begin composing by drawing on what they have absorbed through listening and copying.

Stage Five: Modelling Composing through Live Demonstration

Stage Five invites a band or peer group to demonstrate how music is constructed from the inside, allowing students to learn by watching real musicians work (Green, 2008). Following the demonstration, the visiting musicians take on guiding roles alongside the teacher, reinforcing the connection between classroom music-making and real-world musical practice.

Stages Six and Seven: Informal Learning with Classical Music

The final two stages extend the informal learning approach into classical repertoire, with students asked to learn pre-selected classical pieces by ear using the same strategies developed in earlier stages (Green, 2008). Green (2008) documents that while students initially responded negatively, most gradually developed greater engagement and musical awareness as active music-makers, demonstrating that the approach can be applied across diverse musical traditions beyond popular music.

Research Support for Green's Approach

Green's classroom research project, described above, is built on a set of core principles: peer collaboration, student agency, aural learning, and authentic music-making. Research examining these individual strategies in applied classroom settings provides empirical support for each of these principles.

Rodriguez (2009) found that when students engage in peer-directed learning, they take initiative, exchange expertise, and collaboratively shape the learning process, fostering greater student agency and motivation. Allsup (2003) similarly found that when students were given autonomy over their musical activities, they developed deeper connections to both

the music and to each other, cultivating a sense of shared authority that fundamentally changed how they related to their learning.

Woody (2012) found that students who learned music by ear needed fewer repetitions to accurately reproduce unfamiliar melodies and developed more sophisticated listening strategies than those who relied primarily on notation, suggesting that aural learning cultivates deeper musical understanding and stronger musical intuition. Westerlund (2006) found that when students engaged in authentic, self-directed music-making, they built knowledge-rich musical communities through peer teaching and collaborative practice, demonstrating that music learning becomes both musically meaningful and socially grounded when students engage with music on their own terms.

Together, these studies affirm that the principles underlying Green's approach reflect broader patterns in how meaningful musical learning naturally occurs, lending credibility to its potential as a pedagogical response to the structural challenges facing U.S. secondary music education.

Challenges and Critiques of Green's Approach

Scholars have not accepted Green's framework without scrutiny, and engaging with those critiques is essential to understanding what this study is and is not claiming. Väkevä (2009) raises two concerns that are directly relevant here. First, he questions whether "natural" music learning can really exist in today's multicultural, diverse world, since what feels authentic and natural to one student may feel unfamiliar or uncomfortable to another. Second, he points out that Green's own classroom project became less informal as it progressed. Once Green introduced a pre-selected song and later structured the classical music stages, the teacher was stepping back in rather than stepping back out. Väkevä (2009) described this as a "reverse fading strategy," raising the question of whether bringing informal learning into a school setting inevitably changes what it is. Mariguddi (2022) adds

another concern, noting that in Sweden, where informal learning has been part of school music for decades, the approach eventually limited rather than expanded what students were exposed to, suggesting that informal learning does not automatically lead to greater inclusion. Green (2009) acknowledged these tensions herself, stating clearly that students need access to both formal and informal approaches for the best possible music education, a position that shapes the interpretive lens this study brings to its findings.

Green's Approach as a Pedagogical Response

The structural and institutional challenges facing U.S. secondary music education, such as unequal access, limited institutional support, and a disconnect between traditional curricula and students' musical interests, point toward a need for more inclusive and adaptable pedagogical models (Abril & Gault, 2008; NAfME, 2017b). Green's approach addresses several of these concerns by emphasizing student autonomy, peer collaboration, and alignment with students' out-of-school musical experiences (Green, 2008).

In terms of access, Green's emphasis on student choice and self-directed learning allows learners to engage with music that resonates with their personal interests, potentially reducing dependence on the structured resources and materials that underfunded programs often lack (Green, 2008; Save the Music Foundation, 2021). For students who perceive limited institutional support, Green's approach repositioning of the teacher as facilitator rather than director may help foster a greater sense of agency and ownership over the learning process, reducing feelings of marginalization even in settings where institutional validation is limited (Green, 2008; Waldron, 2013). With respect to curriculum relevance, Green's approach embraces a broader spectrum of musical genres and is more readily adaptable to the diverse musical practices students engage with outside school, addressing the disconnect that

traditional Western classical models often produce (Aróstegui, 2016; Green, 2008; NAfME, 2017b).

Scholars have also examined how digital and participatory platforms extend Green's approach principles beyond the traditional classroom. Early work by Miller (2012) identified interactive gaming platforms as spaces where students engage with music in social, accessible, and self-directed ways, challenging conventional notions of musicianship and performance. More recent scholarship has extended this lens to platforms such as YouTube and social media, where young people engage in peer-directed music learning, share performances, and develop musical identities outside formal educational structures (Bauer, 2014; Waldron, 2013). These digital contexts suggest that Green's principles are not confined to the classroom but reflect broader patterns in how contemporary students naturally engage with music in their everyday lives.

Scholars have cautioned, however, that IL is most effective when implemented thoughtfully rather than wholesale. Allsup (2008) argues that a sound educational framework must underpin any attempt to bring informal practices into school settings, while Hess (2020) finds that students themselves often desire a balance between formal and informal approaches. Mantie (2013) similarly cautions against rigidly separating formal and informal learning, arguing that a balanced approach leads to more comprehensive musical growth. Green's approach is therefore most productively understood not as a replacement for formal music education but as a complementary approach, one that is particularly well positioned to address the structural and equity challenges facing U.S. secondary music education when integrated alongside existing pedagogical approaches.

Gap in the Literature

Despite the philosophical and empirical momentum toward more equitable, student-centered music education, the research literature has not fully addressed how these principles

translate into U.S. secondary music teachers' everyday practice. While studies have examined IL implementation in British-influenced educational systems, comparatively little empirical research has focused specifically on how U.S. secondary music teachers understand, implement, and perceive the impact of IL strategies (Mariguddi, 2022; Waldron, 2013). Existing research has also not fully examined the relationship between teachers' awareness of Green's approach and their use of related strategies in practice, nor the contextual factors that shape implementation decisions within the ensemble-dominated contexts that characterize most U.S. secondary music programs. This study addresses that gap by investigating these dimensions among secondary music teachers on the U.S. West Coast.

Research Questions

The following research questions guided this study:

RQ1: How aware are secondary school music teachers on the U.S. West Coast of informal learning (IL), and how have they acquired this knowledge?

RQ2: To what extent and in what ways do secondary school music teachers on the U.S. West Coast implement IL strategies in their teaching, and what contextual factors influence their decisions?

RQ3: How do secondary school music teachers on the U.S. West Coast perceive the impact of IL on their students' engagement and musical development?

CHAPTER III: METHODOLOGY

Overview

This research investigates how secondary school music teachers in the U.S., specifically the West Coast, engage with informal learning (IL) strategies in their instructional practices. The study examines how teachers incorporate IL strategies into ensemble contexts and how these efforts are shaped by professional training, school environments, and perceived outcomes.

The investigation centers on three areas: teachers' awareness of Green's approach, implementation of these approaches in practice, and their perceptions of the approach's impact on student learning and engagement. These questions are addressed through a structured online survey and semi-structured interviews with secondary music educators in California, Oregon, and Washington. The mixed-methods design documents existing trends while also exploring the contextual factors that shape teacher practice. Qualitative interview data enhance these findings by adding interpretive depth. The following sections detail the study's design, participants, instrument development, data collection and analysis procedures, and ethical considerations.

Research Design and Rationale

The study uses an explanatory sequential mixed-methods design, in which quantitative survey data are collected and analyzed first, followed by in-depth interviews that extend and contextualize the findings (Creswell & Plano Clark, 2018). The primary aim is to explore how secondary school music teachers on the U.S. West Coast understand, implement, and assess the impact of IL strategies within their instructional settings.

The data collection tool is an online survey consisting of closed-ended and open-ended questions. The closed-ended items generate quantifiable data on participants' familiarity with Green's concepts, the instructional strategies they use, and the factors

influencing their pedagogical decisions. This format supports efficient data analysis and facilitates comparisons across school settings, teaching experience levels, and subject areas.

To complement the survey findings, follow-up interviews invite teachers to elaborate on their professional learning experiences, challenges encountered, and observations of student response. These narrative responses are thematically coded to identify recurring patterns or significant contextual details. Together, the quantitative and qualitative strands support a more holistic understanding of teacher practice.

The study is grounded in a pragmatic research paradigm, which prioritizes methodological flexibility and the practical utility of findings. Rather than adhering to a single philosophical stance, pragmatism supports the integration of multiple methods to best address the research questions (Biesta, 2010; Patton, 2015). This paradigm is particularly appropriate for applied educational research aimed at informing practice and policy.

The three research questions align closely with the mixed-methods design. The first investigates how teachers learned about IL strategies, whether through formal teacher preparation, professional development, or self-directed learning. The second explores how teachers integrate these strategies into their classrooms and what contextual factors, such as institutional support, student needs, or curriculum constraints, shape their decisions. The third examines teachers' perceptions of the impact of IL strategies on student engagement and learning outcomes.

The combination of descriptive statistics and targeted thematic coding provides a multifaceted view of how IL strategies are understood and applied in secondary school music programs. The methodology enables the study to capture both the breadth and depth of teacher engagement with IL and Green's approach, offering insights that are both actionable and grounded in current classroom realities. The following section describes the participant population and sampling procedures used to address these aims.

Statement of Positionality

My own path as a music student shaped how I came to understand Green's work. In Taiwan, the role of the teacher as a knowledgeable guide passing wisdom to students is deeply valued, and explicit, structured instruction is understood as a sign of care and responsibility toward learners. Within that cultural framework, stepping back and allowing students to struggle or find their own way can feel counterintuitive, even irresponsible. As a music student growing up there, I was given a great deal: theory, counterpoint, aural skills, and a strong technical foundation; however, I never felt very confident in the skills I learned. These subjects were taught explicitly and didactically, and when I found them difficult, I often did not know how to seek help or work through the confusion on my own. On the other hand, Western music dominated the curriculum almost entirely, from the classical repertoire in my conservatory training to the singing, music appreciation, and recorder playing of my middle school years. Local musical traditions and instruments were introduced occasionally, but only on a small scale and rarely practiced in any sustained way. By the time I left for England, I had learned to follow instructions well, but had little experience making musical decisions for myself, and little exposure to the music that surrounded my own tradition.

It was not until my teaching practicum in England that I encountered a genuinely different vision of what music teaching and learning could look like. I was placed in a secondary school where Musical Futures and informal learning practices were embedded in everyday classroom life, and I had never seen anything like it. Teachers were facilitating rather than directing. Students were choosing their own repertoire, working in small groups, learning pieces by ear, and building up from short scaffolded tasks – a small section of the music at a time. Several times in a lesson, they had the opportunity to jam together or to perform for their peers and receive feedback. Some students had no formal Western notation skills at all, yet they could listen, improvise, and play with a musical confidence I had rarely

seen in formally trained students, including myself. What struck me most was how much was possible without expensive resources or rigid curricula. Diverse genres, differentiated pathways, tiered worksheets, student-chosen repertoire – all of it coexisted in a single classroom in a way that felt both practical and genuinely joyful.

When I later taught at a school in Singapore, one of the mathematics teachers composed what I consider one of the most beautiful school songs I have ever heard. He was a self-taught guitarist who learned by ear, jammed with his band regularly, and had never studied music formally or learned to read notation. Yet he composed and performed with genuine musicality. That contrast stayed with me and raised questions I could not easily answer: why do so many formally trained musicians, myself included, feel uncertain without a score, while someone who had never set foot in a music classroom could create something so moving? What does formal music education actually develop in students, and what might it sometimes get in the way of?

These questions deepened through a 2022 field study comparing two classes learning ukulele: one through direct instruction and one through an informal, facilitated approach where students worked at their own pace with teacher-prepared materials. After a month of observation and follow-up interviews, the findings were not straightforward. Students in the informal setting appreciated the autonomy and ability to move at their own pace, but some also expressed feeling less secure without more explicit guidance. That complexity mattered to me, because it confirmed that informal learning is not a simple fix and that a thoughtful balance between formal and informal approaches is essential, particularly for students who come to music with different needs and levels of prior experience.

All of these encounters brought me to this research with a genuine conviction that Green's approach holds real promise, particularly for students whose musical identities are not well served by traditional, notation-based instruction, and with an equally genuine

awareness that its implementation is more complicated than it first appears. I think it is important to name that conviction openly, because it is not incidental to this research. It is part of what motivated it.

At the same time, I recognize that my background shapes what I see and how I interpret it. I was trained in a formal Western Classical Music tradition, and my encounter with informal learning practices came as something of a revelation, which means I may be inclined to emphasize its possibilities more readily than its limitations. I also come to this work having been educated across four very different musical cultures, Taiwan, England, Hungary, and the United States, and while that cross-cultural perspective is a strength, it also means I carry assumptions about each context that I cannot fully see from the inside.

Throughout this study, I have worked to let the data speak on its own terms, through intercoder reliability, peer debriefing, and careful attention to findings that complicated my expectations, including the voices of teachers who were skeptical of informal learning or found it difficult to sustain. I fully recognize that this approach may not be the right fit for every student, every teacher, or every context. My aim is not to advocate for a single answer, but to understand more honestly what informal music learning looks like in U.S. secondary classrooms, how teachers come to know and practice it, and what that means for how we prepare music educators going forward.

Participants and Sampling

This research focused on secondary school music teachers (grades 6–12) working in public and private schools across California, Oregon, and Washington. These states were selected to provide a diverse yet regionally focused sample, enabling an exploration of IL strategies across urban, suburban, and rural contexts (California Department of Education, 2019a; Oregon Department of Education, 2023a; OSPI, n.d.). Eligible participants included

educators who currently taught choral, instrumental, general, or other music classes at the secondary level.

A purposive sampling strategy was used to recruit participants with appropriate professional experience. Purposive sampling is a non-probability method in which researchers deliberately select individuals who possess specific knowledge or expertise relevant to the study (Patton, 2015). In this case, the sample consisted of secondary music teachers currently employed in school-based positions across the three target states, ensuring that participants were well-positioned to provide insight into the use, interpretation, and perceived impact of IL strategies within ensemble and classroom contexts. Recruitment was conducted through multiple channels; full details are described in the Survey Distribution and Timeline section.

Although there is no fixed sample size requirement for descriptive research, a minimum of 100 responses was targeted to support meaningful statistical interpretation while capturing diversity in experience and perspective (Isaac & Michael, 1995; Mertens, 2015). A total of 137 responses were received. Following data screening to remove incomplete or non-substantive responses, a final sample of 117 participants was included in the quantitative analysis, with 20 volunteering for follow-up interviews.

Instrumentation

Survey Instrument

The primary data collection tool was a researcher-designed online survey administered through the Qualtrics platform. The instrument consisted of closed-ended items, such as multiple-choice and Likert-scale questions, and targeted open-ended prompts designed to elicit elaboration on practices and perceptions. The survey gathered data across six thematic areas: (1) participant background and teaching profile, (2) school profile, (3) teacher education and preparation, (4) teacher's familiarity with Green's approach, (5)

implementation of IL, and (6) perceptions of student outcomes. This structure was intended to generate a comprehensive picture of current teaching practices while remaining efficient for broad distribution.

The survey instrument was adapted and extended from two existing tools: Flory's (2016) survey on IL in instrumental music education and Colquhoun's (2019) study on alternative pedagogies in choral contexts. Flory's instrument provided a well-established framework for investigating IL practices in instrumental settings, while Colquhoun's work addressed parallel developments in choral education, a comparatively under-researched area. Together, they offered valuable models for item formatting, sequencing, and thematic structure. The adaptation process involved aligning survey items with the study's three research questions, revising wording for clarity and contextual relevance, and integrating content specific to both choral and instrumental ensemble settings on the U.S. West Coast. The survey questions are included in Appendix A.

Interview Instrument

The semi-structured interview guide served as the qualitative data collection instrument. This format provides a structured set of predetermined questions while allowing flexibility to probe participant responses in greater depth, making it well-suited for exploring complex professional practices and experiences (Patton, 2015). Questions were drawn directly from the study's three research questions and informed by patterns identified in the survey data, allowing the interview strand to extend and contextualize the quantitative findings. The interview guide is included in Appendix B.

Data Collection Procedures

Preliminary Review and Ethical Approval

Before seeking institutional ethical approval, the draft survey instrument was reviewed by three experienced music educators selected for their familiarity with both

ensemble-based instruction and contemporary pedagogical strategies, including Green's approaches. Minor revisions were made based on their suggestions to enhance accuracy and readability. The revised instrument and supporting materials, including the recruitment email and informed consent text, were then submitted to the University of Oregon's Institutional Review Board (IRB) for ethical approval. The IRB application included a full description of the study's purpose, participant recruitment process, data management protocols, potential risks, and the survey instrument. No data were collected until IRB approval was formally granted. The IRB approval letter is included in Appendix C.

Pilot Study

After receiving IRB approval, the survey was piloted with five secondary music educators who were not part of the main study sample. These individuals completed the survey and provided structured feedback on survey length, flow, wording, technical functionality via Qualtrics, and content clarity. Based on their responses, final adjustments to the survey wording and structure were made to ensure consistency, coherence, and alignment with the research questions.

Survey Distribution and Timeline

The finalized survey was administered via Qualtrics, a secure web-based platform allowing anonymous participation and reliable data export. Participants were presented with an informed consent statement on the first page and could proceed only upon providing consent. Those who completed the survey were invited at the end to voluntarily provide their contact information if willing to participate in a follow-up interview.

Following IRB approval, the researcher obtained authorization from the University of Oregon to distribute mass recruitment emails to school district contacts. Contact information was gathered from publicly available directories maintained by each state's department of education (California Department of Education, 2019b; Oregon Department of Education,

2023b; OSPI, n.d.). Elementary schools were excluded, and recruitment emails were directed to district superintendents, who were asked to forward the invitation to secondary music educators within their districts. In addition to direct district outreach, recruitment messages were distributed through the professional networks of the Oregon Music Education Association (OMEA), Washington Music Educators Association (WMEA), and California Music Educators Association (CMEA), as well as relevant social media platforms including Facebook groups where secondary music educators are active.

The survey was distributed in two stages. The first stage was sent one week prior to a scheduled school holiday period, providing teachers with time to participate during a lower-demand point in the academic calendar. The second stage, functioning as a follow-up to non-respondents, was sent approximately one month later, during the first week of the new school term. This two-stage approach was intended to maximize response rates by reaching teachers at two distinct and accessible points in the academic year (Dillman et al., 2014).

Interview Participants and Recruitment

The 20 participants who volunteered for interviews were contacted individually through their school email addresses to obtain consent, confirm availability, and schedule interview appointments. All agreed to participate and completed interviews. Interview participants represented a range of teaching contexts, experience levels, and geographic locations consistent with the broader survey sample.

The interview guide was developed to complement and extend the survey by probing the decision-making processes, contextual influences, and perceived outcomes that closed-ended survey items could not fully capture. While the survey documented the prevalence and patterns of IL use, interviews allowed participants to explain the reasoning behind their practices and describe their experiences in their own words. The guide consisted of five core questions with accompanying probes. An opening question invited participants to describe

their current teaching context, and a closing question offered space for any reflections not captured in earlier responses. Prior to the core questions, the researcher provided a brief clarifying statement defining how Green's approach was used in the study, to ensure a shared reference point across all participants without constraining their responses.

Interview Procedures

All interviews were conducted via Zoom video conferencing, which allowed for flexible scheduling across geographic locations and provided a consistent interview environment. Each interview was audio recorded with the participant's prior consent. Recordings were subsequently transcribed using Otter.ai, an automated transcription service, and all transcripts were reviewed and corrected by the researcher to ensure accuracy before analysis. Interviews ranged from approximately 30 to 40 minutes in length, consistent with this format's design of fewer core questions with strategic probes to generate rich data while reducing participant fatigue.

Data Analysis Procedures

The survey data were analyzed using both quantitative and qualitative approaches, with each analytic method aligned to the corresponding research question. The following sections describe the quantitative analysis procedures conducted in SPSS, followed by the qualitative analysis procedures conducted in Dedoose.

Quantitative Analysis

Quantitative survey data were analyzed using IBM SPSS Statistics (Version 30). Descriptive statistics, including frequency distributions and percentages, were calculated for all closed-ended items to characterize the sample and describe patterns in participants' familiarity with Green's approach, implementation practices, and perceptions of student outcomes.

Several inferential analyses were conducted to examine relationships among key variables. One-way analyses of variance (ANOVA) were used to examine whether the dependent variables (teachers' confidence in implementing IL, perceived student engagement, and perceived student musical development) differed significantly across levels of IL use and familiarity, which served as the independent variables. Chi-square tests of independence examined associations between categorical variables, specifically the relationship between graduation cohort and IL familiarity, and between familiarity level and reported IL use. Pearson correlation analyses examined the strength and direction of relationships among the three continuous outcome measures. Statistical significance was evaluated at the $\alpha = .05$ level throughout.

