

Original Research Article

Exploring the Pedagogical Potential of Schenkerian Analysis in Japan: A Case Study on Teaching with Schenkerian Graphs

ABSTRACT

Despite Schenkerian analysis's widespread use in music theory education in many countries, this analytical approach has not been comprehensively introduced or widely applied in Japan. This study explores the application of Schenkerian analysis to deepen the understanding of musical structure among non-music major students in Japan. Utilizing foreground graphs, the study aims to evaluate the effectiveness of teaching Schenkerian techniques to individuals without extensive theoretical backgrounds. Five participants from Kyushu University engaged in a structured learning process involving listening, analysis, and comparison of musical scores and Schenkerian graphs. Qualitative data were collected through a combination of multiple-choice questions and open-ended responses. Results indicate that foreground graphs significantly enhance participants' comprehension of musical structure, though understanding the theoretical principles of Schenkerian analysis varied among participants. Feedback suggests that while the method is effective, additional instructional strategies are needed to address the complexity of Schenkerian concepts. Future research will focus on increasing participant numbers, incorporating practical activities, using diverse musical examples, and adopting qualitative methods to further explore the educational potential of Schenkerian analysis.

Keywords: Schenkerian analysis, Schenkerian Graphs, foreground, musical structure, music theory education in Japan, qualitative research

1. INTRODUCTION

Schenkerian analysis, a method of tonal music analysis developed by Austrian-Hungarian music theorist Heinrich Schenker (1868-1935) in the late 19th century, has been integrated into higher music education systems in many countries, predominantly in North America[20]. Despite its introduction to Japan after the 1920s¹, Schenkerian methodologies have not been widely adopted or utilized for music analysis in Japan (Mikami, 2016: 123). Moreover, systematic education on Schenker's theories and analytical techniques has not been sufficiently established (Numaguchi, 2019: 54), resulting in minimal research exploring the application of Schenkerian analysis in music education.

Teaching Schenkerian concepts and analytical methods to non-music major university students in Japan who lack professional knowledge of music theory, including Schenkerian

¹ Through an extensive investigation, the author discovered that the earliest mention of Schenker in Japanese academic literature appears in Tamura Hirosada's "Beethoven's Ninth Symphony" (1924: II-IX).

theory, poses a significant challenge. This study explores, through a case study, the potential for these students to deeply understand musical structure using Schenkerian graphs, specifically foreground graphs, which provide the most detailed visualization of musical structure. The rationale behind targeting non-music majors was to evaluate the effectiveness of the designed teaching methods in introducing Schenkerian analytical techniques to individuals without an extensive theoretical background in this specific area. By making Schenkerian analysis accessible to participants with more general musical knowledge and experience, the study aimed to potentially broaden the reach and applications of this approach beyond specialized music theory circles. The qualitative approach was used, involving a small sample size, facilitated in-depth observation, and detailed data collection. This in-depth exploration was crucial for gaining insights into the participants' understanding of Schenkerian analysis and the effectiveness of the teaching methods employed.

2. PRIOR RESEARCH ON INCORPORATING SCHENKERIAN ANALYSIS INTO MUSIC EDUCATION IN JAPAN

To date, the most relevant research in Japan on this topic is that conducted by Hayakawa (2015, 2016). In 2015, Hayakawa (2015) proposed a method for non-music majors to apply Schenkerian analysis in improving their piano performance skills. The 2016 study used Schenkerian graphs and three piano solo pieces in a survey assessing potential improvements in musical understanding and piano performance among students at non-music professional teacher training institutions. The study analyzed the opening phrases of each piece. Despite the small sample size of ten participants, Hayakawa revealed that Schenkerian graphs might be beneficial. She noted that more than half of the students found that visualizing the relationships between notes enhanced their understanding and interpretation of the compositions, which led to more expressive methods emphasizing these relationships (2016: 18). This suggests the potential usefulness of Schenkerian graphs and their possible application in music education.

