



# Teachers' Perspectives on the Application of Teaching Methods in Group Electone Instruction

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**Abstract:** This study explores teachers' perspectives on the application of teaching methods in group Electone instruction, with a focus on how instructional strategies influence student engagement, peer collaboration, and ensemble performance skills. Two participating teachers—one leading a kindergarten group of four students and another guiding a mixed-level group of four—were observed over five complete lessons each. Data were collected through structured lesson observations, post-lesson semi-structured interviews, and supplementary materials including photographs, annotated scores, and rehearsal notes. Thematic analysis revealed distinct pedagogical priorities: one teacher emphasized cooperative ensemble playing, structured repetition, and confidence-building in young beginners, while the other focused on technical precision, interpretive detail, and independent preparation among mixed-level learners. Across both cases, challenges were noted in balancing individual and group needs, sustaining attention, and ensuring consistent home practice. Comparative analysis highlighted differences in instructional pacing, feedback styles, and the integration of creative elements such as storytelling and visual aids. These findings offer practical insights for Electone educators seeking to optimize group lesson dynamics and suggest that effective group instruction requires adaptive strategies that align with student developmental stages, technical abilities, and ensemble goals.

**Keywords:** Group Electone instruction; teaching methods; ensemble skills; music pedagogy; student engagement; peer collaboration

## I. Introduction

The Electone—Yamaha's advanced electronic organ—has emerged as a versatile and impactful tool in contemporary music education, distinguished by its orchestral sound palette, multi-layered tonal capabilities, and integrated rhythm systems [1]. Its ability to emulate a wide range of instrumental timbres enables exploration across genres including classical, jazz, and popular music. These technological affordances offer unique opportunities for developing polyphonic coordination, fostering ensemble interaction, and cultivating creative expression within group instructional contexts [2].

As technology continues to reshape the landscape of instrumental pedagogy, multi-keyboard digital instruments such as the Electone demand instructional approaches that differ fundamentally from traditional keyboard teaching methods [3]. Unlike conventional piano instruction, Electone pedagogy must account for the simultaneous management of upper and lower keyboards, pedalboard, and orchestral layering, all of which present unique challenges for group-based instruction. These complexities require teachers to adapt their methods to balance individual learning needs with ensemble cohesion, highlighting the necessity of specialized pedagogical frameworks. While research in music education has examined group piano teaching, digital keyboard instruction, and the integration of technology in instrumental pedagogy [4–6], scholarship on group Electone instruction remains limited. Existing studies have primarily focused on the Electone as a solo performance instrument or its role in competitions and recitals [7], with little attention given to how teachers systematically adapt their strategies in group learning environments. Furthermore, although private music institutions in China have seen increasing demand for Electone training, there is a scarcity of empirical research exploring how Chinese educators perceive and implement effective teaching methods for this instrument in group contexts.

**Research Gap:** To date, no comprehensive studies have critically examined how Electone teachers negotiate the instrument's unique technical and expressive features within group settings, nor how they integrate its technological affordances to enhance student engagement and collaborative musicianship. The absence of such studies limits our understanding of both pedagogical challenges and opportunities for curriculum development in this emerging field.

**Purpose of the Study:** This research seeks to address this gap through a qualitative investigation into the teaching practices of Chinese Electone educators. Drawing on semi-structured interviews and lesson observations at Chaoshan Art Training School, the study explores: (1) how pedagogical methods are adapted to the Electone's technical and expressive features; (2) strategies for integrating its technological capabilities into group instruction; and (3) teachers' perspectives on how these methods affect student motivation, skill development, and ensemble performance. Supplementary feedback from learners and parents supports data triangulation, providing a holistic



account of current practice and its implications for future pedagogical design.

## II. Literature Review

### Development Methods of Music Education

The evolution of music education is deeply rooted in theories of cognitive, social, and emotional development. Tao Xingzhi's philosophy of "creative child education" advocates nurturing innate creativity through the "five liberations" of mind, hands, mouth, space, and era, aiming to foster authentic self-expression in music [4]. This vision resonates with contemporary developmental approaches that emphasize experiential learning, especially in early childhood music education.

Historical analyses, such as those found in Chinese music journals from 1937 to 2006, document the integration of Eastern and Western pedagogical traditions, highlighting music's role in moral, emotional, and cultural development [5]. However, more recent research reveals a disconnect between these foundational philosophies and the application of digital technologies in the classroom. For example, Chen and Zhang [6] empirically demonstrated music's cognitive benefits, while Zhao [7] emphasized that its primary purpose should be holistic personal growth rather than technical mastery alone.

