ISSN 2435-6220

Institute of Creativity in Music Education
Tokyo, Japan
https://www.icme.jp/en/

International Journal of Creativity in Music Education

Vol. 10

Special Issue: Expanding the Reach of Creative Music

- J-POP Style Melody-making Using Pentatonic Scale
- Using Lego bricks and Song Maker
- A Collaborative Learning Regulation Process of Junior High School Students in Creative Music-making
- Gendlin's "A Process Model"
- From the Class Practice of "Dialogue Singing," Referring to the Bhutanese Folk song "Tsangmo"

About Cover Photo

Koto is a traditional Japanese instrument, but the koto used here is prepared by attaching various things to the strings. It was inspired by John Cage's "Prepared Piano."

International Journal of Creativity in Music Education vol. 10

ISSN 2435-6220

Published by the Institute of Creativity in Music Education

151-0071 1-26-2 Honmachi Shibuya-ku Tokyo, Japan

https://www.icme.jp/en/

Published May 2023

International Journal of Creativity in Music Education vol.10

Special Issue: Expanding the Reach of Creative Music

Table of Contents

Audio and Visual Materials

International Journal of Creativity in Music Education vol.10

1. J-POP Style Melody-making Using Pentatonic Scale

Figure 1
https://musiclab.chromeexperiments.com/Song-Maker/song/5176805445337088

Figure 2
https://musiclab.chromeexperiments.com/Song-Maker/song/5744872130871296

Figure 3
https://musiclab.chromeexperiments.com/Song-Maker/song/5954287354249216

Figure 4
https://musiclab.chromeexperiments.com/Song-Maker/song/6199863048142848

Figure 5
https://musiclab.chromeexperiments.com/Song-Maker/song/6708288794394624

Figure 6
https://musiclab.chromeexperiments.com/Song-Maker/song/6371373289308160

Figure 7
https://musiclab.chromeexperiments.com/Song-Maker/song/6518751753404416

2. Turning Thoughts and Intentions into Musical Ideas: Using Lego bricks and Song Maker

Figure 1 *Musical expression based on a brick model with an ascending structure*
https://www.icme.jp/jd/en10/figure1.mp3

Figure 2 *Musical expression 1 and 2 based on a brick model with a stair structure*
https://www.icme.jp/jd/en10/musical_expression1_of_figure2.mp3
https://www.icme.jp/jd/en10/musical_expression2_of_figure2.mp3

Figure 3 *Musical expression based on a castle Lego-brick model*
https://www.icme.jp/jd/en10/figure3.mp3

5. Rethinking "Singing" in Music Education: From the Class Practice of "Dialogue Singing," Referring to the Bhutanese Folk song "*Tsangmo*"

Figure 9 *Link for a video of practical classes*
https://youtu.be/RT-uwjRk6IM

Preface

The Institute of Creativity in Music Education was founded in 1991 when "*Dou-Gaku* I" was held at the Tokyo Contemporary Music Festival. "*Dou-Gaku*", meaning "Music （*Gaku*） for Children (*Dou*)", was organized by the Japanese Society for Contemporary Music, a branch of the International Society of Contemporary Music, and was one of the starting points of "Creative Music-making" in Japan. In the revision of Japan's Course of Study of Music in 2008, Creative Music-making was included as one of the important fields of musical activity in primary to secondary school curricula.

Since 1991, we, the members of ICME (Institution of Creativity in Music Education), have worked for the advancement of Creativity in Music Education, for instance, by organizing musical festivals, conducting workshops for music teachers, and collaborating with many composers, music researchers, and performers. Meanwhile, I, the Executive Director of the Institute, have conducted several hundreds of workshops on Creative Music-making over the past 30 years for music teachers and others all over Japan.

From 2018 to present, the Institute has advocated music classes based on the TAS model which includes T=Teacher, A=Adviser (researchers and composers), and S=Supporters, performers who support children's music with their excellent live sound and music, as the facilitators of the lessons (Tsubonou, 2020). Over 50 classes using TAS model have been held in these years, with teachers, advisers, and supporters. I am always happy and grateful for the cooperation of these music professionals who work with children.