Prior to analysis, several variables were recoded to facilitate meaningful group comparisons. Familiarity responses were consolidated into three categories: familiar, somewhat familiar, and not familiar. They ensure sufficient cell sizes for statistical testing. Graduation year was grouped into two cohorts: those who completed their teacher preparation before 2010, and those who graduated after 2011. This division was informed by the publication of Green's (2008) foundational work on IL, with the post-2011 cohort reflecting teachers trained during a period when IL research was sufficiently established to influence teacher preparation curricula.

Two additional survey items were also recoded before analysis. For the item asking where participants had learned about IL (Q15), response options were collapsed into three broader categories: professional sources (conferences, workshops, and professional development), school-based sources (institutional coursework and student teaching or practicum), and personal sources (colleagues or mentors, online resources, and self-directed study). Similarly, for the item asking which factors most influenced participants' decisions to implement IL strategies (Q21), response options were consolidated into three thematic

categories: teacher beliefs (personal teaching philosophy and belief in student-centered learning), student engagement and interest (alignment with student interests and observable student engagement or growth), and professional context (encouragement from colleagues or administrators and training or exposure through professional development). These consolidations were made to reduce the number of sparse cells and support more interpretable descriptive reporting.

Qualitative Analysis

Interview transcripts were imported into Dedoose, a qualitative data analysis platform, for systematic coding and thematic analysis. The coding approach was primarily deductive, with codes derived from the study's conceptual approach and research questions prior to data analysis (Miles et al., 2014; Saldaña, 2016), though the coding structure varied across research questions to reflect the nature of each dataset. For Research Question 1, the coding structure mapped directly onto survey items addressing awareness and familiarity with Green's approach, allowing the qualitative data to add contextual depth to patterns already identified quantitatively.

Building on this foundation, Research Question 2 required a more layered approach, organized into two areas. Codes for the strategies-used section were drawn from Lucy Green's (2008) identified principles of IL. The influencing-factors section began with deductive categories drawn from the survey, supplemented by inductive codes that emerged from the data. Finally, Research Question 3 drew on four areas derived directly from the survey instrument: teachers' confidence in implementing IL, perceived student engagement, perceived student development, and areas of student learning most supported by IL strategies.

Following the initial coding of all 20 transcripts by the primary researcher, a coding manual was developed that defined each code, provided inclusion and exclusion criteria, and

included representative examples from the data. This codebook served as the primary training instrument for intercoder reliability testing.

Intercoder Reliability

To establish the credibility and confirmability of the qualitative analysis, intercoder reliability (ICR) procedures were employed (O'Connor & Joffe, 2020). Two doctoral co-coders participated (one PhD, one DMA), both with experience in qualitative research design and Dedoose, and both distanced from the primary data collection process.

Before independent coding, both co-coders were trained using the coding manual (see Appendix D), which included operational definitions, representative exemplars, and step-by-step guidance for Dedoose. Each co-coder independently coded four of the twenty transcripts (20% of the data corpus), within the 10–25% range recommended for ICR subsamples (O'Connor & Joffe, 2020; Miles & Huberman, 1994). Percent agreement was used as the reliability metric, with a target threshold of 80% (Miles & Huberman, 1994; Saldaña, 2016). Discrepancies were resolved through collaborative discussion until consensus was reached (Armstrong et al., 1997). The verification strategies employed to ensure the trustworthiness of the data are addressed in the following section.

Verification and Trustworthiness

To ensure the rigor and trustworthiness of the study, multiple verification strategies were employed across both quantitative and qualitative strands throughout the research design, data collection, and analysis phases, addressing the credibility, dependability, confirmability, and transferability of the findings (Lincoln & Guba, 1985).

Triangulation

Triangulation was achieved through the integration of multiple data sources: quantitative survey responses from 117 participants, qualitative interview data from 20 participants, and the researcher's analytic memos maintained throughout the coding process.

According to Lincoln and Guba (1985), triangulation helps reduce the risk of systematic bias and enhances credibility by cross-validating findings across multiple data sources. Survey findings and interview findings were presented in parallel within each research question section, allowing patterns identified in the quantitative data to be examined alongside the contextual detail provided by interview accounts.

Audit Trail

Throughout the study, records of key procedural decisions were retained, including correspondence related to piloting feedback and IRB approval. Revisions to the codebook were made iteratively within Dedoose as codes were refined throughout the analysis process. These records provide a transparent and traceable account of the methodological decisions made across phases of the study.

Peer Debriefing

Peer debriefing was incorporated at several stages of the project. For the quantitative strand, the researcher consulted the University of Oregon's statistical advising resources at two points: during the survey design phase to review item formatting and scale construction, and during the analysis phase to confirm the selection of appropriate inferential tests and support the interpretation of results. This external consultation served as a check on key methodological decisions, helping ensure that statistical procedures were appropriately matched to the data structure and research questions. The following section outlines the ethical protocols governing participant recruitment, consent, confidentiality, and data storage.

Ethical Considerations

IRB Approval

Full ethical approval was obtained from the University of Oregon's IRB prior to any data collection, ensuring all protocols met institutional and federal standards for research involving human subjects.

Informed Consent

Informed consent was obtained from all participants prior to data collection. For survey participants, a consent statement appeared on the first page (Q1) of the Qualtrics survey, clearly explaining the purpose of the study, what participation involved, the voluntary nature of participation, and potential risks and benefits.

The statement also included contact information for the researcher and IRB. Participants indicated their consent by choosing to continue with the survey and could exit at any time without penalty. For interview participants, written consent was obtained via email prior to scheduling, and verbal consent was confirmed at the start of each Zoom session before recording began. Participation in both the survey and the interview was entirely voluntary.

Confidentiality Measures

To protect participant confidentiality, no identifying information was collected through the survey unless a participant voluntarily provided their name and email address to indicate willingness to be interviewed. All data were de-identified during analysis and reporting. Quotes drawn from open-ended survey responses and interview transcripts were anonymized using participant numbers (Participant 1–Participant 20) to remove names, school names, or other potentially identifying details. The recruitment email and consent statement informed participants of these confidentiality measures in advance of their participation.

Data Storage and Security

All survey responses were stored securely on the password-protected Qualtrics platform and subsequently downloaded to an encrypted drive on the researcher's computer for analysis. Interview recordings were stored on a password-protected device and deleted following transcription and accuracy review. Only the researcher and dissertation committee

had access to the raw data. De-identified data will be retained for five years following the conclusion of the study, in compliance with university data retention policies, after which all data will be permanently deleted.

CHAPTER IV: RESULTS

Chapter 4 presents the findings of this study examining how secondary school music teachers on the U.S. West Coast engage with informal learning (IL) strategies. Results are organized by the three research questions addressing (1) teachers' awareness of Green's approach, (2) implementation of IL strategies, and (3) perceptions of their impact on student learning and engagement. For each research question, quantitative survey findings are presented first, followed by qualitative findings from semi-structured interviews.

Data were collected from 117 survey respondents across California, Oregon, and Washington, along with semi-structured interviews conducted with 20 participants drawn from the survey sample (Participants 1–20). Because some respondents skipped individual survey items, the number of valid responses varies slightly across analyses. Participant characteristics are summarized in Table 1. Intercoder reliability was established at an average of 86%, exceeding the recommended 80% threshold. The following findings are organized by research question.

Table 1

Participant Characteristics (N = 117)

Variable	**Category**	***n***	**%**
State	California	31	26.5
	Oregon	41	34.7
	Washington	45	38.1
Teaching Level	Middle School	68	58.1
	High School	75	64.1
	Other	19	16.2

Teaching Area	Choral	36	53.4
	Instrumental	85	72.0
	General Music	32	27.1
	Music Technology	12	10.2
	Guitar	30	25.4
	Keyboard	15	12.7
	Other	26	22.0
Years of Experience	0–5 years	30	25.6
	6–10 years	21	17.9
	11–15 years	20	17.1
	16–20 years	16	13.7
	21–30 years	19	16.2
	31+ years	11	9.4
Degree Level	Undergraduate (Bachelor's)	40	34.2
	Graduate (Master's or Doctoral)	74	63.2
	Other	3	2.6
Class Size	Fewer than 10	3	2.6
	10–19	20	17.1
	20–29	42	35.9

30–39	40	34.2
40 or more	12	10.3

Note. Teaching Level and Teaching Area allowed multiple selections; therefore, percentages within those variables may exceed 100%.

Results for Research Question 1: Awareness of Green's Approach

Research Question 1 examined the extent to which secondary school music teachers were aware of IL strategies and how they had acquired this knowledge. The following sections present quantitative findings from the survey, followed by qualitative findings from the interviews.

Quantitative Findings

To address Research Question 1, participants were asked to indicate their familiarity with Green's Approach. Original survey responses across four familiarity levels were consolidated into three broader categories to ensure sufficient cell sizes for analysis: familiar with Green's approach, somewhat familiar with Green's approach, and not familiar with Green's approach (see Table 2). Of the respondents to this item ($N = 117$), the majority reported that they were not familiar with Green's approach before the survey (*n = 76,* 65.0%). Approximately 28.2% (*n = 33)* reported being somewhat familiar, while 6.8% ($n = 8$) indicated being familiar with Green's approach.

Table 2

Familiarity with Green's Approach

Familiarity Level	***n***	**%**

Familiar	8	6.8
Somewhat familiar	33	28.2
Not familiar	76	65.0
Total	117	100.0

Note. Percentages are based on valid responses ($N = 117$).

Participants who indicated some level of familiarity with Green's approach were asked to report how they had acquired this knowledge (see Table 3). To ensure sufficient response frequencies for meaningful comparison, the original response options were collapsed into three broader categories prior to analysis, as described in Chapter 3. Of the 41 participants who indicated some level of familiarity, 23 provided responses to the follow-up items; the remaining 18 did not respond to those items. Because respondents could select more than one source, results are reported as both percentages of selections and percentages of respondents. Among these participants ($n = 23$), the most frequently reported source of learning was professional settings ($n = 16$, 69.6%). School-based and personal sources were reported at equal rates ($n = 13$ each, 56.5%).

Table 3

Sources of IL Knowledge (Multiple Response, n = 23)

Source of Learning	***n***	**%**
Professional	16	69.6
Institutional	13	56.5

Personal	13	56.5
Total	42	

Note. Respondents could select more than one source; therefore, percentages exceed 100%, and a column total is not reported. The percentage reflects the proportion of the 23 respondents who selected each source.

Following the previous question, 23 respondents also responded to the item asking them to identify the specific types of IL strategies they had encountered or learned (see Table 4). Because respondents could select more than one strategy, results are reported as both percentages of selections and percentages of respondents. Among the 23 respondents who answered this item, student choice of repertoire was the most frequently identified strategy (*n* = 20, 87.0%), followed by peer or collaborative learning (*n* = 19, 82.6%). Creative tasks such as listening, improvising, or composing were the third most frequently identified strategy (*n* = 17, 73.9%). Teacher as facilitator was reported by 60.9% (*n* = 14), while learning by ear was identified by 56.5% (*n* = 13). Trial-and-error or self-teaching was the least frequently reported strategy (*n* = 12, 52.2%).

Table 4

IL Strategies Encountered or Learned (Multiple Response, n = 23)

Strategy	***n***	**%**
Student choice of repertoire	20	87.0
Peer or collaborative learning	19	82.6
Creative tasks (listening, improvising, or composing)	17	73.9

Teacher as facilitator	14	60.9
Learning by ear	13	56.5
Trial-and-error or self-teaching	12	52.2
Total	95	

Note. Respondents could select more than one strategy; therefore, percentages of respondents exceeds 100%, and a column total is not reported.

To further examine whether familiarity with Green's approach differed by geographic location, a one-way ANOVA was conducted across states (California, Oregon, and Washington; $n = 116$). Lower mean scores indicate greater familiarity on this scale. Mean familiarity scores were similar across states: California ($M = 2.55$, $SD = 0.68$), Oregon ($M = 2.56$, $SD = 0.63$), and Washington ($M = 2.61$, $SD = 0.58$). Differences were not statistically significant, $F(2, 113) = 0.12$, $p = .886$, $\eta^2 = .002$ (see Table 5).

Table 5

Familiarity with Green's Approach by State

State	***n***	***M***	***SD***
California	31	2.55	0.68
Oregon	41	2.56	0.63
Washington	44	2.61	0.58
Total	116	2.58	0.62

Note. Familiarity was measured on a 3-point scale where 1 = Familiar, 2 = Somewhat familiar, and 3 = Not familiar. Higher mean values reflect lower levels of familiarity. $F(2, 113) = 0.12$, $p = .886$, $\eta^2 = .002$.

To examine the relationship between graduation cohort and familiarity with Green's approach, a chi-square test of independence was conducted (see Table 6). Results indicated a significant association between graduation cohort and familiarity with Green's approach, $\chi^2(2, N = 117) = 6.26$, $p = .044$. Teachers who graduated after 2011 were more likely to report some level of familiarity, whereas those who graduated before 2010 were predominantly not familiar with Green's approach.

Table 6

Familiarity with Green's Approach by Graduation Cohort

Graduation Cohort	**Familiar** ***n*** **(%)**	**Somewhat Familiar** ***n*** **(%)**	**Not Familiar** ***n*** **(%)**	**Total** ***n***
Before 2010	1 (2.5%)	7 (17.5%)	32 (80.0%)	40
After 2011	7 (9.1%)	26 (33.8%)	44 (57.1%)	77
Total	8 (6.8%)	33 (28.2%)	76 (65.0%)	117

Qualitative Findings

Among the 20 interview participants, the distribution of Green's familiarity was broadly consistent with survey findings. A substantial portion had no prior familiarity with

the term before the study, while a smaller number reported some level of awareness acquired through graduate study, practitioner networks, professional development, or peer observation.

Initial Conceptions of Green's Approach. Participants were asked at the start of each interview to describe what IL meant to them before any definition was provided. Data from 20 participants contributed to this theme. Across participants who had not encountered IL, the descriptions they offered captured the core characteristics of the IL approach as described by Green (2008), suggesting that IL principles were intuitively accessible even in the absence of formal exposure to the literature.

Participant 6, who had no prior familiarity with Green's approach as a formal concept, described it in terms of learning without an instructor, passive, listening-based, and unstructured: "My mind kind of goes towards learning without an instructor, or without somebody guiding the process, maybe just through the osmosis of listening, or trying to figure out an instrument...more like learning through listening in a more unstructured way." Participant 15 extended this idea beyond the absence of instruction to emphasize the social and experiential contexts in which informal learning occurs, describing IL as:

> Where someone learns music in a non-traditional way...learning a lot more call and response style, a lot more experiential. Experience versus explanation...It could be from just singing at home with your parents, or singing songs in the car, or your uncle plays this, and they pass it on that way.

Where Participants 6 and 15 described IL primarily in terms of how learning happens, Participant 18 framed it in terms of whose musical knowledge is centered, describing it as a departure from Western-centric instructional norms:

> To me, it sounds kind of more of a less focus on a western approach to music education, and more of a kind of reaching the kids where they are, rather than

enforcing upon them these standards of, this is the standard of music, but really it's just a western standard of looking at music.

Several participants recognized the strategies described in the IL definition of Green's approach as familiar even though the terminology itself was new to them. Participant 10 captured this distinction directly: "Not with that terminology, no. But strategies that were described in the definition were familiar," suggesting that low familiarity with the Green's approach does not necessarily mean low familiarity with its associated practices. This account cautions against reading low familiarity with Green's approach as equivalent to low familiarity with its associated practices.

Pathways to IL Knowledge. Three pathways emerged through which participants had encountered IL-related practices: institutional learning, professional and collegial networks, and self-developed understanding through classroom experience (n = 20). Several participants described more than one pathway, and the routes were not always clearly distinct from one another. For most participants, none of these pathways involved formal exposure and awareness of Green's approach; rather, teachers had developed selective informal learning strategies through routes independent of the academic literature.

Institutional Learning. A small number of participants described encountering IL-related concepts through formal study, though exposure was generally brief and incidental rather than systematic. Participant 12 described how doctoral research on communities of musical practice, which shares core principles with IL, introduced him to peer-directed learning and the redistribution of classroom authority. Participant 9, who recalled vague exposure through his master's program and professional conferences, described the broader tension this represented in the field, noting a "big divide" between teachers who held that everything must be taught through notation and those questioning whether notation-only instruction produced students who genuinely knew how to make music. Participant 3, a first-

year teacher, recalled receiving just one session on IL during his preparation program: “We talked about it for maybe a day...you can incorporate it in the classroom based on what students have learned outside.” Across these accounts, institutional exposure to IL was limited and largely incidental, present enough to name the concept but insufficient to build practical familiarity.

Professional and Collegial Networks. For several participants, the primary pathway to IL-related knowledge was through practitioner organizations, professional development activities, and collegial relationships rather than formal coursework. Participant 17, who became involved with Music Will early in his career, described how its guiding principle shaped his entire approach to instruction: “one of the main tenets in the whole Music Will philosophy that I think is really cool is –play before you explain.”

Participant 7 described a similar pattern of self-directed development, actively seeking professional development each summer to fill gaps she identified in her undergraduate preparation. Participant 16 described a more spontaneous pathway, in which a colleague’s informal Zoom sessions on a web-based digital audio workstation during the pandemic triggered his transition into student-centered music technology teaching. Across these accounts, professional and collegial networks functioned as the primary vehicle through which IL-consistent practice entered teachers’ classrooms, operating largely independently of formal academic frameworks.

Self-Developed Understanding Through Classroom Experience. For the majority of participants, IL-consistent practices developed through sustained reflection on what worked with students, without any formal or collegial trigger. Participant 8 described conducting action research during her time as a middle school teacher that directly shaped her current classroom structures: “The action research was that if students are given roles of ownership and leadership.” She described observing students rise to meet the responsibility they had

been given, noting that the act of formally assigning ownership produced a visible shift in how students engaged with their sections.

Participant 5 described acquiring specific practices through direct observation of colleagues, visiting a teacher who embedded independent practice time into every rehearsal, and later adapting that approach for his own context. For several participants, this process involved a gradual and deliberate release of instructional control developed over years of teaching. Participant 17 noted that only by year five did he fully understand the relationship between relinquishing control and improved student outcomes, reflecting that the more control he let go of, the better his students performed. Participant 17 also noted that at the time he completed his university training, IL was not yet established in the research literature, reflecting that it "was not really on the research landscape at all," which meant it had not featured in any formal preparation he received. Across these accounts, classroom experience functioned as the most common but least visible pathway to IL-consistent practice, shaped by individual reflection rather than external or formal training.

These three pathways illustrate that familiarity with Green's approach among this sample was largely self-constructed rather than institutionally transmitted. Whether through brief and incidental formal exposure, practitioner networks, or years of classroom trial and error, teachers arrived at IL-consistent practice through routes that operated independently of the academic literature. This pattern has direct implications for how teacher preparation programs might more deliberately introduce and sustain IL-related content, a question taken up directly in the following theme.

Views on Institutional Responsibility. Six participants reflected on whether and how teacher preparation institutions should bear responsibility for introducing Green's approach to pre-service teachers, addressing two related questions: whether programs should include IL given existing curricular demands, and if so, how such content should be transmitted.

Should Green's approach Be Included? Participants who addressed this question generally agreed that IL had value as part of a teacher's repertoire but identified structural constraints that complicated its prioritization. Participant 20 acknowledged IL's value while pointing to the finite capacity of preparation programs: "I think it's a great thing to have in somebody's tool bag...there's probably more benefit involved in making sure that the basic toolbox is strong."

Participant 14 questioned whether teaching IL as a distinct, named unit was appropriate, arguing instead for its integration into existing pedagogical coursework, noting that in his own training, IL strategies had reached him through accumulated experience and incidental mentorship rather than deliberate instruction. Participant 17 was unambiguous that IL should be in every preparation program, even as he acknowledged the structural challenge of balancing it against the ensemble-dominated landscape that still defines most teacher training.

Practice Over Exposure. While participants varied in their views on whether IL or Green's approach should be included in preparation programs, those who addressed the question of transmission consistently emphasized the limitations of theoretical introduction. Participant 12 cautioned that encountering IL as one approach among many in a survey course risked producing superficial familiarity without practical competence: "Just learning it as a theory and not as a practice, that's dangerous." Participant 18 described the gap she had experienced between being told a pedagogical principle and being equipped to enact it, noting that her undergraduate program had articulated ideals of individualized teaching without providing concrete tools for how to achieve them in practice. This account suggests that effective transmission of IL would require not just exposure to the concept but structured opportunities to experience and practice it. Participant 19 echoed this preference for integration over isolation, calling not for a dedicated IL course but for broader exposure to diverse pedagogical methods within existing training.