### Collaborative Learning Environment

While parental involvement in early childhood piano education significantly boosts musical literacy [11], and home environments play a crucial role in shaping musical engagement [12], the structured peer collaboration in classrooms remains largely underexplored. Although Yamaha dual-key keyboards have improved institutional pedagogy, they have largely overlooked peer-learning models [13]. Competitive platforms like the Super Fingertip Competition promote professional evaluation but do not foster peer-to-peer growth [14].

### Instrument-Specific Teaching Methods

The Electone's multi-keyboard interface necessitates simultaneous hand-foot coordination, creating orchestral textures that traditional pedagogy cannot provide [15]. Its timbral versatility supports experimental orchestration [16], yet students often struggle with real-time technical adaptation. While curricular integration emphasizes creativity and engagement [7], debates continue regarding standardization—balancing performance focus with holistic musicianship [17]. The Electone's orchestral replication capabilities offer accessible ensemble training [18], though limitations in acoustic authenticity can lead to pedagogical contention [19]. Methodological conflicts arise between Suzuki's structured repetition and Orff's improvisational approach [20], further complicated by outdated curricula that misalign with industry needs [21].

### Participation and Motivation

Intrinsic motivation is essential for sustained musical engagement. Zhu [22] links autonomy-supportive teaching—such as student-centered exploration—to long-term retention, while ensemble dynamics enhance cooperative motivation [23]. Allowing autonomy in instrument choice and incorporating gamification (e.g., multi-genre narratives) can further enhance engagement [23], and music has been shown to alleviate academic stress [22].

### Challenges in Teaching

Group Electone instruction faces a range of pedagogical challenges, including the inadequate adaptation of traditional piano accompaniment techniques for multi-keyboard ensemble contexts [24], which restricts effective skill transfer, and the absence of standardized approaches for accommodating learners with diverse backgrounds and prior musical experiences [25], leading to inconsistent instructional outcomes. The efficacy of Orff-based improvisational strategies for ensemble synchronization remains underexplored [26], particularly in addressing rhythmic cohesion within multi-tiered Electone performances, while role allocation inefficiencies in groups with heterogeneous skill levels [27] further complicate balanced participation. Additionally, the instrument's timbral simulation capabilities are often underutilized for dynamic orchestration exercises [28], reducing opportunities for creative sound exploration. Critically, the lack of a comprehensive pedagogical framework to address these interconnected challenges underscores a pressing need for standardization and adaptive strategy development in Electone-specific group instruction [24, 27].

### Assessment and Learning Outcomes

China's electronic keyboard programs successfully blend performance with technology [29], yet they lack standardized assessment methods. Blended learning models facilitate real-time feedback [30], but often struggle to evaluate ensemble interaction. Dual-keyboard assessments tend to prioritize technical execution over creativity [31], and while collaborative peer evaluations can improve rhythmic accuracy [32], they often lack longitudinal rigor.

### Technology Integration

The Electone's technical evolution allows for the emulation of traditional instruments [33], although gaps in timbral authenticity persist [34]. Multi-keyboard coordination requires specialized kinetic pedagogy [35], while interactive sound libraries enhance genre-based learning. While conservatories have begun integrating digital performance techniques [33], intelligent tools (e.g., AI rhythm trainers) remain underexplored.

### III. Methodology

#### 3.1 Research Design

This study employed a qualitative multiple-case study design to explore how different teaching methods are applied in group Electone instruction, focusing on the relationship between instructional strategies, student engagement, and ensemble performance. Two Electone teachers, each with distinct pedagogical approaches, were studied in depth to compare instructional philosophies and practices. The selection of a qualitative multiple-case study design is well-suited to the aims of this research, which seeks to explore how Electone teachers adapt and apply instructional strategies in group settings—a topic that requires deep contextual understanding and interpretive insight. Qualitative methods allow the study to capture the complex interplay between teaching methods, student engagement, and the technological features of the Electone, which cannot be meaningfully measured through quantitative metrics alone. A case study approach enables close examination of each teacher's practices within their real-life instructional environments, offering both rich, descriptive depth and comparative insight across different pedagogical styles. This design also supports data triangulation through the integration of lesson observations, teacher interviews, and supplementary materials, thereby enhancing the credibility and trustworthiness of the findings. Given the limited existing literature on group Electone instruction, this methodology allows for the generation of new knowledge grounded in lived experience, making it a strong and appropriate choice for addressing the research questions.

#### 3.2 Research Locale and Participants

The research was conducted at Chaoshan Art Training School in Qinhuangdao, China (Figure 2). Two Electone teachers, here referred to as Teacher Cui Han and Teacher Ji Yuan, participated in the study. Teacher Cui's group consisted of four kindergarten-aged students with varying prior keyboard experience. Teacher Ji Yuan's group comprised four mixed-level students working on a thematic medley. The selection was purposive, based on the teachers' experience in group Electone instruction and their willingness to allow sustained observation and post-lesson reflection.

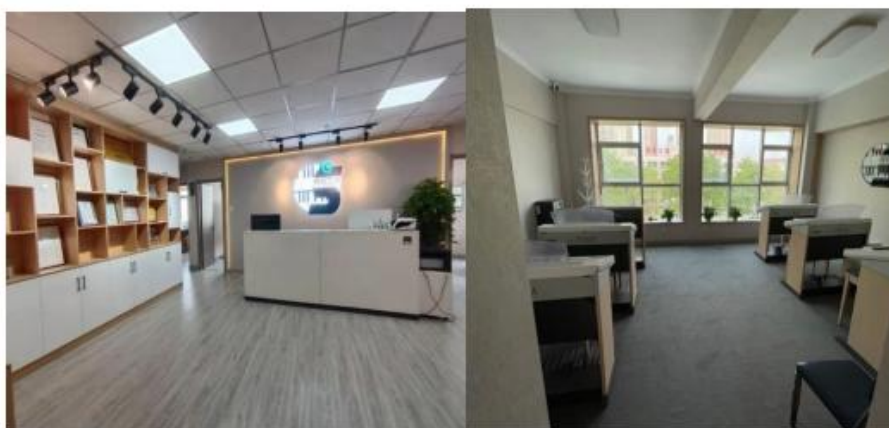


Figure 2, Chaoshan Art Training School

#### 3.3 Data Collection Methods

##### 3.3.1 Lesson Observations

A total of five observation sessions were conducted for each participating teacher, covering complete lessons from beginning to end. These observations followed a structured protocol designed to capture a range of instructional and learning dynamics, including the teaching methods and strategies employed, student responses, participation patterns, peer collaboration, ensemble rehearsal techniques, and any challenges that arose during the process. Attention was also given to teacher interventions, feedback styles, and lesson pacing. Detailed field notes were maintained to document verbal exchanges, gestures, instrument handling, and the overall classroom flow. All observations were conducted in a non-participatory manner to minimize disruption to the natural lesson environment.

##### 3.3.2 Teacher Interviews and Verbal Reflections

Following each lesson, semi-structured interviews were carried out with the participating teachers to obtain their reflections and insights. These interviews explored the rationale behind the teachers' chosen instructional methods, the adjustments made during lessons, challenges encountered when working with their specific student groups, and their perceptions of student progress and engagement. All interviews were audio-recorded with consent and subsequently transcribed to facilitate in-depth thematic analysis.

##### 3.3.3 Supplementary Materials

Supplementary materials were collected to provide additional context and validation for the observed practices. Photographs taken during lessons documented classroom layouts, seating arrangements, and moments of group

collaboration. Lesson records, annotated musical scores, and rehearsal notes were also gathered, serving as tangible evidence to cross-check both observational data and teacher accounts.

### 3.4 Data Analysis

Data from the three primary sources—lesson observations, teacher interviews, and supplementary materials—were integrated through a thematic analysis approach. The first stage, data familiarization, involved repeated review of field notes and transcripts to identify emerging patterns. The second stage, coding, applied descriptive codes to text segments related to teaching strategies, student behaviors, and ensemble techniques. The third stage, theme development, involved grouping related codes into overarching themes such as balancing individual and group needs, engagement strategies, ensemble synchronization, and the importance of home practice. In the final stage, cross-case comparison, themes were compared between the two participating teachers, revealing both convergences and divergences in instructional philosophies and classroom execution. Triangulation was achieved by corroborating findings across the different data sources, ensuring credibility and depth in the analysis.

### 3.5 Ethical Considerations

The study adhered to strict ethical standards to protect participants' rights and privacy. Participation was entirely voluntary, and informed consent was obtained from both teachers and the parents or guardians of the students. To ensure anonymity, pseudonyms were assigned to all teachers and students. Photographic documentation was limited to classroom contexts and excluded any identifiable facial features of minors. All collected data, including notes, transcripts, and images, were securely stored and accessible only to the research team.

### 3.6 Limitations

Several limitations must be acknowledged. First, the small sample size means the findings are not statistically generalizable to all Electone teachers or music institutions. The use of purposive sampling, while suitable for in-depth qualitative inquiry, may introduce selection bias, as the participants were chosen based on their experience and willingness to participate. Second, the study is confined to one geographic and institutional context, which may not reflect broader practices across different regions, educational systems, or cultural settings. Third, the researcher's interpretations, particularly during thematic coding and cross-case analysis, carry the risk of subjective bias, although this was mitigated through methodical triangulation and iterative analysis of multiple data sources.

## IV. Results and Discussion

### 4.1 Overview of Data Sources

A total of five observation sessions were conducted for each participating group, documenting the full progression of lessons, including teaching methods, student responses, ensemble performance, and teacher interventions, with detailed field notes recording verbal exchanges, body language, and practical exercises. Following these sessions, teachers participated in interviews, sharing reflections on their instructional strategies, challenges encountered, perceptions of student progress, and adjustments made during lessons, which offered valuable insights into their pedagogical reasoning. Supplementary materials, such as photographs of seating arrangements, instrument setups, and moments of peer collaboration, along with lesson records including annotated scores and rehearsal notes, were also reviewed to corroborate and contextualize the observations, providing a rich and multi-faceted data set for analysis.

### 4.2 Profiles of Participating Teachers and Groups

#### *Teacher Cui Han Group (Kindergarten, 4 students)*

This group consisted of four kindergarten-aged students with little keyboard experience. Lessons emphasized foundational motor skills, hand shape, and correct finger touch, with the teacher adopting a patient, corrective approach. Group cooperation was encouraged but limited by the students' short attention spans. (Figure 1)



Figure 1, Teacher Cui Han and her student  
Teacher Ji Yuan Group (Mixed-level, 4 studentws)

This group included four students of mixed skill levels, working on an arrangement inspired by Harry Potter. Lessons integrated technical rehearsal, ensemble practice, and interpretive work through storytelling and thematic engagement. Students displayed higher levels of sustained focus compared to the kindergarten group, enabling more complex ensemble coordination.(Figure 2)



Figure 2, Teach Ji Yuan and her student

### 4.3 Observations of Group Electone Lessons

| Dimension                                   | Teacher Cui’s Group                                                                                                                                                                                | Teacher Ji Yuan’s Group                                                                                                                                                                                                      |
|---------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Student Participation & Involvement         | Participation was uneven. Engagement peaked during direct teacher interaction but dropped during peer instruction and waiting periods. Some students became distracted when not actively engaged.  | Participation was consistent throughout. Students stayed attentive during explanations, discussions of the music’s background, and demonstrations. Rhythmic clapping before playing maintained group-wide involvement.       |
| Peer Collaboration & Ensemble Skills        | Collaboration was basic, limited mainly to unison playing. Tempo inconsistencies and incorrect finger positioning reduced ensemble cohesion.                                                       | Collaboration was more advanced, involving active discussion of the score, coordination of medley parts, and adjustments to match each other’s dynamics. Synchronization improved through repeated sectional rehearsals.     |
| Teacher Guidance & Instructional Strategies | Relied on one-on-one corrective feedback, emphasizing finger placement, pedal usage, and posture. Short phrases were demonstrated for imitation, with repetition used to strengthen muscle memory. | Employed a blend of sectional and full-group rehearsals. Integrated storytelling and film imagery to increase engagement, segmented complex pieces for targeted practice, and gave constructive feedback after performances. |
| Classroom Atmosphere & Learning Environment | Supportive atmosphere but difficult to sustain attention, especially among younger students, who required frequent redirection.                                                                    | Relaxed yet focused learning environment. Storytelling and movie references maintained concentration and motivation across varying ability levels.                                                                           |
| Progress in Musical Works                   | Early lessons showed difficulty in finger placement and coordination. Students gradually gained confidence in short segments, though ensemble synchronization remained inconsistent.               | Followed a structured progression from introduction to final performance, with steady improvement in technical execution, rhythm control, and dynamic balance.                                                               |

Table 1, Comparison of Student Engagement, Collaboration, Instructional Strategies, Classroom Atmosphere, and Progress Between Teacher Cui’s and Teacher Ji Yuan’s Groups

Based on the comparative analysis of Table 1 and classroom observations, it is clear that differences in student engagement, collaboration, instructional response, and progress are closely linked to age and developmental stage. In Teacher Cui’s group, student participation was uneven, reflecting the shorter attention spans and higher susceptibility to distraction typical of younger learners aged 5 to 6. While some students actively engaged in demonstrations and responded promptly to prompts, others became distracted, particularly during peer instruction

segments. Engagement peaked during direct teacher interaction but tended to decline when students were waiting for their turn. In contrast, Teacher Ji Yuan’s group, with an average age of 12, exhibited more consistent participation. Students remained attentive during explanations, discussions of musical background, and demonstrations, and interactive activities, such as rhythmic clapping before playing, helped sustain steady involvement across the group, fostering uniform engagement.

Peer collaboration and ensemble skills further differentiated the two groups. In Teacher Cui’s sessions, collaboration was primarily limited to unison playing, and difficulties in maintaining tempo and correct finger placement constrained ensemble cohesion. By contrast, Teacher Ji Yuan’s students engaged in more advanced collaborative work, frequently discussing the score, coordinating different parts within a medley, and adjusting their playing to align with each other’s dynamics. Sectional rehearsals improved synchronization over time, resulting in more cohesive and confident ensemble performance. These differences reflect not only the students’ developmental readiness but also the pedagogical strategies employed to match their capabilities.

Instructional strategies, classroom atmosphere, and overall progress highlighted additional contrasts. Teacher Cui Han emphasized one-on-one corrective guidance, focusing on finger placement, posture, and foot-pedal use, with repeated short phrases to strengthen muscle memory. While supportive, his classroom required frequent redirection to maintain attention among younger students. Teacher Ji Yuan, on the other hand, combined sectional and full-group rehearsals, integrating storytelling and film imagery to enhance engagement. His structured, sequential approach enabled students to develop technical skills, rhythm control, and dynamic balance steadily, culminating in polished ensemble performances that reflected both individual growth and collective cohesion. These observations underscore that effective group Electone instruction must be developmentally attuned: younger learners benefit from highly supportive, individualized, and engagement-focused approaches, whereas older or more advanced students thrive under structured, integrative, and collaborative pedagogical strategies. This alignment between teaching approach and developmental stage is essential to promote meaningful progress in both individual and group musical development.

It should be emphasized that the students in Teacher Cui’s group are between 5 and 6 years old, a developmental stage characterized by short attention spans and high susceptibility to external distractions. As a result, fluctuations in participation and the need for frequent guidance and reminders during class are normal. In contrast, Teacher Ji Yuan’s students have an average age of 12, which not only allows for more mature attention control but also provides them with a certain foundation in music learning. This enables them to demonstrate greater stability and autonomy in class discussions, ensemble collaboration, and rhythm management.

4.4 Comparative Analysis of Teaching Approaches

| Dimension                                    | Teacher Cui                                                                                                       | Teacher Ji Yuan                                                                                                                     |
|----------------------------------------------|-------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Instructional Pacing                         | Slower, skill-focused; emphasizes technical correctness before progression                                        | Faster pace; integrates technical skills and musical interpretation within each lesson                                              |
| Focus on Cooperation vs. Technical Skill     | Prioritizes individual technical skills over ensemble blending, considering students’ age and developmental stage | Emphasizes cooperation and ensemble synchronization, using musical storytelling to enhance group cohesion                           |
| Teaching Philosophy & Pedagogical Priorities | Believes technical foundations must be firmly established before complex collaboration                            | Supports developing ensemble skills and interpretive expression alongside technical growth, using thematic engagement as motivation |

Table2 Comparative Analysis of Teaching Approaches

Table 2 shows key differences between Teacher Cui Han and Teacher Ji Yuan in instructional strategies. Teacher Cui Han adopts a slower, skill-focused pacing, emphasizing technical correctness before progressing to ensemble work. This approach prioritizes individual technical mastery, reflecting a belief that a solid technical foundation is essential before engaging in complex collaborative tasks. Consequently, cooperation and ensemble blending are secondary considerations, tailored to the developmental readiness of younger learners who may struggle with sustained attention and coordination. In contrast, Teacher Ji Yuan employs a faster-paced, integrative approach that simultaneously develops technical skills and musical interpretation. By emphasizing cooperation, ensemble synchronization, and thematic storytelling, Teacher Ji Yuan fosters both individual skill growth and group cohesion, motivating students through meaningful engagement with the music.

4.5 Thematic Findings from Teacher Interviews

| Theme                                | Teacher Cui                                                                                                     | Teacher Ji Yuan                                                                                           |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Balancing Individual and Group Needs | Young learners require repeated individualized corrections (posture, fingering), which can slow group progress. | Mixed-level groups: stronger students advance faster, but pacing must ensure weaker members stay engaged. |

|                                                    |                                                                                                                        |                                                                                                                                                |
|----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Strategies for Sustaining Attention and Engagement | Frequent activity changes and one-on-one interaction needed; restlessness among non-playing students can disrupt flow. | Narrative-based teaching and thematic associations (e.g., linking music to story elements) maintain engagement.                                |
| Ensemble Synchronization as a Core Skill           | Introduces basic unison playing to develop timing awareness; complex ensemble work less emphasized due to age.         | Emphasizes rhythmic alignment, dynamic balance, mutual listening; uses sectional rehearsals before full group play.                            |
| Importance of Home Practice and Self-Management    | Concerned that without home practice, foundational skills may regress; emphasizes finger placement.                    | Encourages structured self-practice, focusing on difficult sections first; recommends listening to recordings to reinforce ensemble awareness. |

*Table 3, Thematic Findings from Teacher Interviews on Group Electone Instruction*

The thematic analysis of teacher interviews, as summarized in Table 3, highlights how student age and developmental stage strongly influence pedagogical strategies in group Electone instruction. Teacher Cui, working with younger learners, prioritizes individualized corrections for posture and fingering, acknowledging that short attention spans and high distractibility necessitate frequent activity changes and one-on-one interaction. Ensemble work is introduced at a basic level, focusing on unison playing to cultivate timing awareness, reflecting the careful balance required between developing individual skills and maintaining overall group progress without overwhelming young students.

In contrast, Teacher Ji Yuan, instructing older or more advanced students, implements strategies that support more complex cognitive and musical engagement. Narrative-based teaching and thematic associations help sustain attention, while sectional rehearsals and an emphasis on rhythmic alignment, dynamic balance, and mutual listening facilitate advanced ensemble synchronization. These strategies enable students to coordinate more effectively, manage challenging musical passages, and develop interpretive skills alongside technical proficiency. The contrast between the two approaches underscores the importance of aligning instructional methods with developmental readiness and group composition, ensuring that teaching is both effective and appropriate for students' cognitive and musical abilities.

The findings also emphasize the critical role of home practice and self-management across age groups. While younger students may require more guided practice to reinforce foundational skills, older learners can benefit from structured independent practice, including focused attention on challenging sections and listening to recordings to enhance ensemble awareness. These insights imply that effective group Electone instruction should combine age-appropriate classroom strategies with support for independent learning, fostering both individual skill development and collective musical growth. Overall, the study suggests that developmentally attuned teaching, attentive to both engagement and skill consolidation, is essential for achieving meaningful progress in group music education.

## V. Conclusion

This study examined how two Electone teachers applied and adapted teaching methods in group lesson settings, revealing that effective group instruction hinges on the balance between fostering individual skill development and cultivating ensemble cohesion. Teacher Cui's kindergarten group demonstrated that young beginners benefit from simple, repetitive exercises, strong teacher modeling, and an emphasis on cooperative playing to build foundational skills and musical confidence. In contrast, Teacher Ji Yuan's mixed-level group showed that older or more experienced learners respond well to targeted technical correction, structured sectional rehearsals, and strategies that promote interpretive depth and independence.

Across both cases, common challenges emerged, including sustaining students' attention, coordinating multiple parts in ensemble settings, and ensuring regular home practice. The findings suggest that successful group Electone instruction requires flexible pacing, differentiated feedback, and the creative integration of storytelling, visual aids, and varied rehearsal formats to maintain engagement. Ultimately, group lessons are most effective when instructional approaches are closely aligned with the developmental stage, skill level, and collaborative readiness of the students, ensuring both technical progress and positive ensemble experiences.

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