The Institute publishes two versions of its journal, one is in Japanese, and the other titled "International Journal of Creativity in Music Education" is in English and was first published in 2012. My intention as the Editor-in-Chief of the English journal at that time was for students of master's and doctoral courses at the two universities where I was working to write reports about Creative Music-making in English. I felt the young researchers would contribute to the journal with very fresh ideas on Creative Music-making, and they did! Gradually, however, original papers have been submitted by professional researchers, and I

have since included a special section featured in each issue by inviting peer-reviewed papers.

Starting with this issue, we have decided to include a new chapter of proposals for music classes, wherein a composer proposes an idea for children and pupils to create music in school music lessons. We hope to continue to introduce practices for primary and secondary schools, mainly based on the TAS model with videos and sound recordings.

As of February 2023, almost a decade after its initial publication, over 2,500 people from 50 countries have read the journal. It's testimony to the growing importance of creativity in music education as a component of music class lessons.

In this journal, We are happy to say that you can now read its substantial content: how music relates to creativity, how music can nurture people's creativity, and how it is possible to create music that anyone can do.

We will continue to work on new research, based on both practice and theory, and are happy to share it with you in this issue of our journal.

We would be honored if you would read our-journal; moreover, if you would like to submit your paper on Creativity in Music Education, we would be more than grateful to consider it.

↓ HP of The Institute of Creativity in Music Education

https://www.icme.jp/en/

↓ Link of The International Journal of Creativity in Music Education

https://www.icme.jp/en/jcme/

Yukiko Tsubonou
Professor Emeritus, Japan Women's University,
Guest Fellow, Art Center of The University of Tokyo
Executive Director, Institute of Creativity in Music Education

Reference

Tsubonou, Y. (2020) Music Education as a Bridge Between Schools and Society: Seeking New Partnerships in School Education, International Journal of Creativity in Music Education vol.7

J-POP style's melody making using Pentatonic Scale

Kazuhiko Kinoshita

Miyagi University of Education, Miyagi, Japan

Akihiko Nakamura

Shukutoku University, Chiba, Japan

Naomi Nakamura

Chiba City Tsuga Junior High School, Chiba, Japan

Yuki Nanjo

Violinist, Certified Workshop Designer, Tokyo, Japan

Author Note

Kazuhiko Kinoshita, Associate Professor of Graduate School of Teacher Education,

Miyagi University of Education.

149 Aramaki-Aza-Aoba, Aoba-ku, Sendai-city, 980-0845 Japan

Contact: kino-kz@staff.miyakyo-u.ac.jp

Abstract

This study examines the usefulness of using the pentatonic structure, one of the musical characteristics of J-POP, and Song Maker, a music creation application, for activities in junior high school music classes. To this end, researchers and musicians collaborated with music teachers to conduct music creation classes.

Results indicated that the pentatonic scale is useful in that it enables students to create melodies by focusing on the elements while having fun. In the process, students' perception of J-POP was transformed from a pentatonic perspective, and Song Maker enabled students to create a variety of melodies while experimenting with various functions, without being limited by their own instrumental or singing performance abilities.

Keywords: ICT, J-POP, Music-Making, Pentatonic Scale

Introduction

In junior high schools in Japan, practices using J-POP (Japanese pop music) have long been lacking in creative activities in comparison to singing and instrumental activities (Kinoshita, 2014). Kinoshita (2017) suggested the use of creative activities using "melodies that tend to be continuous on the same note," a musical characteristic of J-POP that is familiar to many Japanese children, and has implemented the idea in elementary and junior high schools. The results revealed that the educational value of using J-POP as a creative teaching material is that it allows children to utilize the knowledge and abilities they have acquired in their daily lives. However, pop music such as J-POP has a high degree of fluidity in its musical characteristics, and it is not possible to stipulate that a particular sense of style is the basis of pop music. For example, J-POP has songs based on various styles such as rock, jazz, and house music (Kawamoto, 2013). Furthermore, the characteristics of rhythmic and melodic movements in J-POP change according to the times. Therefore, to devise ideas for creative activities with sustainability, it is necessary to construct a method based on the musical characteristics shared by a larger number of J-POP songs in terms of the fluid musical characteristics of pop music, find characteristics in songs familiar to children of that era, and adopt these as specific teaching materials. Songs that are familiar to children need to be identified and utilized as specific teaching materials.

Kinoshita (2022) focused on pentatonics and devised a creative idea. Japanese pop music throughout the ages has featured songs with melodies based on the pentatonic scale. For example, in the 1960s, "Sukiyaki" by Kyu Sakamoto, "Kekkon shiyouyo" by Takuro Yoshida, and "Hikokigumo" by Yumi Arai are genres referred to as "new music" in the Japanese pop scene of the 1970s. In the 2000s, the pentatonic scale was used in hit songs such as "Sakura" by Ketsumeishi and "Junrenka" by Shonan No Kaze. In addition, the scale is also found in a wide

variety of music, including classical and folk music, transcending styles and spanning eras. For this reason, incorporating the pentatonic scale into creative activities has educational value as it fosters interest in diverse musical cultures and provides opportunities to discover commonalities between musical genres.

Since the outbreak of the COVID-19 pandemic in 2020, the use of tablet devices(e.g., iPad) has expanded dramatically in Japanese schools. Music class are no exception, and various applications for music creation are used in activities such as melody creation and sound recording. However, the usefulness of such applications for pentatonic-based melody making has not yet been examined. Therefore, this research develops music creation through the collaboration of researchers and musicians, Kazuhiko Kinoshita and Akihiko Nakamura, professional musician and workshop designer Yuki Nanjo, and school teacher Naomi Nakamura. This study investigates the usefulness of using Song Maker and the pentatonic structure, which is one of the musical characteristics of J-POP, for melody creation activities in junior high school music class.

The usefulness of pentatonics in creative activities with Song Maker, a music creation application, was determined and how Song Maker has affected the creative process was considered.

Method

Development of making melody

The common denominator of J-POP's musical content is that it has a "main melody with lyrics." J-POP is conscious of the fact that it is a "product" that many people will purchase. Therefore, lyrics are an important element for both creators and listeners. Activities to create melodies from words have been widely used in Japanese junior high school music courses. These activities are basically intended to utilize the intonation and rhythm of words to create melodies. However, when starting the activity of creating lyrics, it is considered more appropriate to create lyrics while actually singing them rather than using Song Maker. Therefore, we decided to create melodies without lyrics.

The pentatonic scale in J-POP is a tonal scale based on the theory of harmony in Western music. Therefore, the notes of the melody can be interpreted as including tension notes. This makes it possible to construct a melody independently of, and not necessarily in conjunction with, the chord progression. For example, when a do-re-mi-so-la is placed in the melody in the C chord, each note can be interpreted as the first, ninth, third, fifth, and sixth notes, respectively. However, unlike the harmonic "do-mi-so," it is presumed that the "re-la" may sound unnatural if it is not used as a transitional or embroidery note. In this case, it is expected to sound more like a song melody if rules for the central tone and harmonic/non-harmonic tones are established. However, the complexity of the rules may make learners feel that it is more difficult. Therefore, we decided not to include these rules in this study.

In the Japanese music curriculum, students are expected to create music by utilizing "elements that shape music," such as tone, rhythm, tempo, melody, texture, dynamics, form, and

composition. By focusing on the these and understanding the characteristics of the melodies of J-POP songs, students will gain clues for creating their own melodies.

Designing classroom

Based on the above, this study conducted the following class: “Let’s make melody with pentatonic scale: Pentatonic scale and J-POP.” The class was held on November 11, 2022. The teacher was Naomi Nakamura with three guest teachers, Kazuhiko Kinoshita (Piano), Akihiko Nakamura (Bass), and Yuki Nanjo (Violin). Ms. Nakamura conceived of the class from the following perspectives.

Teacher’s view

In the creative activity for this subject, the five-note pentatonic scale consisting of “do-re-mi-so-la” without the F and C notes will be used. In recent years, the scale has been used in J-POP songs such as “Paprika” by Kenshi Yonezu and “Perfume” by Eito, and it has become familiar to students, making it effective for increasing their interest and motivation. We also believe that the use of “Song Maker,” a music creation application, reduces students’ sense of difficulty due to differences in skills, and further increases their motivation for creative activities. Improvising and experimenting with sounds to create melodies is the basis of creative activities, and we believe it is an important activity at all developmental stages. We want the students to feel that they can create music easily without using difficult music theory.

The target students are highly interested in musical activities and are able to engage in various activities calmly. In a survey of the students conducted to determine what kind of music activities they preferred, more than 70% responded “like” or “rather like” singing, instrumental music, and appreciation activities, indicating that they are highly interested in learning music. On

the other hand, the fact that the students did not tend to prefer creative activities may be because they had little experience in creative activities. When asked if they would like to try making music, more than 60% responded “not very much” or “not at all.” More than 80% answered, “Because it seems difficult.” and I don’t know which notes to choose.” Some students cited difficulty with keyboard instruments and reading music.

In this creative activity, students will get ideas from familiar J-POP songs and create melodies by improvising sounds and experimenting with connections using Song Maker. It is expected to reduce the students' sense of difficulty due to differences in skills and increase their motivation to “try” and “create.”

The Japanese Courses of Study state, “In teaching creative composition, emphasis should be placed on the experience of composing sounds into music, such as experimenting with ways of connecting sounds while improvising. In doing so, avoid a theory-oriented approach and, if necessary, have students devise ways to record their work.” The following is a brief description of the concept of “improvising sound.” “Improvising sounds” means that students should try to make sounds freely according to their feelings and moods at the time, rather than expecting too much theoretical study or coherent music from the beginning in their creative activities. The “experience of composing sounds into music” includes layering notes on top of each other to create a short melody, layering multiple notes to create chords, and gradually creating cohesive music through repetition and variation. By using J-POP, which is familiar music, as the subject matter, we expect that students will become more familiar with the melody-making process.

Therefore, the goal of the class was set as being able to notice the use of the pentatonic scale in familiar music (J-POP) found in society and daily life, and to create melodies that utilize

the devices and characteristics of J-POP. The flow is presented below; this format is based on a standard instructional plan used in Japanese lesson design.

Study contents ・Main study activities	○Teachers' approach ・Students' goals ◇Evaluation Criteria <Evaluation Methods>
1. Performance of a medley in which the pentatonic scale is used. ・Listen to a performance of a medley in which the pentatonic scale is used. Listen to a medley ("*Akatombo*," "*Soranbushi*," "Amazing Grace," "Country Road" performed by Pf, Ba, and Vn) and learn that all the pieces are written in pentatonic scale. ・Listen to the performance of "Perfume" by Eito. Listen to other J-POP songs ("Paprika" and "*Haru wo Tsugeru*") that are also made up of the pentatonic scale.	○Learning live performances by Pf, Ba, and Vn will help the students develop an interest in the music. ・The students noticed and became interested in the fact that the songs in the medley are made up of the pentatonic scale. ○ To stimulate students' creativity by informing them that pentatonic music is not only found in Japan, but also all over the world. ・The students will learn that the pentatonic scale is used in famous songs from all over the world, as well as in J-POP, which they listen to everyday; this will make them feel familiar with the pentatonic scale and motivate them to create new works.
2. Know the goal of this time. Let's make an original melody with the "Perfume" mechanism!	
3. Think about the musical characteristics of "Perfume" Listen to "Perfume" by Song Maker, think about what kind of musical characteristics it has, and present your ideas. <Musical Characteristics> ・It is made up of five notes. ・There are no "fa" and "si" notes. ・There is repetition. ・There are repetitions (repetitions), and changes (changes). ・Many "do" sounds (repetition of the same sound) ・Easy to sing melody, etc.	○Hook up Song Maker to a TV for playback to make it easier to listen to, and post enlarged "Perfume" from Song Maker on the blackboard to make it easier to see melodic features so that students can notice the musical characteristics. ○Write down students' opinions and ideas on the board so that they can check them later when creating the melody. ＜Ideas for creating melodies> Repeat (repetition) Change (variation) Motive (motif, theme) Question and answer (call and response)

4. Start Song Maker on the Chrome book and prepare for melody creation. ・Enter the Google Classroom and open Song Maker with the URL where the melody of “Perfume” has been inputted in advance. ・4/4 time ・Nine bars (one bar is the rhythm section, eight bars of melody) ・Pentatonic scale ・C major The above contents are set. 5. Create a melody in pentatonic scale. ・Students will confirm the creation of a melody for a song. ・Based on the rhythm section, create a melody using the pentatonic scale. (1) Made with the five notes of do-re-mi-so-la (2) Not layering notes vertically. 6. Listen to each other’s melodies. ・Save the melody and submit it to the Classroom. ・In the class room, students will share their impressions of the melodies they have created and their thoughts and feelings about them. ・Play back the melodies they created and listen to the ensemble as the musicians performs them. 7. Fill out the summary questionnaire.	Can be done with repetition of the same notes, etc. ○Support for students who have trouble launching Song Maker from Google Classroom. ○Use earphones or headphones so that students can concentrate on their own sounds without mixing with other sounds. ○ Have students play the Song Maker frequently so that they can improvise and check the melody and have them think and intend how to express it as a coherent creative expression. ○If students do not make progress in creating melodies, motivate them by having them check the “Ideas for creating melodies,” and by telling them that melodies can be created by repeating the same notes, and by choosing any notes on the pentatonic scale. ◇Students understand the characteristics of the sound materials and their compositional features such as repetition, variation, and contrast in relation to the image they wish to express and acquire the skills necessary to create melodies with creative expression, including the selection and combination of sounds according to the task and conditions. <Song Maker’s works and statements> ○As a summary of the activity, ask the students to write down their frank feelings after completing the creative activity.

In addition, students have had the following experiences prior to this class.

・The students enjoyed Beethoven's "Symphony No. 5 in C minor." By focusing on the "motive" and understanding and appreciating the composition of the piece, the students were able to connect it to the "melody creation utilizing the motive" of this subject.

・Basic operations of Song Maker and how to submit your work.

・The students were given the opportunity to freely manipulate Song Maker. Without any conditions or restrictions, such as the use of the pentatonic scale, the students enjoyed using Song Maker by drawing patterns and changing settings (tone, speed, pitch, etc.).

・The students were introduced to the previously learned folk and Japanese pentatonic scales (Miyakobushi and Okinawan scales).

Artist's view

Kinoshita, Nakamura, and Nanjo approached this class from the following perspectives:

In the performance of the medley at the beginning of the lesson, we unified the key of C major. The reason for doing this was to make it easier to grasp the characteristics of the pentatonic scale sound.

The division of roles within the trio was flexible each time according to the situation. Basically, when playing the introduction of a piece, the piano and bass play the role of supporting and repeating in harmony and rhythm, while the violin plays the role of playing the melody and partially improvising the demonstration, respectively. The violin not only plays the melody based on the pentatonic scale in an interactive and receptive manner so that the students can listen and feel the characteristics of the melody but also plays a pentatonic structure to serve

as a bridge for the amplification of ideas during the students' subsequent improvisational activities.

When the students shared their pieces, the trio joins in with live performance to merge into it. The trio members instantly picked up the characteristics of each piece and responded to and supported each other in improvising in their own roles. The violin plays a supportive role here, picking up on sound patterns and characteristics, and decorating, changing, repeating, supporting, and imitating. The piano and bass continue to support and repeat the same role, but they share in the creation of the music, changing chords and nuances with the violin depending on the tempo and style of the piece. The most important thing when performing is to make the most of the students' material and to participate with the margins and spaces of the music so that we do not fill them in.

Questionnaire Survey of effect of activity

To determine the effectiveness of the classes, a questionnaire survey was administered to the students at the end of each class. A total of 113 valid responses were received; the survey was conducted on November 11, 2022. All questions were ranked on a 4-point scale (agree, somewhat agree, not agree, and disagree); see Table 1 for the contents. Statistical analysis was conducted using Statcel 4 by Yanai (2015).

In addition, "Please feel free to write about your innovations in melody making." obtained free-writing answers. Based on the answers, we focused on which of the eight "elements that shape music" (tone, rhythm, speed, melody, texture, intensity, form, and composition) the respondents mentioned as their innovations, classified the meaning of the texts into each of the eight elements, and summarized the number of respondents who mentioned each

of them (see Table 3). Note that if one respondent included more than one element in the content as an ingenious point, each element was counted.

Table 1

Questionnaire items

1. Melody making was interesting.
2. Melody making was difficult.
3. I was interested in the pentatonic scale.
4. The way I perceive J-POP has changed.
5. The use of ICT equipment enabled the students to be motivated to work on the project.

Analysis of musical structure

What melodies did the students create using the pentatonic scale? We arbitrarily extracted several characteristic melodies and discussed how Song Maker's characteristics were reflected in their creations.

Results and Discussion

Questionnaire Survey of effect of activity

The means for each item were 3.86 (*SD*=0.37), 3.41 (*SD*=0.66), 3.60 (*SD*=0.54), 3.48 (*SD*=0.64), and 3.73 (*SD*=0.52) for Items 1, 2, 3, 4, and 5, respectively.

The correlation matrix between each of these variables is presented in Table 2. Nonparametric tests using Spearman's rank correlation coefficient confirmed significant positive correlations at

the 1% level between Items 1 and 5 ($p<.01$), Items 3 and 4 ($p<.01$), and items 4 and 5 ($p<.01$). Significant positive correlations were also found between Items 1 and 3 ($p<.05$) and Items 3 and 5 ($p<.05$), respectively, at the 5% level.

This study focused on the pentatonic scale, one of the musical systems used in J-POP and examined the usefulness of using Song Maker. Items 1, 3, 4, and 5 recorded high scores, indicating a certain degree of usefulness. Interest in the pentatonic scale and the use of Song Maker were identified as factors that changed students' perceptions of J-POP. This indicates that this practice changed the students' stereotypes of J-POP.

The use of Song Maker led to an increase in students' interest in melody creation. However, the correlation coefficient of .216 ($p<.05$) was low in relation to interest in the pentatonic scale, indicating that further studies are needed to determine how the use of Song Maker can lead to increased interest in the pentatonic scale. Item 2 also scored highly, but we were unable to find a relationship with other factors. To build a sustainable creative idea, there is room for further research on how to reduce this difficulty.

The free response results indicated that the number of respondents who devised elements in melody creation were as follows: "tone" (1 person), "rhythm" (18 people), "speed" (7 people), "melody" (48 people), "texture" (1 person), "strength" (0 people), "form" (0 people), "structure" (64 people), and "others" (21 people). "Structure" was the most common response, with the following specific descriptions: "I created the melody with repetitions and changes," "I tried to create a melody with movement using repetitions and changes." "I tried to create a melody with movement using repetition and variation." The reasons for this are that "Perfume" contained many repetitions and changes, which are elements of "composition," and that they were discussed in the activity to think about musical characteristics before starting the activity.

Another possible reason for the high scores for Item 4 was that many students made use of this "composition." The next most common item was "melody," with specific descriptions such as, "I used the motive repeatedly" and "I thought it would be interesting if the melody were shaped like a pyramid." The reason for this is that "Perfume" is not memorable. The reason for this is that "Perfume" repeatedly uses "motive," which is easy to remember and to hum, and Song Maker can draw melody lines in a pictorial way. The "other" category includes elements other than those that form the music. Specific descriptions included "fun music" and "easy to sing," indicating that some students created their music based on these images of J-POP. Thus, from the use of concrete musical elements to abstract images, students' creative activities were conducted with an awareness of the J-POP-like qualities that each of them evoked.

Table 2

Correlation matrix between each variable

	1	2	3	4	5
1. Melody making was interesting.	-	-.148	.225*	.158	.328**
2. