Improving Practice Habits in Middle-School Orchestra Students

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Students' musical growth in orchestra depends not only on the quality of ensemble rehearsals but also on the consistency and quality of independent practice outside of class. At Orchard Hill Middle School, many orchestra students demonstrate limited practice habits at home, which affects both their individual skill development and the overall progress of the ensemble. Informal conversations with students, observation of rehearsal readiness, and performance assessments suggest that many learners practice infrequently or without clear strategies. This lack of independent preparation often results in slower mastery of repertoire, reduced confidence, and disengagement during rehearsals.

Independent practice matters in performance-based classes because instructional minutes are finite and rehearsal time must prioritize ensemble skills such as blend, balance, intonation, and interpretation. When students arrive having already strengthened fundamentals (tone production, technical patterns, rhythmic accuracy), rehearsal time can be spent on higher-order musical goals rather than note learning. Current research indicates that improving independent practice is less about adding minutes and more about building self-regulated routines that include planning goals, using targeted strategies, monitoring, and reflecting. Three levers show strong support in secondary instrumental settings: explicit strategy instruction (Prichard, 2021; Weidner, 2021), goal-aligned practice logs with brief feedback (Li et al., 2023), and teacher-scaffolded digital routines that bolster motivation and persistence (Michałko et al., 2022).

Action research provides a systematic way to examine this problem and explore practical strategies that may help students build stronger practice routines. This proposal outlines the problem, describes the purpose of the study, and presents research questions aligned with the

issue. It then builds toward a literature review, research procedures, data analysis, and a proposed action plan.

Problem

The problem is unstructured at-home practice in middle school orchestra. Adolescents commonly struggle with self-regulated learning (planning, monitoring, and reflecting), so independent practice often defaults to unfocused "playing through" rather than goal-directed strategy use (McPherson et al., 2018). In school instrumental programs, inconsistent or unstructured practice is frequently associated with slower progress and lower confidence among younger players (Johnson, 2023). These patterns suggest that the issue is not merely insufficient time, but insufficient quality of practice driven by weak strategy use (McPherson et al., 2018).

At Orchard Hill, observable indicators include students arriving underprepared for sectionals and full-ensemble rehearsals, increased in-class remediation of basic passages, and rehearsal pacing constrained by repeated note-learning tasks. The impacted population comprises orchestra students in grades 6–8 at Orchard Hill Middle School. Because time, home environments, and adult supports vary across students, explicitly teaching and scaffolding practice strategies in school is a promising route to improve equity of progress (Johnson, 2023).

Purpose

The purpose of this action research study is to determine whether a set of structured supports can improve orchestra students' independent practice. The supports include brief weekly practice logs aligned to SMART goals, periodic student–teacher goal-setting check-ins, and optional use of a digital practice tool. Specifically, the study will examine changes in (a) practice frequency, (b) practice quality (strategy use such as chunking, slow practice, and metronome work), and (c) student motivation and self-efficacy. This focus is grounded in

evidence that explicit instruction in self-regulated learning strategies can improve practice behavior and performance (Mieder, 2018) and that digital practice platforms can enhance motivation and feedback (Upitis et al., 2021). Findings are expected to inform day-to-day rehearsal planning, support more equitable progress across the ensemble, and ultimately enhance students' confidence and performance readiness.

Research Questions

Developing effective practice habits requires understanding both the behavioral and motivational factors influencing students' choices. To investigate strategies that may support improved practice routines, the following questions will guide the literature review of the study:

1. How does implementing structured practice logs influence the frequency and quality of middle school orchestra students' independent practice?
2. What impact do digital practice tools (e.g., practice apps or online platforms) have on students' motivation to practice outside of class?
3. How do students perceive the value of at-home practice in contributing to their learning and confidence in orchestra?

To ensure alignment, Figure 1 summarizes the relationship between the problem, the purpose of the study, and the guiding research questions. This alignment will serve as the foundation for the literature review, methodology, and analysis.

Figure 1

Problem Statement, Purpose Statement, and Research Questions Alignment

Problem Statement	Purpose Statement	Research Questions
The problem is unstructured at-home practice in middle school orchestra.	The purpose of this action research study is to determine whether a set of structured supports can improve orchestra students' independent practice.	*Research Question One:* How does implementing structured practice logs influence the frequency and quality of middle school orchestra students' independent practice? *Research Question Two:* What impact do digital practice tools (e.g., apps or online platforms) have on students' motivation to practice outside of class? *Research Question Three:* How do students perceive the value of at-home practice in contributing to their learning and confidence in orchestra?

Literature Review

Independent practice is the hinge between individual skill growth and ensemble learning in middle school orchestra, yet the quality and consistency of at-home work vary widely among adolescents. The problem is unstructured at-home practice in middle school orchestra. The purpose of this action research study is to determine whether a set of structured supports can improve orchestra students' independent practice. Converging findings in recent research suggest three complementary approaches to address this need: (a) explicit instruction in self-regulated practice strategies, (b) lightweight accountability structures (logs, specific goals, brief feedback), and (c) teacher-scaffolded digital tools that support motivation and reflection (Prichard, 2021; Li et al., 2023; Michałko et al., 2022).

Review of Current Literature

Across empirical studies and reviews, three patterns recur. First, when teachers explicitly model and prompt how to practice (e.g., chunking, slow/accurate repetition, metronome work, and plan–monitor–evaluate cycles), adolescents shift from "playing through" to targeted problem-solving, an indicator of improved practice quality (Prichard, 2021; Weidner, 2021). Second, brief, goal-aligned feedback routines (including self-feedback) raise metacognitive awareness and help students sustain practice frequency and focus (Li et al., 2023). Third, digital supports (e.g., recording/self-rating cycles, practice platforms) tend to boost motivation and self-efficacy when they are embedded in teacher-guided routines rather than used in isolation (Michałko et al., 2022; Koner et al., 2024). Together, these strands align with the present study's questions about frequency, quality, and motivation/self-efficacy.

Strategy Instruction

Quasi-experimental work with middle school wind players demonstrates that brief, in-rehearsal practice-strategy instruction changes what students actually do when they later practice independently. Prichard (2021) found that after targeted instruction, students identified and used more varied strategies, spent longer focused periods on short excerpts, and pursued more diverse practice objectives, signaling a shift from run-throughs to strategic problem-solving. These effects were observed via coded video of independent practice sessions and strategy reports, lending credibility beyond self-report measures.

Weidner (2021) similarly reported that iterative, explicit instruction in large ensembles increased students' use of targeted strategies outside class. This is especially relevant for a middle school orchestra where rehearsal time is finite; modeling and prompting strategy routines in rehearsal can "seed" the specific behaviors needed at home. Microanalytic work further

clarifies the mechanism: when musicians are guided to plan, monitor, and evaluate during practice, their actions become more intentional and efficient (López-Íñiguez & McPherson, 2024). A complementary survey of advanced players found that self-regulated learning behaviors co-vary with experience and practice quantity, reinforcing the value of deliberately teaching these processes early in secondary programs (dos Santos Silva et al., 2024).

Mechanistically, microanalytic research explains why strategy instruction works: when musicians deliberately plan, monitor, and evaluate, their self-regulatory engagement rises, and practice actions become more intentional (López-Íñiguez & McPherson, 2024). Although the multiple-case study involved advanced cellists, the underlying self-regulation process is directly teachable to adolescents through short naming routines (e.g., “Plan: goal & excerpt; Practice: slow plus metronome; Reflect: what changed?”), supporting transfer from rehearsal to at-home practice.

Practice Logs and Feedback

Lightweight accountability structures, such as weekly practice logs tied to specific goals and brief feedback, can increase practice regularity while nudging students toward higher-quality strategy use. Li et al. (2023) found improved metacognitive abilities following feedback-oriented practice; learners became more aware of how they were practicing and why, a precondition for sustaining practice frequency meaningfully. In secondary instrumental settings, embedding short reflection prompts (e.g., “What did I fix today?” “What will I target next?”) inside a log operationalizes metacognition without adding heavy teacher grading.

Recent measurement work supports structuring student logs around a simple cycle. The Instrumental Practice Goal Realization Inventory (IPGRI) operationalizes four phases: practice intention, planning, acting, and evaluating practice. This provides a practical template for brief

weekly logs and reflections in school ensembles (Mazur-Socha et al., 2024). Anchoring check-ins to those phases aligns with findings that metacognitive monitoring improves when feedback is embedded in regular practice routines (Li et al., 2023).

In ensemble contexts, strategy instruction plus feedback cycles appears particularly potent: instruction specifies the "how," while feedback and logs reinforce monitoring and consistency over time. Evidence from middle school band (Prichard, 2021) and beginning instrumentalists (Weidner, 2021) shows that when teachers prompt named strategies and follow up with brief, goal-referenced check-ins, students report and exhibit more targeted work. This is exactly the kind of focused practice a log can track. Thus, for a middle school orchestra, a half-page log with SMART goals and one quick reflection box, paired with occasional teacher comments, is a pragmatic vehicle to raise sessions per week and keep work aligned to strategy routines (Prichard, 2021; Weidner, 2021; Li et al., 2023).

Finally, self-regulated learning-oriented readiness supports can prime students to follow through on their goals. A 16-week study of short mindfulness routines before practice reported meaningful gains in students' self-efficacy, even as some method/behavior subscales fluctuated, suggesting mindfulness should be positioned as a forethought support (focus, calm, confidence) that complements logs and strategy instruction rather than replacing them (Koner et al., 2024). In short, logs scaffold consistency, feedback scaffolds monitoring, and mindfulness can scaffold readiness to engage, and together support frequency and focus. Because home routines can shape follow-through, light parent-facing cues (for example, a weekly goal snapshot or an optional signature line) may amplify consistency; recent work with beginning instrumentalists found higher achievement when parental support was strong (Oliveira et al., 2023).

Teacher-Scaffolded Digital Tools

Digital practice supports (e.g., metronome/recording apps, practice platforms, guided self-recording) tend to strengthen motivation and persistence when they are embedded in regular routines that include clear goals and teacher feedback. A survey of instrumental teachers identified a persistent gap: schools adopt many tools, but they rarely impact daily practice unless they are linked to specific, meaningful cycles (e.g., record, self-rate on a simple rubric, brief teacher comment, re-try), emphasizing the primacy of teacher scaffolds over technology (Michałko et al., 2022). A recent systematic review of digital tools in school music reported gains in engagement and motivation when technology was integrated into teacher-guided routines, while also noting that results were weaker when tools were used in isolation. These findings underscore the importance of scaffolding and echo classroom reports that short record-and-reflect cycles are most effective when tied to clear criteria and brief feedback (Liu et al., 2025).

When implemented with structure, digital cycles can bolster self-efficacy by making improvement visible and giving students more control over pacing and problem-solving. Students who engaged in recording and reflective submission reported higher confidence and used more preparation strategies (Li et al., 2023; Michałko et al., 2022), consistent with findings that perceived competence and autonomy support motivation.

Summary and Conclusions

Recent research converges on three complementary levers for improving independent practice in secondary instrumental settings: explicit instruction in self-regulated practice strategies, lightweight accountability through goal-aligned logs and feedback, and teacher-scaffolded digital routines that can strengthen motivation and persistence (Prichard, 2021; Li et

al., 2023; Michałko et al., 2022). For a middle school orchestra, these approaches collectively target the proposal's outcomes of practice quality, frequency, and motivation/self-efficacy.

Despite this convergence, several gaps remain. Few studies isolate middle school orchestra specifically; many focus on band or mixed secondary samples, or on older learners (López-Íñiguez & McPherson, 2024). Measures of practice quality are inconsistent ranging from self-report to coded observation, and short intervention windows may not capture durable change (Prichard, 2021). Studies of digital tools often under-describe the teacher scaffolds that likely drive impact (Michałko et al., 2022). These gaps limit generalizability and make it difficult to determine which combination of supports is most feasible and effective in typical school schedules.

The present proposal responds to these gaps by testing a multi-component, classroom-embedded approach in a middle school orchestra over an eight-week cycle: brief in-rehearsal strategy instruction; weekly practice logs aligned to SMART goals with short teacher check-ins; and an optional record-and-reflect digital routine. Outcomes will track practice frequency (sessions/minutes), practice quality (rubric evidence of chunking, slow practice, metronome work), and motivation/self-efficacy (brief scales), providing clearer operational definitions than many prior studies (Li et al., 2023; Prichard, 2021). By specifying the teacher scaffolds and collecting aligned evidence, the study aims to clarify how these supports function together in this context. The literature indicates what works, but leaves open how much and in what combination for middle school orchestra learners.

Research Procedures

The purpose of this action research study is to determine whether structured supports, such as weekly goal-aligned practice logs, student–teacher check-ins, and optional digital

reflection tools, can improve middle school orchestra students' independent practice. The research design is action research, using a mixed methods methodology to capture both the behavioral and perceptual aspects of student practice. A mixed-methods approach integrates numerical data with descriptive accounts, allowing for a more complete understanding of how supports influence frequency, strategy use, and motivation (Harper, 2022).

Action research is appropriate because it emphasizes iterative improvement through planning, acting, observing, and reflecting within authentic educational settings (Azulai, 2021). As a teacher-researcher, I will collaborate with students to implement and evaluate supports in real classroom contexts. According to Creswell and Poth (2018), this approach promotes reflective practice while generating data-driven solutions to practical problems. The combination of mixed methods and action research aligns with the study's intent to produce actionable findings that directly inform instructional practice and enhance student learning outcomes.

Research Question

This action research study focuses on improving middle school orchestra students' independent practice by examining how structured supports influence their learning behaviors. The goal is to understand how goal-aligned practice logs and teacher feedback can enhance both consistency and motivation in at-home practice. The following research question will guide the action research study: How does implementing structured practice logs with teacher feedback influence the frequency, quality, and motivation of independent practice among middle school orchestra students?

Methodology

This study will use a mixed methods approach within an action research design. A mixed methods methodology allows the collection and analysis of both quantitative and qualitative data

to provide a comprehensive understanding of the problem. Quantitative data, such as practice frequency and rubric scores, will measure behavioral changes, while qualitative data from surveys and interviews will capture student perceptions of motivation and self-efficacy.

The rationale for using mixed methods is that the problem involves both observable behaviors and internal attitudes. Quantitative data alone cannot capture the reasons behind student motivation, and qualitative data alone cannot demonstrate measurable improvement. Combining both strengthens the study through triangulation, where multiple sources of evidence confirm findings (Harper, 2022). Mixed methods research is grounded in pragmatism, which values using the most effective tools to address real-world educational problems (Creswell & Poth, 2018).

Action research provides the structural framework for this study by emphasizing cycles of planning, acting, observing, and reflecting within an authentic educational context (Azulai, 2021). This design allows the teacher-researcher to implement interventions, analyze data as it emerges, and adjust strategies to support continuous improvement. Using mixed methods within an action research model ensures that both statistical results and students' lived experiences contribute to practical, evidence-based refinements in instructional practice.

Population and Sample

The population for this study includes middle school orchestra students in grades 6, 7, and 8 at Orchard Hill Middle School. Each grade level has its own orchestra class that meets during the school day, providing a structured environment for ensemble learning. All students are expected to practice independently at home to prepare for rehearsals and performances. Because inconsistent or unstructured home practice affects individual progress and overall

ensemble performance, this population is directly impacted by the problem addressed in this study.

The study will focus on one grade-level orchestra, consisting of approximately 50 students, selected through convenience sampling. This group represents a typical range of ability levels, motivation, and practice habits within the overall orchestra program. Inclusion criteria include active enrollment in the selected grade-level orchestra and consistent participation in class rehearsals. Students who lack access to instruments at home or who are unable to complete the practice log assignments will be excluded from the sample.

Participation will be voluntary, with both parental consent and student assent obtained prior to data collection. All data will be collected and reported in accordance with ethical research guidelines and institutional review board principles, ensuring confidentiality and the responsible handling of student information (Hahn, 2023).