In addition to the studies mentioned above, further efforts to incorporate Schenkerian analysis into music education in Japan are exemplified by Cox's (2017) report titled "On Schenkerian theory and the education of tonal music analysis." In this report, Cox advocates for the potential of integrating Schenkerian theory into music theory curricula at Japanese universities by highlighting the benefits of learning Schenkerian analysis for students. She posits that acquiring this analytical approach could enable students to grasp the overarching voice leading structures in musical compositions. Furthermore, Cox suggests that students can apply Schenkerian principles to inform their compositional practices.

However, as noted by Hayakawa (2015: 64), while there has been extensive research on Schenker's musical philosophy, analytical principles, and performance aesthetics (e.g., Kimura 2004, Wada 2009, Nishida 2018), efforts to apply Schenkerian analysis in music education remain limited. Therefore, this paper focuses on exploring the potential applications of Schenkerian graphs in music education through a case study. In Schenkerian analysis, Schenkerian graphs are used to visually clarify the relationships between notes throughout the analysis process. These graphs display the results of the analysis, enabling students to acquire foundational knowledge by engaging with the analytical process. Students can begin by focusing on some of the principal symbols used on the Schenkerian graphs, understanding how these symbols contribute to the overall structure and meaning of the composition. They then explore how melodic lines and harmonic progressions are simplified. This process aims to enhance students' ability to profoundly analyze compositions, from surface details to deeper layers.

3. SCHENKERIAN GRAPHS

(1) Overview of Schenkerian Graphs

This section provides an overview of Schenkerian graphs, including their definition, classification, and the terminology used in this study. The fundamental principle of Schenkerian analysis is extracting essential tones from decorative tones (such as passing tones) through a reductive process, thereby revealing the underlying structural framework of the musical work. A Schenkerian graph is a simplified musical score derived from Schenkerian analysis, which abstracts the structure of a musical work. Schenkerian graphs are generally categorized into three levels: foreground, middleground, and background, based on the degree of simplification. At each level, the relationships among melody, harmony, and other musical elements are visually clarified, enabling a logical comprehension of the musical structure. Compared to the more complex middleground graphs and the highly abstract background graphs, the foreground graphs retain more details from the original composition, being closest to the original score composed by the musician. As a result, more information from the original score, such as non-harmonic tones, is preserved, making it easier for students without specialized knowledge in music theory to comprehend. Due to these characteristics, foreground graphs were predominantly used in this study.

(2) Notational Symbols Used in Schenkerian Graphs

In the context of Schenkerian analysis, specific graphical elements, such as lines (e.g., slurs indicating prolongation) and note heads (highlighting structural tones), are used as symbols to convey the analytical interpretation of musical structure (refer to Example 2). These symbols are not typically found in standard musical scores. This section explains the most commonly used symbols in Schenkerian graphs. While the application of these symbols has been described differently by scholars, this paper primarily references the relatively accessible work, "Analysis of Tonal Music: A Schenkerian Approach" by Cadwallader and Gagne (1995)². It is important to note that these symbols were explained as preliminary knowledge to participants during the study.

Noteheads

In Schenkerian graphs, two types of noteheads are used: open noteheads and filled-in noteheads. Open noteheads represent structurally important tones that form the fundamental structure, such as primary chords (e.g., tonic triads). Filled-in noteheads represent less structurally important tones, often functioning as embellishing or non-chord tones (e.g., neighboring tones, passing tones, suspensions, and anticipations). Different types of noteheads indicate the relative structural importance of tones, with open noteheads (highest level) transitioning to filled-in noteheads with stems, flags, and plain filled noteheads (lowest level), reflecting decreasing melodic and harmonic significance.

Using Example 1, which shows the original score and its foreground graph, we observe that ornamental notes are omitted (as seen in Measure 5). The primary melodic line and harmonic progressions are clearly highlighted and simplified. Filled-in noteheads surround open noteheads, visually depicting their role in shaping the composition through embellishments,

² For specific rules regarding the use of each symbol, please refer to the aforementioned book.

arpeggiated chords, and consonant leaps. The open noteheads G-F-E-D-C form the fundamental line of the '5-line.'

Example 1 (a) Original Score, (b) Foreground Graph. Haydn: Piano Sonata No. 36 in C major, Hob. XVI:21, Op. 13-1, mm. 1-6. Source: Yu, Suxian³ (1993: 68)

(a) Allegro [moderato]

(b)

Other Symbols

In addition to noteheads, Schenkerian graphs use slurs, dashed ties, beams, and slanted lines to indicate relationships between notes at different hierarchical levels. Slurs group melodically or harmonically related notes, while dashed ties show sustained notes beyond an intervening note, symbolizing a 'mental sustain.' For example, in measures 1, 2, and 5 of Example 1's foreground graph, dashed ties connect notes (G, F, D) that continue their inherent motion beyond the surface melody. Roman numerals indicate harmonic functions.

4. CASE STUDY ON THE APPLICATION OF SCHENKERIAN GRAPHS

This section summarizes the case study **investigating** how the utilization of Schenkerian graphs influences students' understanding of musical structure. The study involved a series of designed steps, and data were collected through a questionnaire to assess participants' levels of understanding and gather feedback about the survey content.

(1) Subjects

As this study followed a qualitative research approach, a small number of participants were chosen to facilitate detailed observation and in-depth data collection. The participants were

³ Yu, Suxian (1931-2020) was a Chinese composer, music theorist, and professor at the Central Conservatory of Music. She is regarded as one of the pioneers in the research and dissemination of Schenkerian analysis in China. Her book, "An Introduction to Schenkerian Analysis," is known as the first comprehensive and systematic introduction to Schenker's analytical methods in China, making significant contributions to the field of music theory within the Chinese academic community.

five non-music major students from Kyushu University, selected through a preliminary survey assessing their musical background and knowledge. Although Schenkerian analysis typically requires advanced knowledge of harmony and counterpoint, the selection criteria aimed to include participants with a foundational understanding of tonal music theory gained through university courses. Specifically, the participants: 1) had completed introductory music theory courses covering basic harmonic and melodic principles; 2) possessed experience in analyzing simple musical compositions; and 3) could decipher the symbols commonly used in Schenkerian graphs. None of the participants had prior formal training or exposure to Schenkerian analysis before participating in this study. This allowed for an evaluation of the effectiveness of the designed teaching methods in introducing Schenkerian analytical techniques to participants without a pre-existing theoretical foundation in this specialized area. Additionally, while unrelated to the selection criteria, all participants had more than six years of experience in playing musical instruments, primarily the piano, providing them with a practical musical background. The study was conducted individually with each participant from May to June 2022, with an average participation time exceeding three hours, excluding breaks.

(2) Materials

Musical samples for the survey were selected to align with participants' understanding of music theory. Works by representative composers from the Baroque, Classical, and Romantic periods were chosen, focusing on opening sections with regular harmonic progressions, clear melodic movements, and simple rhythms. These selections facilitated easier analysis. The foreground graphs used common Schenkerian notational symbols to clearly illustrate the fundamental structure, enabling participants to grasp essential elements of musical structure.

(3) Methods

A three-task process was established, each designed with specific learning objectives and steps that are not necessarily suited for regular school education but tailored for the purpose of this case study.

Task I: Understanding Schenkerian Graphs

To understand the conventional symbols and usages of Schenkerian graphs⁴.

i) Introduction of Schenkerian analysis

Before explaining the symbols and usages of Schenkerian graphs, it was crucial to familiarize students with the basic concepts of Schenkerian analysis and its importance as a tool for analyzing musical structure. An overview of Schenkerian analysis, its applications, reductive practices, and unique terminologies was provided.

ii) Explanation of Symbols and Usages

To deepen the understanding of musical structures using Schenkerian graphs, it is essential to comprehend the conventional symbols and their usage. This step involved explaining the role of Schenkerian graphs in visualizing the structure of musical works and detailing the

⁴ The goal was not for students to become proficient in constructing Schenkerian graphs themselves, but rather to appreciate the significance of Schenkerian analysis in understanding musical structure through the use of these graphs.

symbols necessary for interpreting these graphs⁵. To facilitate understanding, explanations were accompanied by Example 2, demonstrating how the melodic line undergoes reduction.

Example 2 (a) Original Score, (b) Foreground Graph, (c) Partial Reduction. Schumann: Album Leaves *Albumblätter*, Op. 124-16, mm. 1-8. Source: F. Salzer (1952: 43).

(a) **Allegretto**

(b)

(c)

The image shows three staves of music. Staff (a) is the original score for Schumann's 'Albumblätter', Op. 124-16, mm. 1-8, marked 'Allegretto'. It features a treble clef, a key signature of one flat, and a 3/4 time signature. The melody is written on a single staff. Staff (b) is the foreground graph, which uses a treble clef and a key signature of one flat. It shows the melodic line with various annotations: a dashed line above the notes, a solid line below, and a bracket under the first four notes. Staff (c) is the partial reduction, showing the same melodic line with a dashed line above and a solid line below, and a bracket under the first four notes.

iii) Graphs Reading Practice

Multiple practice sessions were conducted to familiarize participants with reading various foreground graphs. Through this practice, participants gained a better understanding of notehead types and their significance, the usage of linear symbols (slurs, beams, and dashed lines), as well as alphabetical symbols (e.g., N = Neighbor note, P = Passing tone) employed in Schenkerian graphs. Examples 3 and 4, selected from Felix Salzer's (1952) textbook, were chosen for their beginner-friendly nature and ease of understanding.

Example 3 (a) Original Score, (b) Foreground Graph. Mozart: Piano Sonata No. 14, K. 457, mm. 1-4. Source: F. Salzer (1952: 122)

(a) **Molto allegro**

(b)

The image shows two staves of music. Staff (a) is the original score for Mozart's Piano Sonata No. 14, K. 457, mm. 1-4, marked 'Molto allegro'. It features a treble clef, a key signature of two flats, and a 2/4 time signature. The melody is written on a single staff. Staff (b) is the foreground graph, which uses a treble clef and a key signature of two flats. It shows the melodic line with various annotations: a dashed line above the notes, a solid line below, and a bracket under the first four notes. The graph includes the letters 'N' and 'I' to denote neighbor notes and intervals.

Example 4 (a) Original Score, (b) Foreground Graph. J.J. Froberger: Suite No. 6, "Auf die Mayerin," mm. 1-4. Source: F. Salzer (1952: 125)

⁵ Refer to Section 3 for more information.

(a)

(b)

[From *DTDe*, Vol. VI]

Task II: Analyzing the Original Score

To grasp the musical features of the original score's opening section, including motives, melody, harmony, and rhythm.

i) Listening to the Original Composition

In this step, participants listened to the original composition corresponding to Example 1. Specific questions were posed to guide their listening, including:

- "How does the melody move? Does it ascend, descend, or jump?"
- "What are the characteristics of the rhythm? Is it fast, slow, or irregular?"
- "Focus on the types of chords and their progressions. How do changes in harmony shape the mood of the piece?"
- "What variations occur in the dynamics (loudness), and how do these influence its expression?"
- "Describe your impression of the piece in words. What emotions or images does it evoke?"

These questions encouraged participants to vividly capture the musical features, setting the stage for a deeper analysis in the following step.

ii) Analyzing the Musical Features

After listening, participants analyzed the musical features shown in the score. The observed features included: 1) extensive use of ornamentation, such as mordents; 2) the melody generally moves in stepwise motion, with occasional leaps; 3) use of ascending perfect arpeggiated chords and descending passing tones; 4) rhythmic motives combining dotted sixteenth notes and thirty-second notes; and 5) consistent use of dotted rhythms in the melodic line, while the bass line primarily uses eighth notes and progresses in leaps.

Task III: Comparing the Original Score and Schenkerian Graphs

To understand the basic techniques of Schenkerian analysis and deepen the comprehension of musical structure through comparative practice.

i) Understanding Musical Structure through Schenkerian Analysis

Participants were introduced to the comparison between the original score and the foreground graph from Example 1. This comparison aimed to demonstrate how Schenkerian analysis interprets and analyzes the structure of a composition. The main steps included: 1) placing the original score and the foreground graph side by side and examining the correspondence between each note in detail; 2) highlighting the significance of emphasized notes in Schenkerian analysis by circling and connecting them with lines; 3) explaining why certain notes were considered important and how they influenced the overall structure of the phrase; and 4) clarifying the reasons for omitting certain notes from the Schenkerian graphs and their influence on the melody and harmony.

ii) Practical Analysis Using Schenkerian Techniques

To reinforce their understanding of Schenkerian analytical techniques, participants were asked to analyze the relationship between the original score and the foreground graph from Example 5. Specifically, they compared and analyzed the first four measures, grasping the correspondence between notes in both representations. This practical exercise aimed to deepen their comprehension through hands-on application. During the analysis, participants were prompted with guiding questions to ensure a thorough understanding, such as:

- What is the correspondence between notes in the original score and the foreground graph?
- Which notes are emphasized in Schenkerian analysis, and what roles do they play?
- Why were certain notes omitted from the foreground graph?

After completing the analysis, participants shared their insights, allowing for further reflection and discussion of the concepts involved. Through this iterative process of analysis, deliberation, and knowledge-sharing, participants were expected to develop a stronger grasp of the fundamental concepts and techniques underpinning Schenkerian analysis, solidifying their comprehension of musical structure.

【Example 5】(a) Original Score, (b) Foreground Graph, (c) Reduction of Outer Voices. Beethoven: Piano Sonata Op. 2, No. 1 - III, Trio, mm. 1-4. Source: A. Cadwallader & D. Gagné (1998: 82)

(a) Trio

(b)

(c)

(4) Data Collection and Analysis

Responses to the multiple-choice questions were analyzed using a 5-point Likert scale. Participants rated their answers on a scale from 1 to 5, with higher numbers indicating more favorable evaluations. For example, the question assessing "Understanding of Schenkerian Analysis" was rated as follows: "Not understood at all (1 point), Not well understood (2 points), Neutral (3 points), Understood (4 points), and Very well understood (5 points)." The scores from all participants were summed and divided by the total number of participants to calculate the mean value. Open-ended questions were included to capture nuances in participants' understanding and opinions that the 5-point scale could not measure. Participants provided detailed reasons and opinions, from which common themes were extracted for further analysis. Combining the Likert scale and open-ended questions allowed for a more comprehensive analysis. The degree of achievement of the research objectives, as well as the effectiveness and limitations of the methods, were analyzed based on these results. Feedback from participants was then considered to develop recommendations for improving the research methods and to explore future research directions.

5. RESULTS AND DISCUSSION

(1) Utilizing Schenkerian Graphs

In the multiple-choice responses, 2 participants selected 'Satisfied' (4 points), and 3 participants selected 'Very Satisfied' (5 points), resulting in a high average rating of 4.6 out of 5 points.

In the open-ended responses, many participants positively evaluated the usefulness of the foreground graphs. Some feedback included:

- "The reading practice deepened my understanding of the foreground graphs, making it easier to grasp the overall structure of the musical piece."
- "The visual information from the foreground graphs allowed me to more clearly perceive the musical structure."

However, some participants reported difficulties:

- "I struggled with understanding how to read the graphs and the meaning of specific symbols."
- "While the notehead symbols were easy to understand, additional detailed explanations and resources on linear symbols like dashed ties and beams would be beneficial."

These results and feedback indicate that the use of foreground graphs was beneficial for most participants. However, some participants required more time to understand the relatively abstract symbols of Schenkerian graphs, particularly those related to the concept of prolongation, such as dashed ties. To facilitate the understanding of these challenging symbols, a multi-faceted approach with various examples, visual aids, and metaphors could be employed.

(2) Understanding of Schenkerian Analysis

In the multiple-choice responses, 1 participant selected "Not well understood" (2 points), 4 participants selected "Neutral" (3 points), and 1 participant selected "Understood" (4 points), resulting in an average score of 3.6 points. This score indicates a variation in the level of understanding among the participants. Notably, participants who scored lower than the average appeared to struggle with comprehending the concepts and techniques of Schenkerian analysis.

In the open-ended feedback, some participants commented:

- "It took time to understand the concepts and rules of Schenkerian analysis."
- "The specialized concepts were confusing."
- "More knowledge of harmony would have been helpful for understanding."

However, many participants provided positive feedback, indicating a basic grasp of Schenkerian analysis:

- "While I haven't fully mastered the methods, I believe I have grasped the basic concepts of the analysis."
- "Through Task I-III, I was able to understand the basic reading of Schenkerian graphs and the meanings of the symbols."
- "Although I found analyzing musical structures difficult at times, learning Schenkerian analysis broadened my understanding of music."
- "Initially, I was somewhat confused, but analyzing musical phrases helped deepen my understanding of both the analysis method and the phrases."
- "Comparing the original score with the Schenkerian graphs made the analysis easier to understand. Schenkerian analysis felt more complex than general music analysis but had depth and a multifaceted approach."

Overall, these results indicate that while the concepts and methods of Schenkerian analysis are complex and require careful teaching strategies, learning through a separate study of the original score and Schenkerian graphs, followed by practical analysis exercises, can be effective in helping students understand musical structure.

(3) Understanding of Musical Structure

In the multiple-choice responses, 3 participants selected "Understood" (4 points), and 2 participants selected "Very Well Understood" (5 points), resulting in an average score of 4.4 out of 5. This indicates that all participants gained a substantial understanding of musical structure.

The open-ended feedback revealed significant learning experiences regarding musical structure. Positive comments included:

- "Visualizing the structure of the composition helped deepen my understanding."
- "Participating in practical activities like interpreting Schenkerian graphs and comparing them with the original score enhanced my comprehension."
- "Learning this analytical method made it easier for me to understand how melody and harmony are formed and integrated into entire compositions, not just phrases."
- "Compared to the beginning, I have gained more confidence in my ability to understand and analyze musical structure."

On the other hand, some participants expressed the need for more time and practice:

- "I still lack confidence in analyzing musical structures on my own and would benefit from more study time."
- "While I think I have gained a deeper understanding of musical structure through Schenkerian graphs, I still find it challenging to understand the roles of individual notes in the context of harmonic analysis, indicating the need for further learning and practice."
- These comments indicate that while many participants were satisfied with their understanding, some felt they needed more practice to achieve full confidence.

The survey also included an open-ended question: "Do you think the deepened understanding of musical structure has been beneficial in any way?" Responses included:

- "Through this learning experience, I became able to apply Schenkerian analysis to actual musical works. I believe it will be useful for music analysis."
- "A deeper understanding of musical structure has enabled me to interpret musical works more richly, which may be beneficial for future music appreciation and performance."

These results suggest that learning the techniques of Schenkerian analysis and deepening the understanding of musical structure can potentially enhance participants' abilities in analyzing, appreciating, and performing music.

6. CONCLUSION AND FUTURE DIRECTIONS

This study aimed to deepen students' understanding of musical structure by guiding them through the basic techniques of Schenkerian analysis using visual information from the foreground graphs. Non-music majors were chosen as subjects to explore the potential applicability of Schenkerian analysis for individuals without specialized training in advanced music theory in Japan. The rationale behind this choice was to evaluate the effectiveness of the designed teaching methods in introducing Schenkerian analytical techniques to participants with limited theoretical backgrounds.

The results revealed that employing foreground graphs based on Schenkerian analysis effectively promotes participants' understanding of musical structure. Most participants provided positive feedback on the utility of the foreground graphs. However, there was a variation in the understanding of Schenkerian analysis among participants, particularly regarding the theoretical principles and rules, suggesting the need for more effective instructional strategies.

The study also found that deeply understanding musical structure through Schenkerian analysis can offer new perspectives for appreciating music from multiple angles, highlighting the significance of this approach in music education. Moving forward, the research will focus on the following points:

- 1) Increasing the number of participants to enhance the reliability of the results and obtain more comprehensive data.
- 2) Continuously refine the methods used to make Schenkerian analysis and Schenkerian graphs more accessible to non-music major students with foundational music theory knowledge, such as through various engaging activities and practical analysis of scores.
- 3) Using more comprehensive examples with increasing complexity to expand the scope of the research.
- 4) Adopting diverse data collection and analysis methods, such as interviews and other qualitative approaches, to gain a deeper understanding of participants' progress and comprehension.
- 5) Focusing on specific foundational techniques within Schenkerian analysis to help participants better grasp complex concepts, and examine their role in understanding musical structure.

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- 1.
- 2.
- 3.

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