Results for Research Question 2: Implementation of IL Strategies

Research Question 2 examined how secondary school music teachers implement IL strategies in their classrooms and the factors that influence or constrain their use. The following sections present quantitative findings from the survey, including data on reported IL use, the types of strategies and class settings in which they were used, influencing factors, and perceived obstacles. These are followed by qualitative findings from the interviews, which present a thematic analysis of participants' descriptions of how IL strategies appeared in their teaching practice.

Quantitative Findings

Respondents were asked whether they used IL strategies in their teaching (see Table 7). Among the 114 respondents who answered this item, 12.3% (n = 14) reported intentionally using IL strategies, while 68.4% (n = 78) indicated using similar strategies without having formally studied Green's Approach. Combined, 80.7% (n = 92) of respondents reported using IL strategies in some form. The remaining 19.3% (n = 22) reported not using these strategies. These results suggest that while relatively few teachers intentionally use IL strategies, a substantial majority report using similar strategies in practice.

Table 7

Use of IL Strategies

Response Category	*n*	%
I intentionally use IL strategies	14	12.3
I use similar strategies, but have not formally studied Green's approach	78	68.4
I do not use IL strategies	22	19.3

Total	114	100.0

Note. Percentages are based on valid responses (*n* = 114).

Respondents reported implementing IL strategies across multiple instructional contexts (see Table 8). Instrumental ensembles were the most frequently reported setting (73.6%, *n* = 67), followed by choral ensembles (47.3%, *n* = 43). Less frequently reported settings included general music (16.5%, *n* = 15), music technology (14.3%, *n* = 13), and music appreciation (9.9%, *n* = 9). A smaller proportion of respondents indicated other instructional contexts (17.6%, *n* = 16). These results indicate that IL strategies were most commonly reported in traditional ensemble settings, despite qualitative accounts suggesting that non-ensemble contexts, such as guitar and music technology, may offer more sustained opportunities for IL implementation.

Table 8

Class Settings in Which Teachers Reported Using IL Strategies (Multiple Response, n = 91)

Class Setting	***n***	**%**
Instrumental ensemble	67	73.6
Choral ensemble	43	47.3
Other	16	17.6
General music	15	16.5
Music technology	13	14.3
Music appreciation	9	9.9

Total	163

Note. Respondents could select multiple class settings; therefore, percentages of respondents exceed 100%, and a column total is not reported.

Respondents also reported using multiple types of IL strategies across instructional contexts (see Table 9). Among the 91 respondents who answered this item, student agency was the most frequently reported strategy (81.3%, *n* = 74), followed by peer collaboration (80.2%, *n* = 73). Learning by ear was reported by 63.7% (*n* = 58), while exploratory and creative tasks were identified by 50.5% (*n* = 46). Technology integration was reported by 44.0% (*n* = 40). These results suggest that teachers most readily identified with IL strategies that redistributed classroom authority and encouraged peer interaction, while more distinctly musical strategies, such as learning by ear, creative tasks, and technology integration, were less consistently reported.

Table 9

Types of IL Strategies Reported by Teachers (Multiple Response, n = 91)

Strategy	***n***	**%**
Student Agency	74	81.3
Peer Collaboration	73	80.2
Learning by Ear	58	63.7
Exploratory and Creative Tasks	46	50.5
Technology integration	40	44.0

Total	293

Note. Student Agency comprises two original response options: student-led activities and student choice of repertoire. Respondents could select more than one strategy type; therefore, percentages exceed 100%, and a column total is not reported.

Participants (n = 91) were also asked to identify factors that influenced their decisions to implement IL strategies (see Table 10). To ensure sufficient response frequencies for meaningful comparison, the original response options were collapsed into four broader categories prior to analysis, as described in Chapter 3. The most frequently reported factors were teacher beliefs (95.6%, n = 87) and student-centered factors (94.5%, n = 86). Professional context was reported by 29.7% (n = 27), while a smaller proportion indicated other factors (6.6%, n = 6).

Table 10

Factors Influencing Implementation of IL (Multiple Response, n = 91)

Influence Factor	***n***	**%**
Teacher Beliefs	87	95.6
Student Engagement and Interest	86	94.5
Professional Context	27	29.7
Other	6	6.6
Total	206	

Note. Respondents could select multiple factors; therefore, percentages of respondents exceed 100%, and a column total is not reported. Total does not sum to 100% due to rounding.

Participants (n = 91) were also asked to identify obstacles that may limit the implementation of IL strategies (see Table 11). The most frequently reported obstacle was time constraints (69.2%, n = 63), followed by limited training (57.1%, n = 52), referring to gaps in formal teacher preparation for IL, and limited resources (49.5%, n = 45). Structural factors such as class size were also commonly reported (48.4%, n = 44). In addition, low student engagement was identified by 44.0% (n = 40). Less frequently reported obstacles included administrative factors (16.5%, n = 15), other factors (9.9%, n = 9), and philosophical concerns (5.5%, n = 5). Respondents who selected "Other" indicated "expected performance/concert schedule" and "classroom management." One respondent noted that "students are often motivated to pick their own music or projects but quickly switch to off-task behaviors when not closely monitored."

Table 11

Perceived Obstacles to Implementing IL (Multiple Response, n = 91)

Obstacle	***n***	**%**
Time constraints	63	69.2
Limited training	52	57.1
Limited resources	45	49.5
Class size	44	48.4
Low student engagement	40	44.0
Administrative factors	15	16.5

Other	9	9.9
Philosophical concerns	5	5.5
Total	273	

Note. Respondents could select multiple obstacles; therefore, percentages of respondents exceed 100%, and a column total is not reported.

A chi-square test of independence was conducted to examine the relationship between familiarity with Green's approach and reported use of IL strategies (see Table 12). Results indicated a significant association, $\chi^2(4, N = 114) = 34.37$, $p < .001$. Respondents with greater familiarity were substantially more likely to report intentional use of IL strategies, whereas those with lower familiarity more often reported using similar strategies without formal knowledge. These findings suggest that formal awareness of Green's approach is closely linked to the intentionality with which teachers implement its associated strategies.

Table 12

Use of IL Strategies by Familiarity Level

Familiarity Level	**Intentionally Use *n* (%)**	**Use Similar Strategies *n* (%)**	**Do Not Use *n* (%)**	**Total *n***
Familiar	6 (75.0)	2 (25.0)	0 (0.0)	8
Somewhat Familiar	5 (15.6)	21 (65.6)	6 (18.8)	32
Not Familiar	3 (4.1)	55 (74.3)	16 (21.6)	74

Total	14	78	22	114

Note. $\chi^2(4, N = 114) = 34.37, p < .001$. Some expected cell counts were below 5; results should be interpreted with caution.

Qualitative Findings

Interview data from 20 participants provided detailed accounts of how IL strategies were enacted in teaching practice. Findings are organized into six themes: (1) Factors Influencing IL Implementation, (2) Structured Student Agency, (3) Peer Collaboration and Student Leadership, (4) Facilitation and Exploratory Teaching, (5) Aural Learning Practices, and (6) Structural and Resource Constraints on IL Practice, followed by a section examining the situational use of individual strategies within ensemble rehearsal settings.

Factors Influencing IL Implementation. Across participant interviews, two categories of influencing factors emerged consistently: personal teaching beliefs and direct observation of student engagement. A third factor, professional context, was less frequently cited but present in several accounts.

Teacher Beliefs and Personal Philosophy. The most consistently described driver of IL practice was teachers' personal commitment to student-centered learning, which often preceded and operated independently of any formal knowledge of Green's approach. Participant 17 described his shift toward facilitative teaching as rooted in a deliberate philosophical choice: "I made a conscious choice at that time...I just keep relinquishing my control, and the more control that I let go of, frankly, the better that they do." Participant 8 described her beliefs about student ownership as having developed through action research conducted during her time as a middle school teacher, an account described in detail in the Pathways to IL Knowledge theme under Research Question 1. Across these accounts, personal belief in the value of student voice, peer learning, and experiential engagement was

the primary motivator for IL practice, operating largely independently of institutional encouragement or formal training.

Student Engagement as a Driver. The second most consistently reported influencing factor was teachers' direct observation of how students responded when informal approaches were used. Unlike the engagement outcomes described in RQ3, these accounts focused specifically on how student response functioned as a feedback mechanism that shaped and reinforced teachers' ongoing commitment to IL practice.

Participant 7 described her practice as continuously shaped by direct student feedback, actively seeking student input through surveys to refine what was working and what was not. These accounts suggest that positive student response functioned not only as an outcome of IL practice but as a driver of its continued and expanded use, creating a feedback loop in which observable student engagement reinforced teachers' investment in informal approaches over time.

Exposure to Green's approach. A smaller number of participants described professional networks and collegial relationships as influencing their implementation of IL strategies. As described in the Pathways to IL Knowledge theme, participants such as Participant 17, Participant 12, and Participant 5 developed IL practice closer to Lucy Green's model through involvement with practitioner organizations, doctoral research, and direct colleague observation, and these same professional pathways continued to shape their ongoing implementation decisions.

Structured Student Agency. The most frequently described form of IL implementation involved creating structured opportunities for student voice and choice within music learning. Participants described a consistent process of incorporating student voice while maintaining teacher authority over final decisions. Across participant accounts, this process operated through three consistent stages: teachers gathered student preferences,

structured the available options within practical constraints, and retained final authority over the outcome.

Gathering Student Input on Repertoire. Several participants described gathering student preferences as a regular part of the repertoire selection process, ranging from informal opinion-sharing to structured voting systems. Participant 18 described incorporating student input both in the moment and over longer time frames, returning to one student's repeated request for a Weezer song when a suitable arrangement became available: "I had a student for three years, and every year he was like, 'We should do a Weezer song,' and then I found an arrangement that worked, and we did that song for our final concert of the year, and it was really fun."

Participant 19 described a more structured approach, limiting student voting to one piece per concert: "I usually do it for one of the pieces. I try not to do it for all the pieces, but I do give them a chance to vote." In ensemble settings with student leadership structures, Participant 14 described extending repertoire input to section leaders, giving them resources to explore options.

Curated Choice Within Constraints. Participants frequently described structuring student choice within a pre-selected set of options rather than leaving selection fully open, with class size most commonly cited as the reason. Participant 1 explained the rationale directly: "We definitely can't honor everyone's requests. When you're dealing with 60 kids, you can't have 60 different ideas of what we should be doing. So there has to be a point person, which is me."

Participant 5 described a specific mechanism for managing this constraint, creating a curated list of five songs for each concert and asking students to vote on three. Participant 9 described a similar approach, guiding students through practical considerations such as instrumentation and difficulty before arriving at a group consensus.

Teacher Authority and Final Decision-Making. Across all descriptions of student input, participants consistently noted that final authority over repertoire remained with the teacher. Student preferences were considered alongside, rather than in place of, the teacher's own judgment about instructional needs. Participant 1 captured this balance directly:

> Their ideas can come to me, and then I make the executive decision as to whether or not we're going to play a piece, even if they hate it. If I think it's a good piece that they need to play, then they're going to play it regardless. But I will seek out their input as to whether or not it's something they're interested in.

Student agency in repertoire selection was consistently present across participants, though it operated within clearly bounded structures defined by teacher judgment, class size, and instructional goals rather than as open-ended student control.

Peer Collaboration and Student Leadership. Participants described a range of peer-based practices through which students engaged with musical material, solved problems, and developed communication skills within the ensemble, including peer-directed problem-solving, cross-section interaction, student-led sectionals, and explicitly taught feedback processes.

Peer Problem-Solving. Several participants described directing students back to their peers when musical difficulties arose rather than stepping in immediately. Participant 3 described this as a deliberate pedagogical choice: "They'll come to me, and they go, 'I can't play that.' And I go, 'Okay, have you told your group that?' [They responded] like, 'no,' [I responded] 'Why are you talking to me? Go tell your group.'"

Peer interaction also emerged organically across instrument sections during rehearsal. Participant 15 noted: "I'll see the trombone ask the clarinet, 'Hey, how does this go?' And then the clarinet player will say, 'Oh yeah…sing it to them,' and the trombone player goes, 'Oh, I got it'…and so it allows more communication across instruments." Participant 1

described the broader value of these exchanges in terms of the communication skills students developed through negotiating musical decisions with peers.

Peer Leadership. Some participants described formalizing peer collaboration through student-led sectionals. Participant 19 described formalizing this structure through designated section leaders who ran small group rehearsals independently. Participant 18 described section leaders serving a broader communication role within the ensemble, functioning as a safe space through which students could raise questions they were reluctant to bring directly to the teacher: "My section leaders are supposed to be like, you can ask them silly questions…you can ask them questions you're afraid to ask me, and then the section leaders will ask me."

Teaching Students How to Collaborate. Some participants described explicitly teaching students the skills needed to work collaboratively before releasing them to peer-directed work. Participant 8 outlined a structured approach to peer feedback introduced at the start of the year and reinforced throughout: "We start with how to give feedback...it's taught from the very beginning, and then I model it. Every time I give feedback, I model the steps." These findings indicate that peer collaboration functions both as a musical and social learning mechanism within IL classrooms.

Facilitation and Exploratory Teaching. The most consistently documented IL strategy across participants was the repositioning of the teacher from director to facilitator. Facilitation in these accounts was not passive withdrawal from teaching but the active, intentional structuring of conditions under which students could explore.

Creating Space for Student Exploration. Across teaching contexts, including ensemble classes, guitar, piano, music production, and general music, participants described a consistent pattern of reducing direct instruction and creating time for students to work independently or in small groups. Participant 17 described his role directly:

> I'm definitely more of a facilitator, coach, producer than I am the director. The direct instruction time of class is extremely small, less than 10 minutes in a 90-minute class period...about half the class is spent with just me walking around and engaging with kids about their projects.

Participant 13 described observing a direct relationship between stepping back from the podium and student engagement: "I've noticed when I give up the teacher at the podium, the lecture, I get far more engagement from the students, and they are kind of responsible for what happens next." Several participants described deliberately building in time for students to improvise, experiment, and discover without a prescribed outcome. Participant 19 described short regular windows of 'noodling' time at the start of class: "They always get some time to do that when they set up. I usually give them about three to five minutes at the start of class, very specifically, that's their time." Participant 7 described larger exploratory blocks on a rotating schedule, providing access to practice rooms and a range of instruments approximately every ten days.

Scaffolded Freedom. A recurring pattern across participants was that facilitation was not the absence of structure but a different kind of structure. Teachers described providing scaffolds that defined the boundaries of student exploration without determining its content or direction. Participant 18 described a flexible agenda system used in guitar and piano classes, in which students worked through a list of milestones over a three-week period and received sign-offs as they completed each one: "As long as they're hitting certain milestones, then they can have a more personalized experience. It's them and their education." Participant 4 described providing students with an unfamiliar piece of equipment and an instruction manual and then stepping back to observe what they would do with it, an experience that pushed some students toward independent problem-solving while revealing the limits of open-ended tasks for others, as discussed in the Structural Constraints theme. Participant 16

captured the underlying logic with a memorable image, describing his approach as setting up small sandboxes in which students could build any kind of castle they wanted, provided they demonstrated the required skills.

In more structured course contexts, scaffolded freedom extended to open-ended composition projects that gave students creative ownership within teacher-defined parameters. Participant 7 described asking students to identify what they wanted their piece to express before working collaboratively on chord structure, producing work that was structured enough to result in a finished product but open enough to reflect genuine student voice. These projects illustrated the full range of scaffolded freedom, from brief independent practice time at one end to sustained creative production at the other.

Inquiry Over Answer-Giving. A related but distinct dimension of facilitation concerned how teachers responded in the moment when students encountered difficulty. Where Scaffolded Freedom was proactive, built into the design of tasks and learning conditions before students began working, Inquiry Over Answer-Giving was reactive, emerging in response to what students did during the work itself. Rather than adjusting the structure of the task, these teachers described shifting their interactional style, asking questions instead of providing answers and allowing students to work through problems independently. Participant 13 described using questions as a regular daily strategy, noting that when students made errors, he would ask about their key signature rather than correcting them directly. Participant 4 described a similar approach in ensemble rehearsals, stopping to ask students what they were hearing and what they would change rather than directing them toward a specific correction, noting that after building toward this practice over a semester, students were able to engage thoughtfully with open-ended musical questions in ways they could not at the outset.

The Gradual Release. The previous subthemes describe what facilitation looks like at any given moment, including the structures teachers design, the tasks they assign, and the questions they ask. A final and distinct dimension concerned how these practices developed over time. Several participants described the shift toward facilitative teaching not as something implemented fully from the outset but as a practice that emerged gradually as students developed greater capacity for self-direction.

Participant 4 described a deliberate progression from formal to informal as the semester advanced: "At the beginning, it's like a lot of formal teaching, and then as we get further along, it's like, okay, here's where things get a little bit informal, get a little bit loose." This pattern of gradual release was not unique to Participant 4. As described earlier, Participant 17 similarly described a multi-year process of progressively relinquishing instructional control, finding that student outcomes improved in direct proportion to the autonomy he extended. Across these accounts, the shift toward facilitation was less a pedagogical decision made at the start of a semester than an ongoing process calibrated to student readiness and classroom context.

Together, these accounts suggest that facilitation emerged not as the absence of teaching but as a more demanding and intentional form of it, one that required teachers to design conditions for learning rather than deliver content directly. Whether through open exploratory time, scaffolded boundaries, questioning strategies, or gradual release of control, participants consistently described a shift in the locus of activity from teacher performance to student engagement, and in each case that shift required more deliberate planning, not less.

Aural Learning Practices. Although less frequently reported than other IL strategies, aural learning practices emerged across a range of participant accounts, encompassing rote imitation, call-and-response, delayed notation, student-directed listening and transcription,

and peer-based aural transmission across guitar, jazz, choir, mariachi, and ensemble band contexts.

Student-Directed Listening and Transcription. Several participants described activities in which students independently selected music, listened to recordings, and worked out what they heard without direct teacher modeling. These descriptions appeared primarily in guitar, jazz, and mariachi contexts.

Participant 7 described a structured sequence for beginning band students in which they researched musicians on their instrument, identified a favorite, and worked out the notes of a chosen chorus by ear: "They would, on their own, have to do some research into famous musicians who play their instrument...find their favorite song...and then figure out what the notes were for whatever the chorus was." She noted that this approach produced stronger retention and engagement than traditional instruction.

Participant 7 described extending this approach across ensemble contexts, reaching its most extensive form in mariachi, where students worked entirely by ear to identify chord changes, styles, and drum patterns through to performance. In jazz band, Participant 6 described building transcription into regular instruction, asking students to learn solos or melodies by ear even when written music was available, framing ear-based learning as a core jazz skill rather than an alternative to notation.

Delaying or Minimizing Notation. A number of participants described learning by ear not as the complete replacement of notation, but as its deliberate delay or reduction. These descriptions appeared across guitar, choir, and ensemble settings.

Participant 5 explained why he moved away from standard notation entirely for guitar classes:

> I don't use standard notation at all. I used to, and it just didn't work well. The types of kids that join guitar class are not the types of kids who join band or choir. And so you

> have to teach differently. You can't teach like it's a band class, and it took me a while to kind of start morphing it into that.

Participant 6 described a hybrid approach in guitar that combined tabs, chord reading, memorization, and listening:

> [For] delayed and limited use of notation, definitely in guitar class. We only do a little bit with notation. We do guitar notation, which is quite a bit different anyway, because you have a lot of tabs and lead sheets where you're just reading chords…But then we also do stuff. A lot of it is like learning by memorization, learning by listening.

In choir, Participant 9 described temporarily removing notation when the written score created difficulties for students learning rhythmically complex passages:

> If there's a tricky rhythm or something that's happening, sometimes the visual of seeing the written rhythm on the page can throw them off. So we'll try to do it a different way, where we are just clapping the rhythm, and putting two different rhythms together, and trying to do it more by listening and then getting back into the music.

Call-and-Response and Rote Imitation. The most frequently described form of learning by ear was call-and-response and rote imitation, in which the teacher models a passage aurally and students repeat it. Participants described this approach across beginning band, choir, and guitar settings, though they varied in how fully they characterized it as ear-based learning. Participant 15 described introducing notes to beginning band students through singing and physical feel before presenting any written material: "I just teach them the note and how to play. I'm not putting a sheet or anything in front of them first. It's like, this is how do feels." When reflecting on whether this approach constituted genuine learning by ear, he acknowledged its partial nature: "I sing to them the pitches in Solfège...is it by ear? Yes,

I'm also giving them the answer. So is it like, fully by ear? It's not the highest Bloom's level by ear, but I do that with everybody, because it's tricky." This account illustrates how rote imitation functions in practice, in that teachers provide the model aurally but students are not discovering the pitches independently, placing this approach at the more directed end of the ear-based learning continuum.

Peer-Based Aural Transmission. A smaller number of participants described learning by ear occurring between students, outside of or alongside formal instruction. Participant 9 described students arriving before school to share music they had worked out at home: "I also encourage students to bring me music that they've been working on at home, practicing by ear…especially in the mornings, before school, kids will come in and show me, 'Hey, look at this thing that I was working on.'" The same participant described students teaching each other repertoire from previous years by ear:

> I'll have students who will get together and they'll try to memorize music that we've done in class, or they'll teach each other music that they've learned in the past, because the new students want to play it…instead of pulling out the music and handing it to the students, they'll say, "Oh yeah, you play this note and then you play it like this." So they'll teach each other in that way.

Across these accounts, aural learning practices shared a common departure from notation-dependent instruction, prioritizing embodied musical knowledge developed through listening, imitation, and peer transmission over the reading and decoding skills that dominate traditional music education. The degree to which this departure was sustained or selective varied consistently by teaching context, with guitar, jazz, and mariachi settings supporting the most extensive aural approaches and ensemble band and choir contexts integrating ear-based strategies selectively within otherwise notation-based instruction.

Structural and Resource Constraints on IL Practice. While the preceding themes address how IL strategies were enacted in practice, participants also described structural and resource-related factors that shaped what implementation was realistically possible in their settings, across four areas: time and performance demands, class size, limited teacher training, and physical space, equipment, and human resources.

Time Constraints and Performance Demands. Time emerged as the most consistently cited structural barrier across participant accounts, operating at two levels: the pressure of concert preparation cycles and the competing demands within individual class periods. Several participants described shifting away from IL strategies as concert deadlines approached, returning to more direct instruction when sections remained unresolved close to performance dates. Participant 9 described avoiding informal approaches, specifically during concert preparation, reserving more traditional routes for full ensemble sheet music and notation-based playing tests. Participant 19 captured the day-to-day dimension of this pressure directly: “I think time is probably the biggest barrier...the dream is that you are actually doing what you’ve planned in the lesson plan. Realistically, there’s really like 10 other things going on.”

Participant 4 described how assessment culture shaped these pressures, contrasting the mandatory adjudicated assessment environment he had experienced in Florida with the relative freedom he found in Oregon, yet noting that even without formal institutional requirements he still felt an internal tension between giving students creative autonomy and ensuring they were developing foundational skills.

Participant 11, who described having no institutional oversight of her program at all, similarly noted that comparing herself to other teachers on social media produced feelings of inadequacy that shaped her instructional decisions even in the absence of any formal accountability structure. Participant 3 described a related concern, noting a self-imposed

worry that extending too much autonomy to students might produce strong performers who lacked the foundational musicianship skills he believed formal instruction was responsible for building. Participant 7 described a more strategic response to these pressures, characterizing her participation in regional festivals as "playing the game" while maintaining considerable freedom and student-centered practice across the rest of her program.

These accounts suggest that performance and assessment pressures can constrain IL implementation even when they operate as internalized professional norms and personal pedagogical concerns rather than formal institutional mandates. Across these accounts, time pressure constrained IL implementation at both the macro level of performance schedules and the micro level of moment-to-moment classroom demands.

Class Size. Class size was described as directly limiting the degree of student autonomy that was structurally manageable, with participants working in large ensembles consistently describing more structured and curated approaches to student choice as a practical necessity. Participant 17 noted that his smaller music studio classes of 25 to 30 students allowed students to pursue independent projects simultaneously in ways that would not be feasible in a large ensemble of 60 or more, illustrating how class size shaped not just the degree but the fundamental character of IL implementation.

Limited Teacher Training. Several participants described limited formal preparation in Green's approaches as a constraint on their ability to implement them deliberately. As reflected in the Pathways to IL Knowledge theme under Research Question 1, accounts of undergraduate training consistently described significant gaps in preparation for student-centered and informal approaches, gaps that participants described as directly limiting their confidence and capacity to implement IL strategies in practice. Participant 7's acknowledgment that her training had not prepared her for the realities of her classroom and Participant 18's description of being told pedagogical principles without being given tools to

enact them both illustrate how inadequate preparation translated directly into implementation barriers. Participant 3, a first-year teacher who had received approximately one session on IL during his preparation program, represented the broader pattern in which individual teachers bore the burden of developing competencies that were not built into their initial training.

Low Student Engagement with Open-Ended Tasks. Several participants described low student engagement as a constraint not on IL in general but on specific kinds of open-ended or unstructured tasks. Participant 4 described giving students a piece of equipment to explore independently and finding that a portion of the class waited for direct instruction rather than engaging with the task: "The first thing some of them did was not engage at all...I have no idea. I don't know where to start. Did you Google this? Did you look at the instruction manual?" Participant 17 described having a structured fallback for students who could not yet manage the autonomy being offered, framing it as a scaffolding response rather than a failure of the approach itself.

Physical Space, Equipment, and Human Resources. Physical space, equipment access, and the availability of additional teaching personnel were identified as interconnected structural factors shaping what IL implementation was realistically possible. Participant 20 described the difficulty of managing three ensemble levels in a shared space as "incredibly chaotic," contrasting this with his current school, where nine small practice rooms transformed what IL implementation could look like in practice. With dedicated space available, student groups could work simultaneously and independently on separate tasks, making peer-directed sectionals and small group exploration a regular and manageable feature of instruction rather than a logistical challenge. Participant 20 further noted that having two teachers in his mariachi class of 60 students made student-directed group work manageable in ways that would not have been possible with a single instructor.

Participant 18 described a related pattern in her keyboard classes, where the use of headphones created a self-contained learning environment that supported independent practice and student self-pacing in ways that open instrumental settings do not easily allow, illustrating how relatively accessible equipment can enable the kind of individualized student-directed learning that IL involves. Equipment funding was described by both Participant 17 and Participant 16 as having made their student-centered programs possible, with both having secured grant funding that built out their respective studio and technology labs, resources that Participant 17 noted compared favorably in cost to a traditional ensemble instrument budget.

Across these accounts, structural and resource constraints did not simply limit IL implementation; they actively shaped its character, determining whether teachers could engage with IL as a sustained pedagogical approach or only as a collection of situational strategies. The conditions that enabled deeper implementation, including smaller classes, dedicated space, additional personnel, and equipment funding, were unevenly distributed across participants, suggesting that access to IL as a meaningful instructional approach was itself a function of institutional resource allocation.

Context-Dependent Practice. A consistent pattern emerged across all 20 participant accounts around which classroom contexts supported IL practices and which constrained them. Participants who described the fullest and most sustained use of IL strategies did so predominantly in guitar, keyboard, music technology, music studio, and small advanced group settings. In large ensemble band, orchestra, and choir settings, IL strategies appeared selectively and partially, as brief practices embedded within otherwise traditional rehearsal structures rather than as an integrated instructional approach.

Participant 14 described the contrast between his guitar classes and large ensemble settings directly:

> In a large ensemble, like band, orchestra, choir, jazz band, or marching band, there are a lot of times when you all have to be on the same page, doing exactly the same thing. I would not use informal teaching. But if it's for individual practice or individualized, if they have the opportunity to go on their own, then I would use informal stuff.

Participant 9 described a similar split, using informal approaches more freely in general music while limiting them to specific situational moments in band, particularly when full-group rehearsal was not producing results. Participant 2 described operating in two entirely distinct modes within the same school, conducting his large orchestra class as a traditional ensemble director while acting as a facilitator for his smaller advanced groups, who composed and performed original work at five showcases throughout the year. Participant 4 described a similar distinction between his ensemble and music production classes, using open-ended project work as the default mode in production while reserving exploratory approaches in ensembles for moments when rehearsal was not progressing as expected.

Across these accounts, the degree to which IL practices were present varied consistently by teaching context. Participants working in guitar, music technology, music studio, and small advanced group settings described IL-consistent strategies as central to their instruction, while those working primarily in band, orchestra, and choir described using individual strategies selectively within otherwise traditionally structured rehearsals.

Situational IL Use in Ensemble Settings. Participants in ensemble settings described incorporating individual IL strategies, including brief periods of independent practice, peer work, or student-directed problem-solving, into specific moments within otherwise traditionally structured rehearsals. These were not descriptions of IL as a comprehensive approach but rather of single strategies used selectively in response to particular rehearsal conditions.

When the Rehearsal Is Not Going Well. Several participants described turning to individual informal strategies when the standard rehearsal approach was not producing results. Participant 4 described a deliberate shift in response to a rehearsal that had stalled:

> In a traditional ensemble, I normally do it when, like, nothing about the rehearsal is clicking . . . And that's why I flip the script and go, okay, what are you hearing? Or let's rotate this situation, see if you can notice this. And so that's why I tried to break up some of the traditional structure, to see if I can get everybody in the room to kind of get their ears turning.

Participant 10 described releasing students to work independently or with a partner when full-group rehearsal was not progressing as expected:

> If we're doing a full group rehearsal, and I'm sensing that things are not going the way they're supposed to…I'll say, 'hey, you have two minutes to practice on your own or with a friend, and then we're going to check in and try this again.' Lots of times, issues resolve themselves with that.

When the Teacher Is Working with Another Section. Participants also described using independent or peer-directed work when they needed to focus attention on one section of the ensemble while the rest of the group continued working. Participant 13 described sending the ensemble to independent work while addressing the section most in need of attention:

> When I'm up there on the podium, and we're running through a large chunk, I'm worried about putting out the biggest fire…whoever's messing up the most. Okay, great. I'm going to focus on that for the next five minutes. While I'm doing that, I'm going to send everyone else to work on their stuff.

Participant 19 described a similar structure, using section leaders to run peer-directed sectionals when she needed to work with one group independently.

These findings suggest that IL strategies function as adaptive, situational tools within predominantly formal rehearsal structures, deployed in response to specific conditions rather than as a defining feature of the instructional approach. When used, these moments were brief, but participants consistently described them as effective in resolving the immediate rehearsal challenge.

Results for Research Question 3: Perceived Impact of IL Strategies

The following section presents quantitative findings addressing Research Question 3, examining respondents' confidence in implementing IL strategies and their perceptions of IL's impact on student engagement and musical development. Descriptive analyses are presented first, followed by inferential analyses examining relationships among confidence, familiarity, IL use, and perceived student outcomes.

Quantitative Findings

Respondents reported their level of confidence in implementing IL strategies on a 5-point scale, where 1 represents very low confidence, and 5 represents very high confidence (see Table 13). Responses were based on 87 valid cases. Most respondents reported a confidence level of 3 (42.5%, $n = 37$), followed by level 4 (29.9%, $n = 26$). Fewer respondents reported lower confidence levels (levels 1–2; 17.2%, $n = 15$), while 10.3% ($n = 9$) indicated very high confidence. These results suggest that most teachers who use IL strategies do so with moderate rather than high confidence, indicating potential room for development through targeted professional learning.

Table 13

Teachers' Self-Reported Confidence in Using IL Strategies

Confidence Level	*n*	%

1 (Very low)	1	1.1
2	14	16.1
3	37	42.5
4	26	29.9
5 (Very high)	9	10.3
Total	87	99.9

Note. Responses were measured on a 5-point Likert scale, where 1 = very low confidence and 5 = very high confidence ($N = 87$). Total does not sum to 100% due to rounding.

Respondents reported their perceptions of changes in student engagement when implementing IL strategies using a 10-point scale, where 1 represents greatly decreased, 5 represents no noticeable change, and 10 represents greatly increased (see Table 14). Responses were based on 86 valid cases. Most responses were above the midpoint, with the highest frequencies at levels 7 (31.4%, $n = 27$), 8 (22.1%, $n = 19$), and 6 (20.9%, $n = 18$). Fewer respondents reported no noticeable change (11.6%, $n = 10$), and very few indicated decreases in engagement. These results indicate that teachers who use IL strategies perceive a generally positive effect on student engagement, with the large majority reporting increases of varying magnitude.

Table 14

Perceived Student Engagement With IL Strategies

Engagement Change Level	***n***	**%**

1–2 (Greatly decreased)	0	0.0
3	1	1.2
4	0	0.0
5 (No noticeable change)	10	11.6
6	18	20.9
7	27	31.4
8	19	22.1
9	5	5.8
10 (Greatly increased)	6	7.0
Total	86	100.0

Note. Responses were measured on a 10-point scale, where 1 = greatly decreased, 5 = no noticeable change, and 10 = greatly increased. One cell contains a count of 1; percentages for cells with very small counts should be interpreted with caution.

Respondents also reported their perceptions of changes in student musical development (i.e., growth in skills such as technique, musicianship, music creativity, or performance ability) using the same 10-point scale (see Table 15). Responses were based on 86 valid cases. Most responses were above the midpoint, with the highest frequencies at levels 6 (27.9%, *n* = 24) and 7 (25.6%, *n* = 22), followed by level 8 (18.6%, *n* = 16). Some respondents reported no noticeable change (16.3%, *n* = 14), and very few indicated decreases in development (levels 3–4; 2.4%, *n* = 2). Perceived effects on musical development were

similarly positive, though slightly more moderate than engagement, with a larger proportion of respondents reporting no noticeable change.

Table 15

Perceived Student Musical Development With IL Strategies

Development Change Level	***n***	**%**
1–2 (Greatly decreased)	0	0.0
3	1	1.2
4	1	1.2
5 (No noticeable change)	14	16.3
6	24	27.9
7	22	25.6
8	16	18.6
9	4	4.7
10 (Greatly increased)	4	4.7
Total	86	100.2

Note. Total does not sum to 100% due to rounding. Levels 3 and 4 each contain a count of 1; percentages for cells with very small counts should be interpreted with caution.

Respondents were also asked to identify areas of student learning most supported by IL strategies, selecting up to three areas (see Table 16). The most frequently selected areas were peer collaboration and social learning (60.9%, $n = 53$), musical independence (57.5%, *n*

= 50), and student motivation and agency (51.7%, *n* = 45), followed by creativity and self-expression (48.3%, *n* = 42) and aural skills (42.5%, *n* = 37). Cultural relevance and inclusivity were selected by 33.3% (*n* = 29). These results suggest that teachers perceive IL as most strongly supporting the relational and motivational dimensions of student learning rather than specific technical or musical skill development.

Table 16

Areas of Student Learning Most Supported by IL Strategies (Multiple Response, n = 87)

Area of Support	***n***	**%**
Peer collaboration and social learning	53	60.9
Musical independence	50	57.5
Student motivation and agency	45	51.7
Creativity and self-expression	42	48.3
Aural skills	37	42.5
Cultural relevance and inclusivity	29	33.3
Total	258	

Note. Respondents were asked to select up to three areas; therefore, percentages of respondents exceed 100%, and a column total is not reported. The percentage reflects the proportion of the 87 respondents who selected each area.

A one-way ANOVA was conducted to examine differences in confidence based on IL use, excluding respondents who reported not using IL strategies due to missing data on the confidence measure (*n* = 87; see Table 17). Results showed a significant difference between

groups, $F(1, 85) = 10.30$, $p = .002$, $\eta^2 = .108$, a medium to large effect. Respondents who intentionally used IL reported higher confidence ($M = 4.00$, $SD = 0.78$) than those who used similar strategies without formal knowledge ($M = 3.19$, $SD = 0.88$). These results suggest that formal knowledge of Green's approach is associated with greater confidence in its implementation, supporting the value of deliberate professional learning in this area.

Table 17

Confidence in Implementing IL by Use of IL Strategies

IL Use Category	*n*	*M*	*SD*
Intentional Use	14	4.00	0.78
Similar Use (without formal knowledge)	73	3.19	0.88
Total	87	3.32	0.91

Note. Confidence was measured on a 5-point scale. $F(1, 85) = 10.30$, $p = .002$, $\eta^2 = .108$.

A one-way ANOVA examining differences in confidence by familiarity level did not reach statistical significance, $F(2, 84) = 2.76$, $p = .069$, $\eta^2 = .062$. However, the pattern of means was in the expected direction, with teachers reporting familiarity with Green's approach indicating higher confidence ($M = 3.88$, $SD = 0.83$) than those who were somewhat familiar ($M = 3.48$, $SD = 0.77$) or not familiar ($M = 3.17$, $SD = 0.95$). The small to medium effect size suggests a practically meaningful relationship that the current sample may have been underpowered to detect statistically, particularly given the small number of respondents in the familiar group (n = 8). Although differences did not reach statistical significance, the descriptive trend toward higher confidence among more familiar respondents is consistent with the significant relationship found between familiarity and intentional use in RQ2.

Table 18

Confidence in Implementing IL by Familiarity Level

Familiarity Level	*n*	*M*	*SD*
Familiar	8	3.88	0.83
Somewhat familiar	25	3.48	0.77
Not familiar	54	3.17	0.95
Total	87	3.32	0.91

Note. Confidence was measured on a 5-point scale. $F(2, 84) = 2.76$, $p = .069$, $\eta^2 = .062$.

Perceived student engagement differed significantly by IL use category (see Table 19). A significant difference was found, $F(1, 84) = 6.91$, $p = .010$, $\eta^2 = .076$. Respondents who reported intentionally using IL perceived higher levels of student engagement ($M = 7.93$, $SD = 1.59$) compared to those using similar strategies without formal knowledge ($M = 6.89$, $SD = 1.31$). These results suggest that teachers who implement IL with formal knowledge and intentionality perceive greater benefits for student engagement than those who use similar strategies without the exposure.

Table 19

Perceived Student Engagement by Use of IL Strategies

IL Use Category	n	M	SD
Intentional Use	14	7.93	1.59

Similar Use (without formal knowledge)	72	6.89	1.31
Total	86	7.06	1.40

Note. Engagement measured on a 10-point scale. $F(1, 84) = 6.91$, $p = .010$, $\eta^2 = .076$.

A similar pattern emerged for perceived student musical development in the IL use categories (see Table 20). Results similarly indicated a significant difference, $F(1, 84) = 4.29$, $p = .041$, $\eta^2 = .049$. Respondents who intentionally used IL perceived higher levels of student development ($M = 7.43$, $SD = 1.65$) compared to those using similar strategies without formal knowledge ($M = 6.60$, $SD = 1.32$). The smaller effect size compared to the engagement analysis suggests that the relationship between intentional IL use and perceived music development outcomes is somewhat less pronounced than for engagement.

Table 20

Perceived Student Musical Development by Use of IL Strategies

IL Use Category	***n***	***M***	***SD***
Intentional Use	14	7.43	1.65
Similar Use (without formal knowledge)	72	6.60	1.32
Total	86	6.73	1.40

Note. Development measured on a 10-point scale. $F(1, 84) = 4.29$, $p = .041$, $\eta^2 = .049$.

Pearson correlation analyses were conducted to examine relationships among confidence, perceived student engagement, and perceived student development (see Table 21). A moderate positive correlation was found between confidence and perceived student

engagement ($r = .49$, $p < .001$), and a weak positive correlation between confidence and perceived student musical development ($r = .26$, $p = .019$). A strong positive correlation was observed between perceived student engagement and perceived student musical development ($r = .67$, $p < .001$). The stronger relationship between confidence and engagement compared to confidence and development suggests that teachers' sense of efficacy in implementing IL is more closely tied to what they observe in student behavior than to their perceptions of musical growth. The strong correlation between engagement and development indicates that teachers perceive these two outcomes as closely linked in practice, rarely observing one without the other.

Table 21

Correlations Among Confidence, Engagement, and Development

Variable	1	2	3
1. Confidence	—		
2. Perceived student engagement	.49**	—	
3. Perceived student development	.26*	.67**	—

Note. Confidence was measured on a 5-point scale. Perceived student engagement and perceived student development were each measured on a 10-point scale. * $p < .05$. ** $p < .001$.

Qualitative Findings

Interview data from 20 participants provided accounts of how IL strategies affected student learning and engagement as observed by teachers. Findings are organized into three themes: Increased Engagement and Participation, Motivation Through Ownership and

Repertoire Choice, and Varied and Uneven Outcomes. The first two themes address the most consistently described positive effects teachers observed. The third presents cases where outcomes were more mixed, absent, or where informal approaches produced difficulty rather than benefit.

Increased Engagement and Participation. The most frequently described impact of IL across participant accounts was an increase in student engagement, observed not only as a general sense of increased interest but in concrete terms, such as, changes in student behavior during class, students choosing to practice independently outside of class, and in some cases measurable growth in program enrollment.

Observable Changes in Student Behavior. Several participants described noticing a shift in how students behaved during class when informal approaches were in use, particularly in terms of on-task behavior and student-to-student interaction. Participant 7 described a moment that stood out after years of gradually building toward a more student-centered structure:

> This is the first year I've had everybody lock in like this. I walk around, there's like 60 of them, and I don't see anybody off task...it's because the upperclassmen are so used to it now, because we've been doing it every year, that everyone just understands the expectation.

Participant 13 similarly described the relationship between teacher positioning and student engagement, noting that stepping back from the podium consistently produced a visible increase in student responsibility and on-task behavior, an observation discussed in detail in the Facilitation theme under Research Question 2. Repertoire selection and collaborative decision-making were described as producing a specific kind of engagement that went beyond compliance. Participant 10 noted that students were more excited and engaged when they felt they had been part of choosing or shaping what they were working

on: “They’re more excited about the music and more engaged when they feel like they were a part of either choosing what music we’re playing or crafting a particular kind of performance...they can feel really proud of that.”

Students Practicing Outside of Class. Several participants described students choosing to practice on their own time, before school, during lunch, or after school, as one of the clearest observable signs of increased engagement. Participant 5 described a direct contrast between his guitar and band students: “I find that my guitar kids practice way more than my band kids do, just because of that mode of self-motivation there.” Participant 13 described students using self-directed practice time during class and arriving at lunch to continue working on repertoire they were genuinely invested in, a pattern he attributed directly to student ownership over what they were playing. Participant 11 described a related shift, noting that students began asking who they could share their work with, an unsolicited indication of investment that went beyond completion of assigned tasks.

Enrollment Growth as an Indicator. Participant 8 described a concrete institutional measure of sustained engagement, that is, growth in program enrollment over time. She described the guitar program as having grown from one section of 40 students to 250 students, attributing this growth to the instructional approach built around student ownership and informal learning: “I see the guitar program started at one section with 40 kids, and now it’s 250 kids. So it’s successful.” She connected this directly to the broader goal of the program, noting that if the aim was to produce students who continued making music after leaving the classroom, the evidence of sustained engagement was as positive as it could be.

Differential Impact Across Student Groups. Participants also described that the positive effects of IL on engagement were not evenly distributed across all students. Participant 1 observed that students who typically underperformed in traditional ensemble settings often responded particularly well when the pressure of technical evaluation was

reduced, noting that lower-achieving students frequently thrived in more informal contexts. Participant 19 noted that even brief windows of self-directed work produced measurable results, describing how 60 seconds of independent practice consistently resulted in students returning with better command of the material they had been working on. Participant 9 reflected on the visible cost of the absence of informal approaches: “Without them, you have a lot of lack of student engagement, or you have students who lack passion or capacity to do things outside of what’s on the page.”

Across these accounts, the positive effects of IL on engagement were most pronounced among students who typically struggled in traditional ensemble structures, suggesting that informal approaches may have particular value as a means of broadening musical participation beyond the students who already thrive in formal instructional contexts.

Motivation Through Ownership and Repertoire Choice. While the preceding theme addressed engagement in terms of observable behavior, a distinct pattern emerged around motivation, specifically how student ownership over repertoire choice appeared to produce a qualitatively different kind of investment, characterized by intrinsic motivation rather than compliance.

Participant 14 described the underlying logic directly, framing ownership as the mechanism through which motivation shifted:

> When students choose the repertoire, they have more buy-in. They tend to like the pieces more that they’ve chosen...they have more of what we call skin in the game, which is a term that means they want to be a part of it. It increases their devotion to the music because it’s theirs.

Participant 6 described the same dynamic from the perspective of student voice: “Having students buy into the music they’re learning is huge. We can’t just force them to learn the music that we think is important. They have to also have voice.”

Participant 13 described how genuine motivation could be distinguished from compliance by observing what students did outside of formally structured class time. He described presenting repertoire options to his eighth-grade orchestra and observing:

> They're playing it outside of class time, working on it by themselves before class starts. One of my violin players comes up and says, 'Hey, I'm practicing this section. Does this sound good?' So I know they're working on it because they want to, because they like how it sounds."

The same participant described the contrast when students were not connected to the repertoire, recalling a piece he had been certain would work that students rejected entirely, a comparison that underscored how directly motivation tracked student response to the musical material itself.

Participant 14 described an extended outcome of this ownership dynamic, noting that student-led sectionals sometimes produced levels of self-direction and creativity that exceeded what he had planned for, with section leaders developing their own lesson structures independently. Participant 12 described the overall effect of student voice on musical engagement in his program: "I think that the kids are a lot more engaged. I'm surprised how they sort of responded quickly. Overall, they articulated feelings of being seen, that their voices matter, that they have ideas worth contributing."

Across these accounts, student ownership over repertoire choice consistently produced a qualitatively different quality of engagement than teacher-directed selection, shifting student orientation from compliance with assigned material to genuine investment in music that felt meaningfully theirs.

Varied and Uneven Outcomes. While increased engagement and motivation were the most commonly described perceived impacts, participants also described situations where

IL did not produce anticipated effects or where outcomes varied significantly across students in the same classroom.

Participant 1 noted that IL had little noticeable impact in his traditional ensemble settings: “Realistically, it doesn’t have much of an impact in my regular, traditional ensembles.” Participant 16 described a subset of students who remained unchanged regardless of instructional approach: “I know there are students in my program now that just do what’s asked of them, they do nothing more. They do the assignments, they do them well, and they do nothing more.”

Other participants described specific instances where informal approaches produced disengagement rather than increased motivation.

Participant 4 described giving students an open-ended task, an unfamiliar piece of equipment and an instruction manual, and finding that a portion of the class waited passively for direct instruction rather than engaging independently: “I gave them the preamp...here’s an instruction manual. You’ve got to figure out what everything else does. And the first thing some of them did was not engage at all...they are like, ‘No, I’m just waiting for us to go over it as a class.’” Participant 4 described the experience as prompting reflection on accountability structures, noting that the open-ended task eventually pushed some students toward taking responsibility for their own learning, but not without intervention.

Participant 17 described a structured fallback he maintained for students who were not yet ready to manage the autonomy being offered:

> If you’re not ready to have that autonomy, then we’re going to need to set up a thing where you have playing tests...you’re not going to pick your own thing. I’m going to give you this book, and you’re going to do this page and perform it for me at the end of class. And frankly, most of the time when we start down that path, they’re like, “Oh, okay, I’ll find something to do,” and then they do.

Across these accounts, varied and uneven outcomes did not lead participants to abandon IL approaches but rather to develop differentiated responses, maintaining informal structures for most students while building structured fallbacks for those not yet ready to manage the independence being offered. These findings suggest that effective IL implementation requires not only pedagogical flexibility but also attentiveness to the differential readiness of individual students within the same classroom.

The findings presented in this chapter suggest that IL strategies are more widely practiced than formally recognized among secondary school music teachers on the U.S. West Coast. Most teachers in this sample were unfamiliar with Green's approach yet described practices consistent with its core principles, including student agency, peer collaboration, facilitation, and aural learning, as regular features of their instruction. Where teachers implemented IL with greater intentionality and formal awareness, they reported higher confidence and perceived stronger effects on student engagement and musical development. Contextual factors including class size, teaching setting, time constraints, and resource availability shaped the degree to which IL could function as a sustained pedagogical approach rather than a collection of situational strategies. The following chapter situates these findings within existing literature on IL and considers their implications for music teacher preparation, professional development, and the structural conditions that enable or constrain IL implementation in school music programs.

CHAPTER V: DISCUSSION

Chapter 5 presents a discussion of the findings from this study, which examined how secondary school music teachers on the U.S. West Coast understand, implement, and perceive the impact of informal learning (IL) strategies in their music classrooms. Data were collected through a survey of 117 secondary school music teachers across California, Oregon, and Washington, and through semi-structured interviews with 20 participants drawn from the survey sample. The study was guided by three research questions addressing teachers' awareness of IL approaches developed by Green and how they acquired that knowledge, how teachers implement IL strategies and what factors shape those decisions, and teachers' perceptions of the impact of these strategies on student learning and engagement. The study found that Green's approach is not widely known among secondary music teachers in this region, that a large proportion of teachers are using selective informal learning strategies without formal knowledge of the approach, and that teachers who are familiar with Green's approach and implement IL more intentionally tend to report higher confidence and more positive perceptions of student outcomes. The following sections present an analysis of these findings in relation to existing literature, followed by a discussion of the study's limitations, recommendations for future research, implications for music education practice and teacher preparation, and a concluding summary of the study's contributions.

Green (2002, 2008) documented an approach to music learning in which students choose their own music, learn primarily by ear and through peer collaboration, and take increasing ownership of their musical development, while the teacher repositions from director to facilitator. Grounded in constructivist principles of learning through experience and social interaction (Vygotsky, 1978), her approach also resonates with broader commitments to student-centered pedagogy and culturally responsive teaching, particularly in its emphasis on students' own musical identities and community practices (Ladson-Billings,

1995; Lind & McKoy, 2016). A distinction central to this chapter's analysis is the difference between IL strategies applied coherently and intentionally, with awareness of Green's approach, and selective informal learning strategies employed intuitively and in isolation without that awareness. This distinction shapes how the findings are interpreted throughout the discussion.

Analysis of Findings

The findings of this study are discussed in relation to three research questions addressing secondary school music teachers' awareness of Green's IL approach, their implementation of IL strategies, and their perceptions of IL's impact on student learning and engagement. Where relevant, quantitative and qualitative findings are considered together to provide a more complete picture of each finding. Connections to existing literature are drawn throughout, with particular attention to how the study's findings align with or extend what has previously been reported in the field. The distinction between IL implementation similar to Green's approach and the selective use of informal learning strategies is maintained throughout, as it is central to interpreting both how widely and how deeply IL strategies are used in this sample.

Research Question 1: Awareness of Green's Approach

This section examines the extent to which teachers in this sample were aware of Green's approach and how that awareness developed, drawing on both quantitative familiarity data and qualitative accounts of how teachers encountered IL strategies and practices. Research Question 1 examined the extent to which secondary school music teachers on the U.S. West Coast were aware of IL strategies and how they had acquired this knowledge. The findings present a consistent picture: Green's approach is not widely known among this population, the pathways through which teachers encounter the approach tend to

be informal and self-directed rather than institutionally structured, and even teachers who are unfamiliar with the term often describe practices that closely resemble its core principles.

The low overall familiarity rate, with nearly two-thirds of respondents (65%) reporting no prior familiarity with Green's approach before the survey, can be understood in the context of how secondary music education in the U.S. is structured. As established in the literature, secondary music programs in the U.S. are predominantly organized around large ensemble formats, including band, orchestra, and choir, that emphasize conductor-led, notation-based instruction (Abril & Gault, 2008; Elpus & Abril, 2011). Within this context, Green's approach may simply not have appeared relevant to many teachers' daily practice. An approach developed primarily through the study of popular musicians learning outside formal settings may not have seemed immediately applicable to the realities of preparing a 60-person concert band for a spring performance. This mismatch between the notation-first, teacher-directed instruction that dominates U.S. secondary ensemble programs and the student-centered, aural learning that Green prioritizes may help explain why the approach has not gained wider recognition among practicing teachers.

A second factor worth considering is the geographic and institutional origin of this IL literature. Green's work was developed within the U.K. educational context, where secondary music education is structured differently from its U.S. counterpart. In England, general music is embedded within curricular classroom hours for all students, whereas ensemble participation is largely extracurricular, a contrast to the U.S. model, where performance-based ensembles tend to dominate formal music education (Mariguddi, 2022).

The lower uptake of IL in music classrooms in the U.S. compared to countries with British-influenced education systems has been attributed to structural differences in how secondary music programs are organized, particularly the dominance of performance-based ensemble formats in U.S. schools (Abril & Gault, 2008; Mariguddi, 2022). The low

familiarity rate found in this study (65%) provides direct survey evidence that this gap persists among practicing teachers, more than fifteen years after Green's (2008) work was published. However, the current study adds an important nuance to this picture. Rather than simply confirming that Green's approach is completely absent from U.S. classrooms, the data suggest that many of its associated practices are already present, albeit without awareness of Green's approach that could give them coherence and direction. The gap may therefore be less about whether these practices are happening and more about whether they are happening consistently, scaffolded sequentially, and with conscious awareness of Green's approach, a distinction that has significant implications for how the field supports teacher development. It is reasonable to suggest that a body of literature rooted in a different national context may take longer to filter into U.S. teacher preparation programs, particularly when it does not map neatly onto the ensemble-dominated structures that define most secondary music positions in this country.

The interview data reinforces and adds texture to this finding. Multiple participants across different states, experience levels, and teaching contexts confirmed that they had no prior awareness of Green's approach or IL before taking the survey. Participant 17's reflection that Green's approach "was not really on the research landscape at all" during his training years speaks directly to both of the explanations outlined above, addressing both the recency of the approach and its limited reach into U.S. preparation contexts. At the same time, Participant 10's distinction between not knowing the approach and recognizing the associated practices points to an important nuance in how this non-familiarity figure (65%) should be read. Low familiarity with Green's approach does not necessarily mean low familiarity with all of the practices it encompasses. This distinction becomes particularly important when considering the implementation findings discussed in the following section, where more than two-thirds of respondents (68.4%) reported using selective informal

learning strategies consistently without having formally studied Green's approach. This distinction also cautions against over-reading survey exposure as genuine familiarity. Participant 19, for example, could not recall what IL may encompass weeks after completing the survey, suggesting that a brief explanation of IL is not enough to produce lasting awareness.

Participants who did report some familiarity with Green's approach identified professional settings as the most common source of that knowledge, with a large share of this group (69.6%) pointing to professional development, conferences, and practitioner networks as their primary pathway. School-based and personal sources were each reported by a similar proportion of this group (56.5%). These patterns were consistent with the qualitative data, which revealed three main pathways through which participants developed awareness of IL strategies: institutional learning, professional and collegial networks, and self-developed understanding through classroom experience. Notably, for most participants, none of these pathways involved direct engagement with Green's work. Teachers had arrived at IL strategies through routes that operated largely independently of the academic literature.

The prominence of professional networks as a source of IL awareness, reflected in both the quantitative and qualitative data, suggests that organizations such as OMEA, WMEA, CMEA, and practitioner communities like Music Will are currently playing a more active role in spreading awareness of approaches similar to Green's than formal teacher preparation programs. Participant 17's account of encountering IL through his involvement with Music Will, and Participant 16's description of learning from a colleague through informal Zoom sessions during the pandemic, both illustrate how practitioner networks can serve as effective pathways for pedagogical knowledge that has not yet been systematically incorporated into preservice training.

The strategies that teachers who are familiar or somewhat familiar with Green's approach most commonly reported using strategies such as, student choice of repertoire and peer or collaborative learning, are also the strategies most compatible with existing ensemble structures. Learning by ear and trial-and-error, which require more significant shifts away from notation-based instruction, were encountered less frequently even among those with some familiarity with Green's approach. This pattern is consistent with the implementation findings discussed in RQ2, where the same strategies tend to appear more commonly in practice, while those that require more structural change tend to be reported less frequently. Whether familiarity shapes adoption or whether both are shaped by the same structural conditions is a question the current data cannot fully resolve.

The graduation cohort finding adds an important temporal dimension to this picture. A statistically significant association between graduation cohort and familiarity with Green's approach indicates that Green's (2008) work has had a measurable, if modest, effect on teacher preparation. Post-2011 graduates showed higher familiarity rates than pre-2010 graduates, suggesting that more recently trained teachers were more likely to have encountered the approach. However, Participant 3's account of discussing the approach "for maybe a day" during his teacher preparation program captures both the progress and the limitation this finding represents. Exposure is occurring, but it remains brief and inconsistent. Among post-2011 graduates, more than half (57.1%) reported no familiarity with the approach. This raises a question the current data cannot fully answer: whether Green's approach is being introduced in preparation programs but not retained, or whether its integration into coursework remains too limited and inconsistent to produce lasting awareness.

Some teachers who trained before 2010 arrived at IL strategies through sustained classroom experience and professional networking, even without formal exposure to the

approach. Participant 17's account of spending five years gradually releasing instructional control, and Participant 8's action research on student ownership, both illustrate pathways to IL practice that did not depend on institutional knowledge transmission. While these accounts are encouraging, they also reflect how much individual initiative and circumstance can shape a teacher's professional development when formal preparation does not provide a foundation in student-centered approaches.

The participants who reflected specifically on the question of institutional responsibility for IL education offered perspectives that add important nuance to these findings. Rather than simply calling for more IL content in preparation programs, these participants recognized the real constraints that limit what can be covered within a teacher preparation program. Participant 20 noted that foundational skills, including classroom management, may reasonably take priority over Green's specialized approach. Participant 14 questioned whether Green's approach should be taught as a standalone unit at all, suggesting instead that its strategies would be better introduced as part of broader pedagogical coursework.

Several participants converged on the position that if Green's approach is to be included in teacher preparation, it needs to be taught experientially rather than as a theoretical topic. Participant 12's warning against treating the approach like a single-day introduction alongside other approaches, noting that "just learning it as a theory and not as a practice, that's dangerous," reflects an understanding that Green's approach is a practice-based approach that cannot be meaningfully transmitted through lecture alone. Participant 18's account of being told principles without being given tools to act on them, and Participant 19's call for broader exposure to diverse pedagogical methods within existing coursework, point in the same direction. These perspectives do not argue against including the approach in preparation programs. Participant 17 stated directly that it should be in every preparation program. However, they do suggest that the more productive question for teacher educators

may be not simply whether to include Green's approach, but how to create conditions in which preservice teachers can encounter, practice, and reflect on IL strategies in ways that prepare them for the varied and often ensemble-dominated settings they will enter.

The awareness patterns described under Research Question 1 provide important context for understanding the implementation findings that follow. While familiarity with Green's approach remained limited across the sample, the data suggest that many teachers were already engaging with its underlying principles, a pattern that becomes clearer when implementation is examined more closely.

Research Question 2: Implementation of IL

This section examines how teachers implement IL strategies in their classrooms, what factors influence those decisions, and what structural conditions shape or constrain that practice. Research Question 2 examined how secondary school music teachers implement IL strategies in their classrooms and what factors influence or constrain those decisions. The findings reveal that while a large proportion of teachers are using IL strategies in some form, the nature and depth of that implementation varies considerably across teaching contexts, and is shaped by a complex mix of personal beliefs, student response, structural constraints, and level of familiarity with the approach.

Overall Rates of IL Use. The large majority of respondents (80.7%) reported using IL strategies in some form, with more than two-thirds (68.4%) indicating they used similar strategies without having formally studied Green's approach. While these figures suggest broad adoption on the surface, they require careful interpretation. As discussed in relation to Research Question 1, many teachers who described using selective informal learning strategies had no formal knowledge of the approach and were drawing on individual practices in isolation rather than implementing IL as a coherent and intentional pedagogical approach. Green's (2008) research was conducted in U.K. secondary general music classrooms, where

students worked in small groups with considerable freedom to choose their own music and direct their own learning. The current study extends her approach into a different institutional context, where the structural demands of large ensembles, concert schedules, and performance accountability fundamentally shape what implementation can look like. What emerges is not a failure to implement IL but a contextually adapted form of it, one that Green's original model did not fully anticipate and that the field has not yet systematically described. The data suggest that what is currently occurring in many classrooms reflects partial implementation rather than the full application of IL as Green originally conceived it.

This distinction matters for how the finding is interpreted. With more than half of respondents using informal strategies in classroom is encouraging in that it suggests the underlying values of IL, including student voice, peer collaboration, and experiential learning, are already present in many secondary music classrooms. At the same time, it would be an overstatement to conclude that IL is already widely practiced in U.S. secondary music education. Selectively adopting individual informal strategies without awareness of how they can work together as a cohesive approach represents a fundamentally different kind of practice than implementing them intentionally and comprehensively in the way Green's approach envisions.

A smaller proportion of respondents who reported not using IL strategies (19.3%) is likely concentrated among teachers working primarily with large ensembles, where the structural demands of concert preparation and group rehearsal leave limited room for the kinds of student-directed and exploratory learning that IL involves. This interpretation is consistent with the qualitative data, in which participants working primarily in band, orchestra, and choir described using IL strategies selectively and situationally rather than as a regular feature of instruction. The low rate of philosophical resistance to IL, with only a very small share of respondents (5.5%) citing philosophical concerns as an obstacle, suggests that

non-use is more likely a reflection of structural constraint than of disagreement with IL's underlying values.

Class Settings and the Sampling Context. The class settings in which teachers reported using IL strategies deserve careful consideration alongside the demographic profile of the sample. Instrumental ensembles were the most frequently reported setting, cited by nearly three-quarters of respondents (73.6%), followed by choral ensembles, reported by nearly half (47.3%). Other settings, including general music, music technology, and music appreciation, were reported considerably less frequently. A straightforward reading of these figures might suggest that IL strategies are most commonly practiced in ensemble settings. However, this interpretation would be misleading without accounting for the teaching contexts that dominate the sample.

The sample for this study was drawn from secondary school music teachers across California, Oregon, and Washington, and reflects the broader demographic reality of secondary music education in the U.S., where band and choir programs are by far the most common music offerings (Elpus & Abril, 2011). With nearly three-quarters of respondents (72%) teaching instrumental music and more than half (53.4%) teaching choral music, it is statistically expected that ensemble settings would dominate the reported implementation contexts regardless of how deeply or comprehensively IL is actually practiced in those settings. The high ranking of instrumental and choral ensembles in Table 8 reflects the composition of the sample more than it reflects the depth of IL practice in those contexts. When the qualitative data is considered alongside the quantitative findings, a more nuanced picture emerges. Participants who described the most sustained, comprehensive, and structurally integrated use of IL strategies were almost exclusively those teaching in guitar, keyboard, music technology, music studio, modern band and small advanced group settings.

Participant 17's description of spending half of every 90-minute class facilitating and coaching individual student projects, Participant 8's account of a guitar program built around student ownership and peer leadership, and Participant 4's music production class in which students regularly produced fully realized original work with minimal direct instruction all represent forms of IL implementation that go considerably beyond what was described in large ensemble settings. These non-ensemble contexts appear toward the bottom of Table 8, not because IL is less present in them, but because the teachers who work in these settings are themselves underrepresented in the sample.

This reflects a broader reality of secondary music education research rather than a specific limitation of this study. Survey-based research targeting secondary music teachers will naturally draw predominantly from the pool of teachers that the profession currently produces, most of whom work in band and choir contexts.

Strategy Types and Teacher's Approach. The distribution of reported IL strategy types reflects a clear pattern: those most compatible with existing ensemble structures were adopted most widely. Student agency, which includes student-led rehearsal and repertoire selection, and peer collaboration, ranked highest, with the vast majority of respondents reporting each (81.3% and 80.2% respectively), while learning by ear (63.7%), exploratory tasks (50.5%), and technology integration (44.0%), all of which require more structural change, ranked lower.

Student agency and peer collaboration ranked higher, likely because they can be layered onto traditional rehearsal formats without fundamentally changing how a class is organized. A choir or band director can invite student input on repertoire selection. They can also assign section leaders to run small group rehearsals. These are meaningful departures from strictly teacher-directed instruction, but they do not require restructuring the fundamental format of the class. Interview data confirm this: across participants, student

agency in ensemble settings was almost always described as constrained and teacher-mediated rather than fully open. Participant 1's curated voting system, Participant 5's pre-selected list of five repertoire options, and Participant 14's practice of consulting section leaders while retaining final decision-making authority all illustrate this pattern. These examples reflect meaningful movement toward student-centered practice, and scaffolded forms of agency, where teachers structure the conditions for student choice rather than opening the floor entirely, can themselves represent a deliberate and appropriate application of informal learning principles, particularly in large ensemble contexts. At the same time, the degree of autonomy described here remains considerably more bounded than the broad student self-direction that Green (2008) placed as one of the centers of the approach. This is not to say that every music classroom must move toward full student autonomy. What the data do suggest is that in most ensemble contexts, the degree of student agency being offered is limited more by the demands of the setting than by a conscious choice about how much autonomy students should have.

Learning by ear, in particular, emerged as a highly context-dependent strategy. In jazz band, mariachi, and guitar settings, participants described aural learning as a central and sometimes notation-free approach. Participant 7's fully ear-based mariachi learning, Participant 6's jazz transcription work, and Participant 5's complete abandonment of standard notation in guitar all represent contexts where aural learning was structurally supported. In contrast, participants in band and choir settings described ear-based strategies as supplementary departures from notation-based instruction, used selectively when the written score was creating difficulties rather than as a primary mode of learning. The lower quantitative ranking of learning by ear likely reflects a combination of factors rather than ensemble structure alone. The predominance of ensemble teachers in the sample, paired with the notation-dependent conventions of band and choir rehearsals, and limited curricular

flexibility, all contribute to making aural approaches less accessible as a primary instructional mode. This does not mean larger ensemble contexts are inherently resistant to aural learning; participants in jazz, mariachi, and guitar settings demonstrated otherwise, but rather that genre, instrumentation, and institutional expectations shape which IL strategies are realistically available to teachers.

Regarding technology integration, which ranked lowest among reported strategy types (44.0%), an important instrumentation note applies. The survey item used to capture this dimension of IL practice was framed around technology use in teaching generally, which reflects only one aspect of how technology functions in IL classrooms. What the qualitative data reveals is that in many of the teaching contexts in this study, technology was not simply a tool among others but the structural infrastructure that made facilitative, student-directed learning possible in the first place. Participant 17's studio setup, in which 20 individual stations equipped with mixers, headphones, small practice amps, and electronic drum kits allowed students to work simultaneously on separate projects without requiring a director to coordinate the sound, illustrates how physical and digital infrastructure can replace the organizational function that a conductor typically serves in ensemble settings. Participant 16's use of Soundtrap and Ableton Live followed a similar logic: rather than directing students toward a predetermined musical product, he described setting up what he called sandboxes, defined skill parameters within which students had full creative freedom to produce original work in any direction they chose. Participant 18 described a related pattern in keyboard classes, where headphones created a self-contained learning environment that supported independent practice and student self-pacing in ways that open instrumental settings do not easily allow. Across these accounts, technology functions less as a supplement to instruction and more as a condition that makes a particular kind of teaching possible. The survey treated technology integration as one strategy among others, but this does not reflect

how broadly facilitative teaching actually operates in IL classrooms. Because the survey had no dedicated item for facilitative teaching as a whole, the full picture of how teachers reposition themselves away from direct instruction is better seen in the qualitative data. This gap is addressed further in the limitations section.

Influencing Factors. The factors that teachers identified as influencing their use of IL strategies were strongly dominated by two categories: teacher beliefs, cited by the largest number of respondents (95.6%), and student engagement and interest, cited by nearly as many (94.5%). Professional context, which included teacher training, colleague influence, and alignment with standards, was reported by fewer respondents (29.7%). This pattern was consistent across both quantitative and qualitative data and points to a clear picture of how IL adoption currently works in practice.

Teachers are not adopting IL strategies primarily because they were trained to do so or because institutional expectations encourage it, they are adopting these strategies because they believe in student-centered learning and because they observe students responding positively when those approaches are used. The qualitative data illustrate this dynamic in concrete terms. Participant 17's sustained commitment to releasing instructional control was driven by watching student performance improve as he did so. Participant 7's use of student surveys to continuously refine her approach reflected a practice shaped by ongoing attention to student response. Participant 13's shift away from podium-based instruction was motivated by noticing that engagement increased when students were given more responsibility for their own learning. In each of these cases, the teacher's personal beliefs and direct observations of student response were the primary drivers of pedagogical change, operating largely independently of formal training or institutional encouragement.

Student engagement functions in this data not only as an outcome of IL but also as a driver of its continued use. When teachers try IL strategies and observe students responding

with greater enthusiasm, participation, or self-direction, they are motivated to continue and develop those approaches. This pattern, in which positive student response strengthens teacher beliefs and encourages further use of IL strategies, helps explain how IL teaching can grow and continue even without formal training or institutional support. For many of the teachers in this study, the beliefs and student-centered practices that support IL are already present in their classrooms. Professional development that starts from what teachers already believe and already observe in their students may therefore be a more practical starting point than introducing IL as something entirely new.

The low ranking of professional context as an influencing factor, reported by fewer respondents (29.7%), also points to a pattern that appeared throughout Research Question 1. Teachers in this study were largely finding their way to IL practice on their own, through personal conviction and classroom experience rather than through formal training or institutional encouragement.

The spread of IL practice across the profession appears to depend more on individual circumstances than on any consistent or systematic pathway, which raises questions about how broadly and how equitably these approaches can reach teachers across different schools and contexts. This has particular significance for equity. Teachers in well-resourced schools with active professional networks and supportive administrators may be more likely to encounter and develop IL practice than those working in more isolated or under-resourced contexts. If IL adoption continues to depend primarily on individual initiative and circumstance, its benefits are likely to remain unevenly distributed across the profession.

Obstacles to Implementation. The obstacles teachers identified were dominated by practical and structural concerns rather than philosophical ones, a pattern that holds across both the quantitative and qualitative data. Time constraints were the most frequently cited barrier, identified by the most respondents (69.2%), followed by limited teacher training

(57.1%), limited resources (49.5%), class size (48.4%), and low student engagement (44.0%). Administrative factors were reported by fewer (16.5%) and philosophical concerns by very few (5.5%).

The prominence of time constraints as the leading obstacle reflects something deeper than individual scheduling difficulties. Participants described two related dimensions of this constraint: the pressure of concert preparation cycles and the competing demands within individual class periods. In large ensemble settings, rehearsal time was consistently structured around collective coordination and performance readiness, with IL strategies most present in the early stages of a concert cycle and most likely to give way to direct instruction as performance deadlines approached.

This pattern suggests that time constraints are not simply a matter of how individual teachers manage their schedules, but a structural feature of how ensemble music programs are organized around public performance. Beyond the concert cycle, the general rhythm of a class period itself was described as a barrier, with transitions, individual student needs, and other classroom demands consistently competing for the time that student-directed learning would otherwise require. This is not primarily a time management problem that individual teachers can solve. It is a feature of how large ensemble music programs are organized and evaluated, and addressing it meaningfully would require changes at the level of program structure and institutional expectations rather than individual practice.

Among participants teaching in Oregon and Washington, where formal adjudicated assessments are either optional or absent, several still described making conservative pedagogical choices shaped by other forms of pressure. Participant 7 described participating in regional festivals as “playing the game,” even while maintaining considerable freedom across the rest of her program. Participant 4 contrasted the mandatory assessment culture he had experienced in Florida with the relative freedom of Oregon, yet still described an internal

tension between giving students creative autonomy and ensuring they were building foundational skills. Participant 3 described a self-imposed worry that too much student autonomy might produce strong performers but weak musicians. Participant 11, who reported no institutional oversight of her program at all, described feeling inadequate when comparing herself to other teachers on social media.

Together, these accounts suggest that even when formal institutional expectations are absent, professional norms, personal standards, and community performance culture can exert similar pressure on teachers' instructional decisions. Whether these informal pressures operate differently from institutional ones, and what conditions might help teachers navigate them, are questions the current study was not designed to answer but that warrant further investigation.

Limited teacher training as the second most commonly reported obstacle, connecting directly to the awareness findings discussed under Research Question 1. Teachers who are not familiar with Green's approach are naturally less equipped to implement it deliberately or to adapt it effectively when initial attempts do not produce the expected results. The qualitative data show that even motivated and experienced teachers described years of self-directed learning to fill gaps left by their preparation programs. Participant 7's acknowledgment that her undergraduate training "didn't prepare me for anything" and her subsequent investment in summer professional development reflect a pattern in which individual teachers bear the burden of developing competencies that were not built into their initial preparation.

Limited resources were reported by close to half of respondents (49.5%), making it the third most commonly cited barrier after time constraints and limited teacher training. The survey data alone offers little insight into what specific resources teachers felt they lacked,

but the qualitative data provides concrete illustrations of how different types of resources shaped what IL practice was possible in their settings.

Physical space emerged as a consistent factor. Participant 2 described practice rooms as essential for splitting his orchestra into independent working groups, noting that without that space, student-directed learning in a large ensemble room would be considerably harder to manage. Participant 20 similarly described space as significant, contrasting the relative ease of student-led sectionals at his current school, where nine practice rooms were available, with the difficulties that arose when three ensemble levels attempted to work simultaneously in a single shared space.

Human resources emerged as an equally important factor. Participant 20 described a mariachi class of 60 students across three skill levels where two teachers in the room made it possible to direct beginners while allowing intermediate and advanced groups to work independently. Participant 2 similarly noted that having a co-teacher was what allowed him to split his orchestra and give students more individualized and self-directed time.

Equipment funding represented a third dimension of the resource barrier. Both Participant 17 and Participant 16 described building their informal music technology programs through grant funding rather than school budgets. Participant 17 secured federal grant funding to purchase the instruments, mixers, DAWs, and individual stations that made his studio program possible. While acknowledging that the total investment was substantial, he noted that the full setup cost less than a handful of traditional band instruments, observing that everything in his classroom could be purchased for the equivalent cost of a new set of timpani, a contrabassoon, and an oboe, a fraction of what starting a traditional band program would require. Participant 16 similarly received a $50,000 grant from a foundation specifically supporting music technology programs, describing it as having bought basically his entire lab. Both accounts suggest that while the financial barrier to setting up informal

learning environments is real, it may be lower than many teachers assume when compared to the infrastructure costs already accepted as standard in traditional ensemble programs. For both participants, targeted grant funding made what might otherwise have seemed financially out of reach a practical possibility. Together, these accounts point to limited resources as a multidimensional barrier that encompasses space, personnel, and equipment. It is shaped as much by institutional structures and funding opportunities as by individual teacher capacity.

Class size was reported as an obstacle by nearly half of respondents (48.4%), and the qualitative data offer further explanation. Larger classes do not just make IL harder to manage logistically; they also limit how much student choice and autonomy are realistically possible. Participant 1's observation that it is not possible to honor 60 different repertoire requests and Participant 5's practice of offering a curated list of five options for students to vote on, both illustrate how class size directly constrains the degree of student autonomy that is structurally manageable. In smaller class settings, such as those described by Participant 17 in his music studio context and Participant 2 in his advanced ensemble groups, teachers were able to offer considerably more individualized and student-directed learning experiences.

The finding that low student engagement was identified as an obstacle by nearly half of respondents (44.0%) may appear to conflict with the overwhelmingly positive perceptions of student engagement reported in Research Question 3. This apparent contradiction is resolved when the qualitative data is examined more closely. Low student engagement was most commonly described in relation to open-ended or unstructured tasks where students lacked sufficient preparation or readiness for self-direction. Participant 4's account of students who did not engage with the open-ended preamp task and waited for direct instruction, and Participant 17's description of needing a structured fallback for students who could not yet manage the autonomy being offered, both suggest that IL does not automatically produce engagement. Deliberate planning, gradual release of responsibility,

and appropriate scaffolding appear to be necessary conditions for IL to work effectively, particularly with students who are accustomed to direct instruction.

The fact that very few responses (5.5%) cited philosophical concerns as a barrier indicates that the obstacles to IL are practical, not philosophical. Teachers broadly support student-centered learning. What limits their use of IL is more often, class size, limited teacher training, and the structural demands of their teaching contexts. For professional development, this means the focus should not be on convincing teachers that IL is worthwhile. Most already believe it is. The more useful goal is giving teachers practical tools and support to use it more consistently within the realities of their classrooms.

Familiarity and Intentional Use. The association between familiarity with IL and intentional use offers one of the clearest explanations for why implementation varies so widely across the sample. The chi-square analysis (Table 12) showed that among teachers who reported being familiar with Green's approach, three-quarters (75%) reported intentional use, compared to very few (4.1%) of unfamiliar teachers. As familiarity increases, intentional use increases substantially. The qualitative data helps explain this pattern. Teachers who know Green's approach have a clearer sense of what they are doing and why. They can plan instruction with more purpose, notice when IL strategies are happening, and build on them over time. Participant 17's account of his Music Will training shaping a deliberate and sustained facilitation model, and Participant 12's doctoral research providing a theoretical grounding for his use of peer-directed learning, both reflect teachers whose practice is informed by a clear understanding of the approach they are working within.

At the same time, the large proportion of teachers who reported using selective informal learning strategies without formal knowledge of the approach (68.4%, Table 7) are already doing things that benefit their students. But without awareness of how these strategies connect to a broader approach, they may find it harder to build on them deliberately, adapt

when things do not go as planned, or recognize the fuller possibilities that a more comprehensive implementation could offer their students. Professional development that helps these teachers understand the principles behind what they already do, and build on it more deliberately, could make a meaningful difference without requiring them to start over.

The similarity in non-use rates across familiarity levels (Table 12), with roughly one-fifth among unfamiliar teachers (21.6%) and a similar proportion among somewhat familiar teachers (18.8%), indicates that awareness alone is not sufficient to drive IL adoption. For teachers who are not using IL strategies, structural factors such as program structures, class sizes, and performance expectations appear to be more significant barriers than awareness.

Confidence in IL-teaching, then, is not simply a byproduct of experience but of informed experience. It is practice guided by a clear understanding of how and why these strategies work together as a cohesive approach. For professional development designers, this points to the value of models that pair awareness of Green's approach with sustained classroom application, rather than treating conceptual introduction and hands-on practice as separate phases of teacher learning. The implementation findings discussed under Research Question 2 raise a natural follow-up question: when teachers do use IL strategies, what do they observe in their students? Research Question 3 addresses this directly, examining how teachers perceived the impact of those strategies on student engagement and musical development.

Research Question 3: Perceived Impact of IL

This section examines teachers' perceptions of the impact of IL strategies on student engagement, musical development, and broader learning outcomes. Research Question 3 examined teachers' perceptions of the impact of IL strategies on student learning and engagement. Both the survey and interview data show that teachers generally perceived positive changes in student engagement and musical development when IL strategies were

used. At the same time, the data also show that these positive perceptions were not uniform across all teachers or all settings, and that teacher confidence and teaching context both played a role in shaping what teachers observed.

Teacher Confidence. With nearly half of respondents (42.5%) rating their confidence at the midpoint of a five-point scale and only a small minority (10.3%) reporting very high confidence, most teachers using selective informal learning strategies appear to be still developing rather than settled in their practice. Interview accounts add texture here: Participant 7, who described her approach as "a lot of trial and error" and Participant 5, who gradually shifted guitar instruction away from standard notation over several years, both reflect teachers who are still working things out through classroom experience. In contrast, Participant 17 and Participant 8, who had developed their practice through Music Will training and action research, respectively, described teaching with more confidence and a clearer sense of purpose. Their accounts suggest that confidence in IL tends to grow when teachers have both a clear sense of what Green's approach involves and sustained experience putting it into practice.

This is supported by the ANOVA finding that teachers who intentionally used IL reported significantly higher confidence than those using similar strategies without formal knowledge (mean scores of 4.00 and 3.19, respectively). While causality cannot be determined from these data, the association suggests that greater awareness of Green's approach may contribute to how confident a teacher feels in their practice. Building that confidence takes time and cannot happen through brief or one-off exposure to Green's approach. Rather, it appears to develop when teachers have ongoing opportunities to learn about Green's approach and practice applying it in their classrooms.

Perceived Student Engagement. Teachers' perceptions of student engagement when using IL strategies were positive across the sample. The large majority of respondents (74.4%) rated engagement changes at levels 6, 7, or 8 on a 10-point scale, and only one respondent indicated a decrease in engagement. This pattern, reinforced by 18 of 20 interview participants describing observable increases in student engagement, is one of the most consistent findings across the study.

The qualitative data grounds these perceptions in specific and observable terms rather than leaving them as general impressions. Participant 7's description of 60 students all staying on task during a student-directed rehearsal, Participant 13's observation that engagement visibly increased when he stepped away from the podium, and Participant 5's comparison of how much more his guitar students practiced compared to his band students all point to concrete behavioral changes that teachers could observe directly. One of the clearer signs of genuine engagement, described across several accounts, was students choosing to practice outside of class time without being required to do so. Participant 13's description of students working on pieces during lunch because they genuinely liked them, and Participant 9's account of students arriving before school to share music they had worked out at home, both reflect a quality of engagement that goes beyond compliance and suggests genuine intrinsic motivation. This kind of voluntary musical engagement is consistent with what Green (2008) described as a central goal of IL, fostering students' desire to engage with music independently and on their own terms.

One participant also described a concrete institutional measure of sustained engagement over time. Participant 8's guitar program growing from one section of 40 students to 250 students, reflects a level of student investment that extends well beyond individual class sessions and points to IL strategies having a meaningful effect on students' decisions to continue engaging with music in school.

Students who were lower-performing in traditional ensemble contexts appeared to respond particularly well to IL strategies. Participant 1's observation that students who typically struggled in traditional settings often thrived when the pressure of technical evaluation was reduced suggests that IL may have relevance beyond general engagement and may help create conditions where a broader range of students can experience success in school music. This connects to broader conversations in the literature about the need for more inclusive approaches to music education that do not privilege the skills and dispositions that traditional ensemble settings tend to reward (Allsup & Westerlund, 2012).

The fact that very few teachers reported decreased student engagement in the quantitative data should be interpreted with some caution. It is possible that teachers who tried IL and found it did not work well for their students stopped using it over time, and would therefore not be represented in this data. The qualitative data also includes accounts where IL strategies did not produce the positive engagement teachers had hoped for. These less positive experiences are discussed further in the section on varied outcomes below.

Perceived Student Musical Development. Teachers' perceptions of student musical development followed a similar pattern to their engagement ratings, though the scores were generally somewhat lower. The largest groups of respondents rated development changes at levels 6 and 7 (27.9% and 25.6% respectively), and fewer than one-fifth (16.3%) reported no noticeable change. The slightly lower ratings for development compared to engagement may be because changes in student engagement are often visible relatively quickly, while growth in musical independence and creative ability tends to take longer to develop and may not become apparent until IL has been used more consistently over time.

Interview responses support this interpretation, with participants consistently pointing to longer-term changes rather than short-term technical gains when describing musical development. Participant 17 described students performing better after he gradually released

more control over a five-year period. Participant 4's students produced original compositions that went beyond what had been formally taught in class. These accounts suggest that IL's impact on musical development tends to become visible over time, and is more likely to be seen in settings where it is used regularly and consistently rather than occasionally.

The minority of respondents (16.3%) who reported no noticeable change in musical development is a finding worth acknowledging. The qualitative data offers some context here. Participant 1's direct statement that IL strategies had "not much of an impact" in his traditional ensemble settings illustrates how teachers using IL selectively within rehearsal-dominated contexts may not observe significant developmental gains, at least not in the areas of musicianship that ensemble directors tend to prioritize. What this pattern does suggest is that IL's contribution to musical development may be systematically underestimated in studies that rely on short-term observation or on measures of development that reflect ensemble-based musicianship rather than the broader musical independence and creativity that IL prioritizes. Future research using longer observation windows and more expansive definitions of musical growth would be better positioned to capture what IL actually supports. Different teachers working in different contexts are likely defining musical development differently, and these differing definitions make cross-context comparisons difficult to interpret with confidence.

Areas of Student Learning Most Supported by IL. When asked to identify the areas of student learning most supported by IL strategies, teachers most frequently selected peer collaboration and social learning, cited by most respondents (60.9%), followed by musical independence (57.5%), student motivation and agency (51.7%), creativity and self-expression (48.3%), aural skills (42.5%), and cultural relevance and inclusivity, cited by the fewest (33.3%).

The top three outcomes, peer collaboration, musical independence, and student motivation and agency, form a connected cluster that points to IL's particular strength in supporting students as self-directed and socially engaged musical learners. These outcomes align closely with the principles that Green (2008) identified as central to IL, including the development of student autonomy, the value of peer learning, and the cultivation of intrinsic motivation through engagement with personally meaningful music. The qualitative data provides illustration of each of these outcomes. Participant 14's description of students developing greater investment in music when they felt a sense of ownership over it, Participant 12's observation that students articulated feeling seen and that their voices mattered, and Participant 8's account of students taking on leadership roles that extended beyond what the teacher had planned all reflect the kinds of student growth that this cluster of outcomes describes.

Aural skills ranking fifth in this list is notable, given that learning by ear is a core principle of Green's (2008) approach. The qualitative data make clear that aural learning is practiced in jazz, mariachi, and guitar contexts, but that it remains supplementary in most ensemble settings. The lower ranking likely reflects both the large proportion of ensemble teachers in the sample and the practical difficulty of using ear-based learning in rehearsals that depend heavily on scores and notation.

Cultural relevance and inclusivity were the least frequently selected outcomes, reported by a lower proportion of respondents (33.3%). The qualitative data offers some context. Participant 18 described IL as a way of reaching students where they are, rather than imposing Western standards, and Participant 15 spoke about how music is passed on through family and community. Both accounts illustrate how IL can create space for students' cultural identities and community musical practices in ways that ensemble-dominated settings do not easily allow. The lower quantitative ranking may therefore reflect the composition of the

sample rather than the actual absence of cultural relevance and inclusivity in IL practice. This distinction matters. These outcomes may be among the most meaningful contributions IL can make to student learning, but they are hardest to observe in classrooms dominated by traditional ensemble instruction. As long as band and choir define both secondary music programs and the research that examines them, students whose musical backgrounds and cultural identities fall outside the Western ensemble tradition may remain underserved and underrepresented in what the data shows.

Confidence, Engagement, and Development. The ANOVA and correlation analyses conducted for Research Question 3 together reveal a connected pattern across teacher confidence, perceived student engagement, and perceived student musical development. Teachers who intentionally used IL strategies reported significantly higher confidence than those using similar strategies without formal knowledge. Teachers who intentionally used IL also reported significantly higher perceived student engagement and significantly higher perceived student development. Across the full sample, perceived engagement and perceived development were strongly correlated with each other ($r = .67$).

While causality cannot be established from these data, these findings suggest that the benefits of IL implementation depend not simply on which strategies are used, but on how deliberately and knowledgeably they are applied. The difference between intentional and similar users in terms of confidence, engagement perceptions, and development perceptions points to the value of formal knowledge of Green's approach. Teachers who understand what they are doing and why appear to implement IL more effectively and observe more positive outcomes as a result.

The moderate correlation between confidence and perceived engagement ($r = .49$) raises an interpretive question that the current data cannot fully resolve. It is not clear from this study whether higher confidence leads teachers to implement IL more effectively, which

then produces better engagement outcomes, or whether observing positive student engagement builds teacher confidence over time and motivates more sustained IL practice. The qualitative data suggest that both directions are likely operating at the same time. Participant 17's account of student performance improving as he released more control, which in turn reinforced his commitment to the approach, and Participant 13's observation that stepping away from the podium produced immediate engagement gains that encouraged him to continue doing so, both reflect a pattern in which confidence and positive student response reinforce each other over time.

The weaker correlation between confidence and perceived development ($r = .26$) is consistent with the broader picture across Research Question 3. Musical development is a longer-term and more complex outcome than engagement, and teacher confidence in IL may be a more indirect factor in shaping it. The conditions necessary for IL to produce observable developmental gains, including sustained and comprehensive implementation, sufficient time for student-directed learning to take root, and teaching contexts that allow for the full range of IL principles to operate together, go beyond what teacher confidence alone can provide. This does not diminish the importance of confidence as a factor. It does suggest that confidence is one component of a broader set of conditions that need to be in place for IL to realize its full potential in terms of student musical growth.

Taken together, the findings across all three research questions point to a consistent set of practical considerations for music education at multiple levels. The following sections draw out the implications of these findings for teacher preparation, professional development, and school-level program design.

Implications for Teacher Preparation

This section translates the study's findings into concrete recommendations for teacher preparation programs, professional development, and school-level program design. Perhaps

the clearest implication of this study concerns the role of teacher preparation programs in introducing IL to preservice music educators. The graduation cohort finding, showing that teachers who trained after Green's (2008) work was published were more likely to report familiarity with Green's approach, suggests that the approach is beginning to enter preparation programs, but the effect is modest and the coverage remains inconsistent. Participant 3's account of discussing IL for approximately one day during his preparation program illustrates how limited that exposure can be, and points to the gap between the approach's growing presence in the research literature and its incorporation into preservice training. At the same time, participants in this study who reflected on the question of institutional responsibility offered a more nuanced picture than a simple call for more IL content. They recognized that preparation programs carry competing demands and limited time, and several expressed the view that IL cannot be effectively transmitted through lecture or theoretical introduction alone. Participant 12's warning that treating IL as a single-day theoretical topic alongside other approaches is "dangerous," and Participant 18's description of being told principles without being given tools to act on them, both point toward the same conclusion: if IL is to be included in teacher preparation, it needs to be taught through experience and practice rather than as a named approach among many others in a survey course.

These perspectives suggest that the goal for teacher preparation programs should not simply be to add Green's approach to existing course content, but to create conditions in which preservice teachers can encounter, practice, and reflect on IL strategies in ways that prepare them for the varied and often ensemble-dominated settings they will enter. This might include practicum experiences in non-traditional music settings, collaborative projects that mirror IL's peer-directed learning structures, or coursework that explicitly connects IL principles to the kinds of student-centered practices that many teachers already value. The

finding that familiarity with Green's approach is a strong predictor of intentional use underscores the importance of sustained and meaningful engagement with the approach during preparation, rather than brief or surface-level introduction.

Implications for Professional Development

For the large proportion of teachers who are already in the profession, professional development represents the primary available pathway for building awareness of Green's approach and practice. The current study found that more than two-thirds of teachers with some familiarity with Green's approach (69.6%) identified professional settings, including conferences, practitioner networks, and professional development activities, as the source of that knowledge. Organizations such as OMEA, WMEA, CMEA, and practitioner communities like Music Will are currently doing more to spread awareness of the approach than formal preparation programs, and this role deserves recognition and support.

The findings also suggest what kind of professional development is likely to work best. In this study, teachers adopted IL primarily because of their own beliefs and what they observed in their students, not because of formal training or institutional pressure. This means professional development that connects IL to what teachers already believe and already see in their classrooms is likely to be more effective than presenting it as a completely new approach. This is especially relevant for the more than two-thirds of teachers (68.4%) who are already using selective informal learning strategies without knowing it. For these teachers, the goal of professional development should not be to introduce something new, but to help them recognize what they are already doing, understand the principles behind it, and apply it more deliberately and intentionally.

The finding that intentional IL users report higher confidence and more positive student outcomes than selective users also points to how professional development should be structured. Moving teachers from experience-based to more intentional IL practice appears to

make a real difference in what they observe in their students. Professional development that supports this shift through sustained engagement with IL principles, opportunities to apply them in the classroom, and structured reflection is likely to be more effective than one-time workshops that introduce IL without supporting its continued growth in practice.

Implications for School-Level Practice and Program Design

At the school and program level, the findings point to the importance of structural conditions in shaping what IL implementation is possible. Time constraints, class size, and the demands of concert-driven ensemble rehearsal were the most commonly reported obstacles to IL use, and these are not problems that individual teachers can solve on their own. School administrators and curriculum designers who wish to support more student-centered and inclusive music education need to understand that the barriers to IL adoption are primarily structural rather than philosophical, and that addressing them requires attention to program structure, scheduling, and performance expectations rather than simply encouraging individual teachers to try new approaches.

The qualitative data also points to the importance of expanding the range of music course offerings available to secondary students. The teachers who described the most sustained and comprehensive IL practice were almost exclusively those working in guitar, keyboard, music technology, music studio, and small advanced group settings. These contexts are structurally more hospitable to the kinds of student agency, peer collaboration, aural learning, and exploratory practice that IL involves. As long as band and choir remain the dominant and often only music offerings in secondary schools, IL will continue to operate at the margins of those programs rather than as a central pedagogical approach. Expanding course offerings to include guitar, keyboard, music technology, and general music classes would not only serve a broader range of student interests and learning needs but would also create more structural space for IL to develop and flourish.

Implications for the Field of Music Education

The findings contribute to ongoing conversations about the future direction of secondary music education in the U.S. The near-absence of philosophical resistance to IL among survey respondents, with only a very small share (5.5%) citing philosophical concerns as a barrier, suggests that the values underlying IL, including student voice, peer learning, and connection to students' musical lives outside school, are broadly shared among secondary music teachers. The challenge is not to convince teachers that these values matter but to create the conditions in which they can act on them more consistently and more effectively.

The finding that a large proportion of teachers are already using selective informal learning strategies without formal knowledge of the approach also raises a broader question for the field. If the practices associated with IL are already present in many classrooms in some form, the question becomes how the field can support teachers in developing those practices more intentionally, more comprehensively, and more equitably across different school contexts. This is as much a question about professional infrastructure, preparation programs, professional organizations, and school structures, as it is about individual teacher knowledge or motivation.

Finally, the study highlights the need for music education as a field to continue examining and expanding what secondary music programs look like and who they serve. The dominance of large ensemble formats in U.S. secondary schools has deep historical roots, and this study does not suggest that those programs lack value. What it does suggest is that the structural dominance of ensemble-based music education shapes what pedagogical approaches are possible, what students are served, and what kinds of musical learning are valued. Broadening that landscape, through more diverse course offerings, more flexible program structures, and greater attention to the musical lives and interests of all students,

would create conditions in which approaches like IL could contribute more fully to the goals of inclusive, student-centered, and musically meaningful secondary education.

Limitations

This study offers a descriptive account of how secondary school music teachers on the U.S. West Coast understand, implement, and perceive the impact of IL strategies. As with any study, a number of limitations should be considered when interpreting the findings.

The geographic scope of the study is one of its primary limitations. Participants were drawn from California, Oregon, and Washington, and the findings reflect the educational contexts, professional cultures, and music program structures of these three states. While the West Coast provides a regionally diverse sample, the findings may not be representative of secondary music educators in other regions of the U.S., where different curricular traditions, institutional structures, and demographic contexts may shape teachers' engagement with IL in different ways.

A second limitation concerns the composition of the sample. The majority of survey respondents taught instrumental or choral ensembles, reflecting the broader reality of secondary music education in the U.S. where band and choir programs are by far the most common offerings. As discussed throughout the analysis of findings, this demographic reality shapes many of the study's quantitative results, particularly the reported class settings and strategy types associated with IL use. The relatively small number of respondents teaching guitar, keyboard, music technology, and general music means that the findings may underrepresent contexts where IL is practiced more comprehensively and consistently. Readers should interpret the findings with this sampling context in mind, recognizing that the picture of IL implementation presented here reflects the profession as it is currently structured rather than the full range of contexts in which IL strategies may operate.

A third limitation is that the study relied entirely on self-reported data. Participants described their own familiarity with Green's approach, practices, and perceptions of student outcomes, which means responses may reflect how teachers wish to be seen rather than what actually happens in their classrooms. Without observational data, there is no way to verify whether the strategies reported were implemented as described or produced the outcomes teachers perceived.

A fourth limitation concerns the interview sample. The 20 participants who completed semi-structured interviews were drawn from survey respondents who voluntarily provided their contact information, indicating willingness to be interviewed. The act of volunteering for a follow-up interview may itself reflect a degree of openness toward or engagement with IL strategies. Teachers who were less engaged with or less favorable toward IL strategies may have been less inclined to offer their time for further conversation. As a result, the qualitative data may represent a somewhat more IL-engaged subset of the broader survey sample, and findings from the interview strand should be interpreted with this potential self-selection bias in mind.

A fifth limitation relates to the measurement of student outcomes. The study relied on teachers' perceptions of changes in student engagement and musical development when IL strategies were used. These perceptions provide valuable practitioner perspectives, but they are not equivalent to measured student outcomes. Teachers' assessments of engagement and development are shaped by their own instructional contexts, their definitions of what those outcomes look like, and their prior expectations.

A sixth limitation concerns the survey instrument itself. The survey did not include a dedicated item for facilitative teaching, which is one of the core principles of Green's (2008) approach. Instead, the closest item was framed around technology use, which only partially captures what facilitative teaching involves. This gap likely explains why facilitative teaching

ranked lower in the quantitative data despite being documented across 19 of 20 interview participants.

A seventh limitation concerns the alignment between survey language and the conceptual distinctions developed in this study. The survey asked respondents whether they used strategies similar to those associated with Green's approach without formal knowledge of it, a phrasing that, while accessible to participants unfamiliar with the approach, does not precisely capture the distinction between using individual informal strategies selectively and intuitively versus implementing them coherently and with awareness of Green's work. As a result, the proportion of respondents categorized as using similar strategies without formal knowledge (68.4%) should be interpreted with caution, as some respondents may have understood this category differently than the study intended. Future survey instruments might more precisely operationalize this distinction to allow for cleaner categorization of how teachers engage with informal learning strategies in practice.

Finally, the study's cross-sectional design means that it captures a snapshot of teachers' awareness, practices, and perceptions at a single point in time. It does not track how these change as teachers develop professionally, gain experience with IL, or participate in professional development.

These limitations reflect the inherent constraints of a regional, self-report study conducted within a single professional context. They do not diminish the value of the findings, which offer the most systematic account to date of how IL is understood and practiced among secondary music teachers on the U.S. West Coast, but they do point to important directions for how this work can be extended and strengthened.

Recommendations for Future Research

Several directions for future research emerge from these findings that could deepen understanding of IL in U.S. secondary music education and address the limitations identified

above. First, a national replication of this study with a broader and more geographically diverse sample would allow for more generalizable conclusions about the state of IL awareness and implementation across U.S. secondary music education. The patterns identified here, including low overall familiarity with Green's approach, the dominance of ensemble contexts, and the reliance on professional networks as the primary pathway to IL knowledge, may look different in other regions where music education structures, professional cultures, and institutional priorities vary. A national survey using a similar design would allow for meaningful comparisons across regions and provide a broader picture of where IL stands in U.S. secondary music education as a whole.

Second, future research should include observational studies that move beyond self-report data to examine how IL strategies are actually implemented in secondary music classrooms. Classroom observation, combined with teacher interviews and student feedback, would provide a more complete and externally validated account of IL implementation and its effects. Such studies would be particularly valuable in large ensemble settings, where the current data suggests IL operates selectively and situationally rather than as a comprehensive approach, and where the nature and depth of that selective use remains difficult to assess through survey data alone.

Third, future research should examine student outcomes through direct measurement rather than teacher perception. Studies using direct assessments of student engagement, musical independence, creative development, and long-term participation in music would provide a stronger empirical basis for evaluating IL's impact and would help clarify which dimensions of student learning are most consistently supported by IL strategies, and under what conditions.

Fourth, more research is needed on classrooms where IL is implemented fully and intentionally, rather than partially or selectively. What is still unclear is what complete IL

practice actually looks like in secondary music settings in the U.S., how it develops over time, and what its long-term effects on students are. Longitudinal studies that track students across multiple years of IL exposure, looking at engagement, musical growth, and personal development, would help answer these questions and give teachers and teacher educators concrete examples of what comprehensive IL implementation can look like in practice.

Fifth, future research should examine the role of technology and other facilitative tools in IL implementation more directly. While the current study found that technology integration was the least frequently reported IL strategy in the quantitative data (44.0%), qualitative accounts from several participants suggested that technology plays a broader enabling role than that figure reflects. Participants described digital audio workstations, individual practice stations, and music production software as infrastructure that made student-directed and peer-collaborative learning structurally possible in ways that traditional ensemble settings do not easily allow. However, these accounts were limited to participants already teaching in music technology and modern band contexts. Future research could examine more systematically how different types of classroom technology create conditions for IL practice, and whether access to such tools helps lower structural barriers in contexts where time pressure, class size, and ensemble demands would otherwise limit its reach.

Sixth, as noted in the limitations, the survey instrument did not include a dedicated item for facilitative teaching. Future survey instruments examining IL implementation should address this gap directly, with a carefully designed item or set of items that captures the full range of ways teachers reposition themselves away from direct instruction. This would allow future studies to measure facilitative teaching more accurately and compare it meaningfully across contexts.

Seventh, future research should look directly at teacher educators and music teacher preparation programs. This study captured what teachers remembered about their own

training and what they believed preservice programs should include. What is still unknown is how teacher educators themselves view IL, what challenges they face in incorporating it into their programs, and which approaches to IL preparation have the most lasting impact on how teachers actually teach. Studies examining preservice IL education across different institutions would provide practical, evidence-based guidance for improving music teacher preparation.

Finally, longitudinal research tracking teachers through IL training and into their classroom practice would help clarify how training translates into teaching over time. This study found that brief exposure to IL is not enough to produce consistent and intentional implementation, and that confidence grows through a combination of knowledge and hands-on experience. Longitudinal studies would allow researchers to examine how knowledge, confidence, and practice develop together across a teaching career, and which professional development models best support that growth.

Conclusion

This study examined how secondary school music teachers on the U.S. West Coast understand, implement, and perceive the impact of informal learning strategies in their classrooms, drawing on survey data from 117 teachers across California, Oregon, and Washington and semi-structured interviews with 20 participants. Organized around three research questions concerning teachers' awareness of Green's approach, how they implement informal learning strategies and what shapes those decisions, and how they perceive the impact on student learning and engagement, the study offers the most systematic account to date of how secondary music teachers on the West Coast encounter and enact these principles, and documents both the gap between teachers' intuitive practice and their awareness of Green's work, and the structural conditions that shape what implementation looks like in U.S. secondary music contexts.

The philosophical foundations of this field have long pointed toward the kind of education this study examines. Reimer (1989) argued that music education should cultivate students' capacity for aesthetic experience, their ability to perceive, respond to, and be transformed by music. Elliott (1995) pushed further, insisting that musical meaning grows through active participation, collaborative making, and culturally situated doing rather than passive reception. Jorgensen (2003) extended both, calling for music education that actively confronts structural inequalities, centers student agency, and positions teachers as reflective practitioners who continuously examine whose musical traditions they privilege and whose they neglect. Taken together, these three visions describe an education in which students choose, make, listen, collaborate, and bring their own musical lives into the classroom, which is precisely what Green's approach, at its most fully realized, asks teachers to make possible.

The findings across all three research questions point in a similar direction. Green's approach is not widely known among secondary music teachers in this region, and most teachers who have encountered IL strategies have done so through professional networks, self-directed learning, or classroom experience rather than through formal preparation. At the same time, a large proportion of teachers are already using selective informal learning strategies without having formally studied the approach. Student agency and peer collaboration are present in many classrooms, and teachers broadly support student-centered approaches.

The barriers to deeper and more consistent IL use are not primarily about disagreement with its values, they are more often practical and structural, including the time demands of concert preparation, large class sizes, and limited exposure to IL during teacher training. This matters because it shifts where the responsibility for change lies, away from individual teachers and toward the institutions, programs, and systems that shape the conditions in which they work. Many secondary music teachers on the U.S. West Coast are

already engaging with informal learning strategies intuitively, but without awareness of Green's approach to ground and connect those practices, implementation remains partial, uneven, and dependent more on individual circumstance than on any systematic professional pathway.

The study also found that awareness of Green's approach was associated with higher confidence in implementation and more positive perceptions of student outcomes. This does not suggest that experience-based practice is without value; it does suggest that helping teachers develop a better understanding of the principles behind what they already do could support more consistent and effective IL practice across the profession.

The structure of secondary music education in the U.S. also shapes what is possible for Green's approach in practice. The landscape remains ensemble-dominated, while the non-ensemble settings where teachers described the most comprehensive and consistent implementation remain the least common offerings in secondary schools. Expanding course offerings to include general music, modern ensemble, and music production classes would not only serve a broader range of students but would also create more room for the kinds of student-directed, creative, and aural learning that Green's approach supports, while opening the profession to teachers whose preparation and interests extend beyond the traditional large ensemble model. Without that expansion, the students who stand to benefit most from informal learning's emphasis on cultural relevance, creative autonomy, and diverse musical identities are also those least likely to encounter it.

The role that professional networks and practitioner communities play in spreading IL awareness. Because preparation programs have not consistently addressed IL, organizations such as OMEA, WMEA, CMEA, and Music Will have become important pathways through which teachers encounter IL strategies and practices. This is a valuable contribution, though it currently depends more on individual initiative and access than on any consistent or shared

professional pathway. Teachers who happen to attend the right conference or know the right colleague are more likely to encounter IL than those who do not, a pattern that reinforces existing inequities in professional development access and raises questions about how the field can make these pathways more broadly and consistently available.

Jorgensen's call for reflective practitioners is not an abstract ideal; it describes what many of the teachers in this study are already doing. The will to make that shift appears to already exist among the teachers this study sought to understand. What they need are not simply better intentions but better conditions. The question is no longer whether Green's approach belongs in U.S. secondary music education. It is how quickly and how equitably the field can build those conditions, in preparation programs, in professional development, and in school structures, so that the vision Reimer, Elliott, and Jorgensen articulated, and that Green's approach makes practically possible, can finally take root.

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APPENDIX A: SURVEY QUESTIONS

Hello fellow educators,

Thank you for participating. This survey examines how secondary school music teachers use informal learning (IL) strategies as described by Lucy Green, which center the idea on student-directed learning. A brief definition will appear before related questions.

Your responses are anonymous and confidential. The survey takes about 5–10 minutes. Continuing indicates your consent to participate.

Consent

Q1 Do you consent to participate in this anonymous survey?

1. Yes
2. No

Section 1: Participant Background and teaching profile

Q2 What is your current role? (select all that apply)

1. Middle school music teacher
2. High school music teacher
3. other (please specify)

Q3 What types of music/music-related classes do you currently teach? (Select all that apply)

1. Choral ensemble
2. Instrumental
3. General Music
4. Music tech/music production
5. Guitar
6. Keyboard
7. Other (please specify)

Q4 How many years have you been teaching music? - Year(s)

Q5 In which state do you currently teach?

1. California
2. Oregon
3. Washington
4. Others (please specify)

Q6 Have you taught in any other location besides your current position? (Select all that apply)

1. No, I've only taught in my current state
2. Yes, in other U.S. state(s)
3. Yes, outside the United States

Q6-1 Please list the state(s) where you have previously taught.

Q6-2 Please list the country/countries where you have previously taught.

Section 2: School profile

Q7 Approximately what percentage of your students qualify for free or reduced-price lunch?

1. 0-25%
2. 26-50%
3. 51-75%
4. 76-100%
5. Not sure

Q8 Is your school currently designated as a Title I school under federal funding guidelines?

1. Yes
2. No
3. Not sure

Q9 What is the typical class size of the music classes you teach?

1. Fewer than 10 students
2. 10-19 students
3. 20-29 students
4. 30-39 students
5. 40 or more students

Section 3: Teacher Education and Preparation

Q10 What is the highest degree you have earned?

1. Bachelor's degree
2. Master's degree
3. Doctoral degree (Ph.D., D.M.A., Ed.D., or equivalent)
4. Other (please specify)

Q11 In what year did you complete your highest degree?

1. Before 2000
2. 2000-2009
3. 2010-2019
4. 2020-present

Q12 Do you currently hold a state-issued teaching license?

1. Yes
2. No
3. No, but I hold other teaching license from abroad (please explain).

Q13 What was the primary focus of your teacher training? (Choose the option that best matches your program.)

1. Choral
2. Instrumental (Band/Orchestra)
3. General music
4. Multiple areas (please specify)
5. Other (please specify)

Section 4: Your Familiarity With IL

Definition: For the purposes of this survey, informal learning (IL) refers to the naturally occurring practices documented by music education researcher Lucy Green (2002, 2008), who observed how popular musicians learn outside formal settings. These practices include students choosing their own repertoire, learning music by ear from recordings, collaborating with peers without direct teacher instruction, and working in self-directed ways while the teacher acts as a facilitator rather than a director. You do not need to be familiar with Green's work or informal music learning to participate. This survey is interested in your own teaching practices and experiences, whatever form they take.

Q14 Before beginning this survey, how familiar were you with Lucy Green's informal learning (IL) approach?

1. Familiar
2. Somewhat familiar
3. Not familiar

Q15 Where have you learned about Green or other IL-related practices? (Select all that apply.)

1. Institutional coursework
2. Student teaching/practicum
3. District or in-service professional development
4. Conferences or workshops
5. Colleagues or mentors
6. Online resources (e.g., blogs, videos, webinars)
7. Self-study (books, articles, research)
8. Other (please specify)

Q16 Which of the following strategies did you encounter during your learning? (Select all that apply.)

1. Learning music by ear (through expert's performances or by recording)
2. Peer-directed or collaborative group learning
3. Student-chosen repertoire or projects
4. Trial-and error or self-teaching
5. Teacher as facilitator (minimal modelling)
6. Creative musical tasks (improvisation, arranging, songwriting)
7. Other (please specify)

Q17 If possible, please briefly describe one meaningful learning experience that shaped your understanding of Green or IL-related practices.

Section 5: Implementation of IL

Q18 Using the definition above, do you use any of the specific informal learning strategies described by Lucy Green (such as learning by ear from recordings, peer-directed learning, student-selected repertoire, self-teaching, or trial-and-error exploration)?

1. Yes, I intentionally use strategies consistent with Lucy Green's approach
2. Yes, I use similar strategies even though I have not formally studied Green's approach
3. No, I do not use these strategies

Q19 In which class types do you use IL strategies? (Select all that apply)

1. Choral ensemble
2. Instrumental ensemble (band, orchestra, etc.)
3. General music
4. Music appreciation
5. Music technology/production
6. Other (please specify)

Q20 Which specific IL strategies do you use? (Select all that apply)

1. Learning by ear
2. Peer collaboration
3. Student-led
4. Group improvisation or composition (e.g. arranging, repertoire selection)
5. Technology integration (e.g., DAWs, apps, online tools)
6. Other (please specify)

Q21 Which three factors most influence your decision to implement IL strategies?

(Please select up to three options.)

1. Alignment with student interests
2. Belief in student-centered learning
3. Personal teaching philosophy
4. Encouragement from colleagues or administrators
5. Training or exposure through professional development
6. Alignment with standards or framework
7. Observable student engagement or growth
8. Other (please specify)

Q22 Which three factors present the biggest obstacles to implementing IL strategies in your teaching? (Please select up to three options.)

1. Lack of time in the curriculum
2. Limited resources or materials for IL

3. Limited knowledge or training in IL
4. Lack of administrative or institutional support
5. Large class sizes or challenging student-teacher ratios
6. Student resistance or low engagement
7. Personal disagreement with the IL approach or strategies
8. Other (please specify)

Q23 How confident are you in implementing informal learning strategies? Please rate your confidence on a scale from 1 to 5, where 1 = very unconfident and 5 = very confident.

1. Very confident
2. Somewhat confident
3. Neutral
4. Somewhat unconfident
5. Very unconfident

Section 6: Perceived Student Outcomes

Q24 How has using informal learning strategies affected student engagement in your classes? Please rate on a scale from 1 to 10, where 1 = greatly decreased, 5 = no noticeable change, and 10 = greatly increased. Slide to the number that best represents your perception.

Q25 How has using informal learning strategies influenced student musical development in your classes? Please rate on a scale from 1 to 10, where 1 = greatly decreased, 5 = no noticeable change, and 10 = greatly increased. Slide to the number that best represents your perception.

Q26 Select up to three areas of student learning that you believe are most supported by IL approaches:

1. Creativity and self-expression
2. Aural skills and listening
3. Musical independence
4. Peer collaboration and social learning
5. Student motivation and agency
6. Cultural relevance and inclusivity
7. Other (please specify)

APPENDIX B: INTERVIEW GUIDE

Opening
Could you briefly describe your current teaching context and the classes you teach that are related to music?

Q1. When you think about the term informal learning, what does it mean to you, if anything? Based on your own experience, how do you think about these ideas in your teaching?

Prompt:
Thanks for sharing that. To give a bit of context for the next questions, I want to briefly clarify how I'm using informal learning in this study. When I mention 'informal music learning strategies,' I'm using it broadly to refer to approaches that may include:

1. Learning by ear (with recordings as primary models)
2. Student choice of repertoire (often music they already value)
3. Peer-directed learning (students learn from and with each other)
4. Self-directed pacing and sequencing
5. Integration of listening, performing, improvising, and composing
6. Delayed or limited use of notation (notation may emerge later, if at all)
7. Teacher as facilitator rather than director

There's no right or wrong understanding here. I'm interested in how these ideas show up, or don't show up, in your own teaching.

Q2. Decision in Practice (6-8 minutes)

Q2-1. Can you describe one or more moments when and how you chose to use these strategies in your teaching?

Probes
What influenced that decision?
Was this a typical situation or an exception?
What was happening in the class at the time?
How did students respond in that moment?

Q2-2. Were there moments when you chose to avoid these strategies? Why?
Probes
What concerns or constraints were you thinking about?
Did anything make it feel less appropriate in that context?

Perceived Impact (5 minutes)
Q3. How, if at all, do these approaches affect student engagement or musical learning?
Probes
Are there specific skills or behaviors you notice changing?

Do some students respond differently than others?
Are there areas where you feel these approaches work particularly well?

Limits and Tensions (5 minutes)
Q4. Are there areas of music learning or classroom goals where you feel these strategies are less effective or harder to justify?
Probes
Are there musical skills you feel require a different approach?
Do assessment, performance expectations, or time play a role?

Open Reflection / Closure (3 minutes)
Q5. Is there anything about your experience with these approaches that you haven't shared yet but feel is important?

APPENDIX C: IRB APPROVAL LETTER

UNIVERSITY OF OREGON | Research Compliance Services

EXEMPT DETERMINATION

June 17, 2025

Grace Kuo
pkuo@uoregon.edu

Dear Grace Kuo:

The following research was reviewed and determined to qualify for exemption.

Type of Review:	Initial Study
Study Title:	Exploring the Integration of Informal Music Learning in Secondary School Music Classrooms: Practices, Influences, and Teacher Preparation on the U.S. West
Principal Investigator:	Grace Kuo
Parent Study ID:	STUDY00001883
Transaction ID:	STUDY00001883
Funding Source:	None
IND, IDE, or HDE:	None
Documents Reviewed:	• Exempt Determination form, Category: IRB Protocol; • Research Plan, Category: IRB Protocol; • Survey, Category: Consent Form;
Approval Date:	6/3/2025
Effective Date:	6/17/2025
Expiration Date:	6/30/2026

For this research, the following determinations have been made:

- This study has been reviewed under **the 2018 Common Rule** and determined to qualify for exemption under **Title 45 CFR 46.104(d)(2)(i) Tests, surveys, interviews, or observation (non-identifiable).**

The research is approved to be conducted as described in the approved protocol using the approved materials. Approved materials can be accessed in the protocol workspace in the IRB module of the research administration portal (RAP).

All changes to this research must be assessed to ensure the study continues to qualify for exemption. Research Compliance Services has developed specific guidance to help you understand when a modification is required before a change can be implemented. It is your responsibility to ensure modifications are submitted when required and approval secured before implementing changes to the protocol

A regulatory continuing Review is not required for this study. **An institutional approval period has been established based on your application materials.** If you anticipate the research will continue beyond the approval period, you must submit a **Continuing**

Review Application at least 45 days prior to the expiration date. A closure report must be submitted once human subject research activities are complete. Failure to maintain current approval or properly close the protocol constitutes non-compliance.

With the submission of your request, you agreed to uphold the responsibilities of the Principal Investigator and have agreed to follow the requirements listed in the Investigator Manual (HRP-103), which can be found by navigating to the IRB Library within the IRB module of the RAP.

If you have any questions regarding your protocol or the review process, please contact Research Compliance Services at ResearchCompliance@uoregon.edu or (541)346-2510. The University of Oregon and Research Compliance Services appreciate your commitment to the ethical and responsible conduct of research with human subjects.

Please consider completing our user satisfaction survey. It only takes a few minutes, and we would like to hear about your experience working with our office!

Sincerely,

Lizzy Utterback
Research Compliance Services
on behalf of the Committee for Protection of Human Subjects

APPENDIX D: CODING MANUAL FOR INTERCODER RELIABILITY

Study Focus

This study examines how secondary school music teachers understand, implement, and perceive informal learning (IL) in classroom settings.

Research Questions

- **RQ1 (Awareness):**
  To what extent are teachers aware of Green's approach, and how did they acquire this knowledge?
- **RQ2 (Implementation):**
  How do teachers implement IL strategies, and what factors influence their decisions?
- **RQ3 (Perceived Impact):**
  How do teachers perceive the impact of IL on student learning and engagement?

Definition of Informal Learning

Informal learning (IL) refers to the naturally occurring practices documented by music education researcher Lucy Green (2002, 2008), who observed how popular musicians learn outside formal settings, and explored how these practices could be brought into school music classrooms. These practices contrast with traditional approaches in which instruction is typically structured, sequential, and centered on notation and teacher direction.

In classroom settings, IL is characterized by a shift in the teacher's role from director to facilitator, providing guidance and support while allowing students the time, space, and autonomy to engage in self-directed and collaborative learning.

IL practices include:

- **Peer-directed learning**: students learn from or teach each other rather than receiving direct instruction from the teacher
- **Student choice of repertoire or projects**: students select their own music, topics, or learning goals
- **Self-directed exploration**: students experiment, problem-solve, and figure things out independently through trial and error
- **Teacher as facilitator**: the teacher guides, supports, or steps back rather than directing or demonstrating
- **Learning by ear**: students learn from listening to recordings rather than reading notation or following direct modeling

Important Distinction

Do **NOT** code as IL if the practice is:

- Teacher-directed
- Sequential/step-by-step instruction

- Based on methods like Suzuki, Kodály, Orff (even if ear-based)

Coding Categories and Definitions

1. Awareness & Knowledge Acquisition (RQ1)

Code any statement describing awareness, familiarity, or how teachers learned about IL

Codes

- **A1: No Awareness**
  - Teacher has never heard of IL
  - *Example:* "I don't know what that is"
- **A2: Institutional Learning**
  - Learned through formal education (undergrad, master's, coursework)
  - Includes student teaching experiences
- **A3: Professional Development (PD)**
  - Workshops, conferences, in-service training, teacher networks
- **A4: Self-Developed Understanding**
  - Learned through personal teaching experience, experimentation, or reflection
  - *Key idea:* not formally taught, but figured out over time
- **A5: Contextual Adaptation**
  - Learning shaped by external events (COVID)

2. Implementation & Influencing Factors (RQ2)

2A. IL Strategies Used

- **S1: Student Choice**
  - Students select repertoire, activities, or direction
- **S2: Learning by Ear**
  - Students learn music through listening instead of notation
- **S3: Peer Collaboration**
  - Students work together, teach each other, or co-learn
- **S4: Student Leadership**
  - Students lead rehearsals, groups, or decision-making
- **S5: Exploratory Learning**
  - Trial-and-error, improvisation, experimentation
  - No single "correct" path given by teacher
- **S6: Teacher as Facilitator**
  - Teacher guides rather than demonstrates
  - Provides support, asks questions, or steps back
- **S7: Flexible Pacing**
  - Students progress at different speeds

2B. Influencing Factors (Use of IL)

Code reasons teachers choose to use IL

- **F1: Teacher Beliefs / Philosophy**
  - Belief in student-centered or creative learning
- **F2: Student Engagement / Interest**
  - Students respond positively or show motivation
- **F3: Training / Knowledge**
  - Exposure to IL encourages use
- **F4: Classroom Context**
  - Type of class (e.g., general music vs ensemble)

2C. Barriers (Non-use of IL)

Code reasons teachers do NOT use IL

- **B1: Time Constraints**
  - Limited class time
- **B2: Performance / Concert Pressure**
  - Need to prepare for concerts quickly
- **B3: Large Class Size**
  - Hard to manage student-led learning
- **B4: Lack of Training**
  - Teacher unsure how to implement IL
- **B5: Curriculum / Standards Constraints**
  - Required content limits flexibility
- **B6: Classroom Management Concerns**
  - Fear of losing control or structure
- **B7: Student Readiness**
  - Students lack skills or independence

3. Perceived Student Impact (RQ3)

Code teacher perceptions of student outcomes

3A. Engagement

- **P1: Increased Engagement**
  - Students more motivated, interested, or active
- **P2: No Change**
  - No noticeable difference
- **P3: Decreased Engagement**
  - Students disengaged or confused

3B. Musical Development

- **P4: Increased Musical Development**
  - Skill improvement, better understanding

    - Creativity
    - Musicianship
- **P5: Limited/No Development**
    - not improving
    - shallow learning

3C. Student Independence

- **P6: Increased Independence**
    - Autonomy
    - self-directed learning
    - confidence in learning alone
- **P7: Difficulty with Independence**
    - reliance on teacher
    - struggle with autonomy

Key Coding Rules

1. Code only what is explicitly stated, Do NOT infer beyond the data
2. Use multiple codes if needed. One segment can have multiple meanings
3. Prioritize IL definition. If unclear, do NOT code as IL
4. Context matters. Look at surrounding sentences if needed

Quick Glossary (for Intercoder Clarity)

- **Facilitator:**
  A teacher who **guides rather than directs** learning
- **Trial-and-error:**
  Learning by experimenting, making mistakes, and adjusting
- **Student agency:**
  Students having **choice and control** over their learning
- **Peer-directed learning:**
  Students learning from each other without teacher leading
- **Exploratory learning:**
  Open-ended learning without a fixed outcome or step-by-step instruction

Coding Examples

Purpose

This section provides sample excerpts with correct coding applications to ensure consistency between coders. Coders should use these examples as a reference when making coding decisions.

Example 1:

Transcript Excerpt:

> "I actually first heard about this kind of approach during my master's program, but I didn't really use it until later in my teaching."

Codes Applied:

- A2: Institutional Learning
- A4: Self-Developed Understanding

Rationale:

- "master's program" → formal coursework → A2
- "didn't really use it until later" → developed through experience → A4

Example 2:

Transcript Excerpt:

> "I'm not familiar with that term at all."

Codes Applied:

- A1: No Awareness

Rationale:

- Direct statement of no knowledge

Codes Applied:

- S1: Student Choice
- P1: Increased Engagement

Rationale:

- "pick songs" → student decision-making → S1
- "more excited" → engagement → P1

Example 3: Exploratory Learning + Teacher as Facilitator

Transcript Excerpt:

> "I give them time to figure things out on their own in small groups, and I walk around to help if needed."

Codes Applied:

- S5: Exploratory Learning
- S6: Teacher as Facilitator
- S3: Peer Collaboration

Rationale:

- "figure things out on their own" → trial-and-error → S5
- "walk around to help" → facilitator role → S6
- "small groups" → peer interaction → S3

Example 4: Barriers – Time & Concert Pressure

Transcript Excerpt:

> "Honestly, I'd love to do more of that, but we just don't have time with concerts coming up."

Codes Applied:

- B1: Time Constraints
- B2: Performance / Concert Pressure

Rationale:

- "don't have time" → B1
- "concerts coming up" → performance pressure → B2