Data Collection Plan

The data collection plan for this action research study is designed to capture both quantitative and qualitative data to understand how structured practice logs with teacher feedback influence middle school orchestra students' independent practice frequency, quality, and motivation. Collecting multiple types of data allows for a rich and credible understanding of the problem through methodological triangulation, a process that strengthens reliability and validity by confirming results across sources (Duesbery & Twyman, 2020, Ch. 65). Three data sources will be used: weekly practice logs, student reflection surveys and interviews, and performance rubric assessments. Together, these instruments will provide converging evidence to address the research question while aligning with action research principles of practicality, reflection, and continuous improvement (Azulai, 2021; Harper, 2022).

Weekly Practice Logs

The first data source will be weekly practice logs, which collect both quantitative and qualitative data. The participants will be students in one grade-level orchestra class at Orchard Hill Middle School who are participating in the eight-week intervention. Each student will complete a digital practice log once per week using a Google Form created by the teacher-researcher. The log will ask students to record their total minutes practiced, the number of sessions completed, and which strategies they used, such as slow practice, metronome work, or repetition of difficult sections. In addition, each log will include one open-ended reflection question prompting students to describe their focus, motivation, or progress toward their SMART goal for that week.

Before data collection begins, the teacher-researcher will model how to fill out the form and explain how the responses will inform both student goal setting and the study's findings. Quantitative entries (minutes and sessions) will be exported into a spreadsheet and analyzed using descriptive statistics (mean, median, and mode) to summarize weekly changes in practice frequency (American College of Education [ACE], 2021a). Qualitative reflections will be transcribed into a coding document and analyzed thematically using Braun and Clarke's (2006) six-phase model, which includes familiarization, coding, and theme development (ACE, 2021b). Organizing both numerical and narrative data together will help identify patterns linking frequency of practice with strategy use and motivation, directly answering the research question by showing whether structured supports change students' independent behaviors.

Reflection Surveys and Interviews

The second data source will consist of student reflection surveys and brief semi-structured interviews, both designed to gather qualitative data on student perceptions of

motivation and self-efficacy during the study. All participating students will complete two short online surveys, administered at Weeks 4 and 8, containing open-ended prompts and Likert-scale items such as “How motivated were you to practice this week?” and “How helpful was teacher feedback in meeting your goals?” Six students will also participate in follow-up interviews to provide deeper insight into their experiences. Participants will be selected purposively to ensure representation of different practice habits and confidence levels, a common and appropriate approach for classroom-based action research (Duesbery & Twyman, 2020, Ch. 46).

Survey responses and interviews will be coded using Creswell and Poth’s (2018) data analysis spiral, which involves reading and memoing data, developing codes, and organizing themes to form interpretations (ACE, 2021b). Interview transcripts will be verified through member checking to ensure accuracy and strengthen trustworthiness. These qualitative data will illuminate how students perceive the value of structured practice logs and teacher feedback, complementing the numerical findings from the logs to provide a holistic understanding of the intervention’s impact.

Performance Rubric Assessments

The third data source will be performance rubric assessments, which provide quantitative data on students’ musical growth throughout the intervention. A teacher-created rubric aligned with state music performance standards will assess tone, rhythm, intonation, and expression. Each student will complete two individual performance assessments, one in Week 1 and another in Week 8, to capture pre- and post-intervention progress. All students in the participating orchestra class will be assessed, representing the same sample used for the practice logs and surveys.

Each performance will be scored on a four-point scale, and results will be entered into a digital spreadsheet. The data will be analyzed using descriptive statistics, including mean, median, and standard deviation, to determine patterns of improvement (ACE, 2021a). These quantitative findings will then be compared with practice log data to identify whether students who reported higher practice frequency and strategy use also demonstrated measurable gains in performance. This alignment between behavioral and outcome data directly supports the research question by testing whether the intervention improved both the quality and results of independent practice.

Data Analysis Plan

The analysis will follow the study's mixed methods design. I will examine each data source on its own terms and then look across sources so that numbers and words inform each other. For quantitative information, I will rely on descriptive statistics to summarize change in practice behavior and performance. For qualitative information, I will use an established coding model to develop themes that explain why patterns may be changing. I will use spreadsheet software for quantitative summaries and charts and NVivo for qualitative coding and documentation (ACE, 2021a; ACE, 2021b; Creswell & Poth, 2018).

Weekly Practice Logs

The practice logs include both counts of behavior and short reflections on strategy use. After each week, I will export minutes and sessions to a spreadsheet and calculate class means and medians to describe central tendency, along with standard deviation to describe spread. Over the eight-week cycle, I will chart these summaries, so trends are easy to see at a glance. When helpful, I will examine individual change scores from Week 1 to Week 8 to show growth without

overreaching into inferential claims, which is appropriate for classroom action research (ACE, 2021a).

For the open-ended responses in the logs, I will use thematic analysis. I will import the reflections into NVivo and work through Braun and Clarke's six phases, moving from careful reading and initial codes to candidate themes, review, naming, and a brief narrative of what the themes mean for practice (Braun & Clarke, 2006; ACE, 2021b). A small start list of codes aligned to the study constructs (for example, chunking, slow practice, metronome work, feedback usefulness) will keep the analysis anchored, and I will remain open to inductive codes that emerge from students' language. Throughout coding, I will write short analytic memos so that decisions and interpretations are transparent and traceable (Creswell & Poth, 2018). I will then place the weekly graphs next to a simple timeline of themes to see whether increases in strategy language coincide with increases in minutes or sessions. To support clear communication and protect student privacy, I will present summarized results with simple tables and figures rather than individual data (Duesbery & Twyman, 2020, Ch. 77).

Reflection Surveys and Interviews

To understand students' motivation and perceptions of usefulness, I will analyze the survey open-ended responses and interview transcripts together using Creswell and Poth's data analysis spiral. I will begin by reading and memoing, move into coding and clustering, and then consolidate themes that speak to confidence, ownership, and barriers or supports to at-home practice (Creswell & Poth, 2018; ACE, 2021b). To enhance credibility, I will invite a member-checking step by sharing short, coded summaries with participants and asking whether the interpretations reflect their views. A music colleague will co-code about 20 percent of the transcripts; we will compare coding, reconcile differences, and refine the codebook before I

complete the remaining transcripts. The qualitative products will include a concise codebook, a theme table with representative quotations, and a brief note on how themes varied. When I share these qualitative findings, I will tell a concise story of why, how, and what comes next so colleagues can follow the logic from problem to action (Duesbery & Twyman, 2020, Ch. 76).

Performance Rubric Assessments

Performance data will be summarized descriptively to show practical growth in tone, rhythm, intonation, and expression. I will enter pre- and post-scores into a spreadsheet and compute class means, medians, and standard deviations for each criterion, along with mean change scores. Clustered bar charts will make the pattern of improvement easy to interpret, and I will also report the proportion of students who improved by at least one rubric point on two or more criteria to convey meaningful change in a school context (ACE, 2021a). In interpreting growth, I will report both central tendency and variability because the combination offers a more precise view of group change than a single average (Duesbery & Twyman, 2020, Ch. 68). Before scoring the post-assessments, I will calibrate the rubric with a second rater using a few anonymized samples and document our agreement and decisions so that scoring remains consistent. Results will be reported in aggregate to maintain confidentiality while still enabling stakeholders to draw warranted conclusions (Duesbery & Twyman, 2020, Ch. 77).

Integrating the Strands

Once each strand has been analyzed, I will look across sources for convergence. A simple joint display will align change in minutes and sessions, change in rubric scores, and the presence of key qualitative themes such as metronome use, chunking, and growing confidence. Where the strands tell the same story, I will note the pattern; where they diverge, I will offer plausible explanations grounded in classroom context. This synthesis by triangulation strengthens

credibility and keeps the interpretation appropriately cautious for action research (Duesbery & Twyman, 2020, Ch. 65; Creswell & Poth, 2018).

Proposed Action Plan for Implementation

I will implement the plan within one grade-level orchestra over an eight-week rehearsal cycle. The primary audience for the plan and results is the Orchard Hill music faculty and the school administration, since they oversee rehearsal structures, progress monitoring, and home-practice expectations. A secondary audience includes the district fine-arts coordinator and the band and choir directors, who may adapt the procedures to their ensembles, as well as families who support practice routines at home. Implementation will begin with an introduction to named practice strategies and a demonstration of the weekly SMART goal-aligned practice log during Week 1. Students will complete the log each week, and I will provide two short goal check-ins during the cycle. An optional record-and-reflect routine will allow students to capture brief clips of their progress and complete a simple self-rating. Pre- and post-individual performance assessments will provide baseline and outcome evidence aligned to tone, rhythm, intonation, and expression.

Communication will be tailored to stakeholders' needs. Faculty and administrators will receive a concise professional-development share-out that includes a one-page brief, class-level graphs of practice and performance trends, and two anonymized student vignettes that illustrate change in strategy use. Families will receive a plain-language summary that explains what effective at-home practice looks like, with an infographic and translation available upon request. Students will participate in a class debrief that highlights class-level growth and provides each student an individual progress note identifying one strength and one next step. Visual, tangible tools will be used during debriefs so students and families can co-analyze patterns and weigh in

on which supports felt most helpful (O'Reilly-de Brún et al., 2018). The district fine-arts coordinator will receive a two-page executive summary that includes an implementation checklist and a short replication timeline. Presentations to colleagues and leaders will follow a consistent arc of why, how, summarized results with visuals, and next steps, followed by an explicit invitation for feedback (Duesbery & Twyman, 2020, Ch. 76; Ch. 77). The Action Plan Proposal is the Appendix of this paper.

Reliability and Validity

I will support reliability and validity through standardized procedures, transparent documentation, and triangulation. All students will complete the same digital practice log at the same weekly interval, pre- and post-performance tasks will use the same four-point rubric, and interviews will follow a consistent semi-structured protocol. Quantitative reliability will be strengthened through consistent administration and a brief rater-calibration step on anonymized performances before post-scoring. Qualitative trustworthiness will be addressed through an audit trail of decisions, codebook development, and analytic memos that record how interpretations evolve over time (ACE, 2021b; Creswell & Poth, 2018). Member checking will invite students to verify short interview summaries, and a colleague will conduct a co-coding check on approximately 20 percent of transcripts to confirm code application and refine the codebook. Methodological triangulation will compare practice-log trends, rubric outcomes, and themes from interviews and reflections to identify convergence or explain divergence, which strengthens credibility in classroom action research. Triangulation brings multiple perspectives to the same question and reduces bias from any single instrument, sample, or procedure (Duesbery & Twyman, 2020, Ch. 65).

Ethical safeguards will align with the Belmont principles of respect for persons, beneficence, and justice. Respect for persons will be ensured through parental consent and student assent, clear age-appropriate explanations of procedures and voluntary participation, and the option to withdraw without penalty. Beneficence will be addressed by minimizing risk, restricting data collection to routine instructional artifacts, de-identifying records, and storing all files on a password-protected drive; benefits will be returned to participants through practical feedback that can improve practice habits and performance. Justice will be promoted by selecting participants fairly within the intact class, providing equitable access to supports regardless of home resources, and offering reasonable accommodations so that no subgroup is disadvantaged. Privacy will be protected by reporting only aggregated results in public forums and by excluding personally identifying information from any shared artifacts (U.S. Department of Health, Education, and Welfare, 1979). Together, these procedures support dependable, credible, and ethically sound findings.

Findings

Although the study will not be implemented in this course, the anticipated pattern of findings would benefit stakeholders in several practical ways. If practice logs and feedback function as intended, students should show increased weekly sessions and minutes, more frequent use of named strategies such as chunking and metronome work, and improved rubric scores in tone, rhythm, intonation, and expression. Qualitative themes may indicate greater focus and confidence, which supports self-regulated learning. For teachers and administrators, these results would justify continuing brief strategy instruction and light-touch accountability systems that fit within normal rehearsal schedules. For families, a clear description of what good practice looks like would make home support more concrete. Together, these outcomes would improve

ensemble readiness and support more equitable progress across students with different home contexts.

Reflection

Developing this proposal highlighted the value of iterative feedback and practitioner voice. Early feedback prompted me to refine three initial questions into a single guiding question that integrates frequency, quality, and motivation, which strengthened alignment across measures. Colleague input led me to focus on one grade-level class rather than a mixed section and to add rubric calibration and co-coding to strengthen reliability. Student-facing language in the log was simplified after piloting prompts informally, which reflects a participatory stance consistent with action research.

This process made me more prepared to lead evidence-based decision-making. I am better able to select feasible measures, analyze both numbers and narratives, and translate results for varied audiences. I can reuse this cycle to refine other aspects of the program, such as sectional routines or sight-reading strategies, and to support colleagues who want to test small changes in their classes. Treating improvement as ongoing inquiry builds a culture where decisions are grounded in data and reflection rather than intuition alone.

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Chapter 46: How Do I Not Randomly Choose My Participants?

Chapter 65: I Wrote My Question and Chose My Design. What Kind of Data Do I Need?

Chapter 68: What Does It Mean To Triangulate My Data?

Chapter 76: Now I have All These Data. What Is the Best Way to Present My Results?

Chapter 77: How Do I Tell a Story With My Data?

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Appendix

Proposed Action Plan

Problem: The problem is unstructured at-home practice in middle school orchestra. Students frequently "play through" without clear strategies (plan–monitor–reflect), resulting in underprepared rehearsals, increased in-class remediation, and slower ensemble progress.	**Research Question:** How does implementing structured practice logs with teacher feedback influence the frequency, quality, and motivation of independent practice among middle-school orchestra students?
Target Solution/Intervention Strategy: A classroom-embedded, 8-week package of supports: 1. brief, in-rehearsal strategy instruction; 2. weekly SMART-goal-aligned practice logs with two teacher check-ins; 3. optional "record-and-reflect" digital routine (short clip + self-rating + brief feedback).	**Goal:** Increase weekly practice sessions/minutes, raise observable strategy use (chunking, slow practice, metronome work), and improve confidence and performance readiness as evidenced by gains on a four-point performance rubric.
Target Population: Middle-school orchestra students (grades 6–8) at Orchard Hill Middle School who are expected to practice independently outside class.	**Sample Population:**

Action Steps	Person(s) Responsible	Timeline	Resources	Evaluation: Data	Outcomes
Step 1. Launch & baseline: Introduce named practice strategies; model SMART goals; demo digital practice log; collect baseline individual performance (Week 1).	Teacher-researcher; students	Week 1	Slides/visuals; exemplar SMART goals; Google Form practice log; instruments; baseline rubric; consent/assent materials	Baseline performance rubric (tone/rhythm/intonation/expression, 4-point scale); baseline student self-ratings of confidence	
Step 2. Strategy mini-lessons: Short, embedded "plan–practice–reflect"	Teacher-researcher	Weeks 1–2 (and 1–2 min	Mini-lesson scripts; metronome; excerpt cards	Walk-through checks; quick exit tickets ("What did you fix today?")	

routines (chunking, slow/accurate reps, metronome).		refresher s weekly)			
Step 3. Weekly SMART-aligned logs + 2 check-ins: Students submit Google Form logs once/week (minutes, sessions, strategies used + 1 reflection). Teacher gives two brief goal check-ins (verbal or written) across the cycle.	Students (submit logs); teacher-researcher (feedback)	Weeks 1–8 (logs each week); Check-ins: Weeks 3–4 & 6–7	Google Form; spreadsheet for exports; feedback comment bank	**Quantitative**: minutes, sessions (descriptive stats: mean/median/SD; trend charts). **Qualitative**: weekly reflection coded thematically (Braun & Clarke).	
Step 4. Optional record-and-reflect digital routine: Students record a brief excerpt, self-rate on a simple criteria scale, and (optionally) receive a short teacher comment; repeat 2–3 times.	Students; teacher-researcher	Weeks 2–7	Phone/Chromebook ; private upload link/folder; 3-level self-rating rubric; headphones	Short self-ratings; teacher quick notes; interview/survey items on usefulness/motivation	
Step 5. Post-assessment, integration, and share-out: Post individual performance assessment; integrate strands in a joint display; debrief with students; prepare brief reports for faculty/administration/families .	Teacher-researcher; students	Week 8	Same rubric/tasks as baseline; spreadsheet/NVivo; graphs/one-page brief; anonymized quotes	Performance rubric post scores; log trends; surveys/interviews (member-checked); joint display triangulating quantitative + qualitative	
Reflection:					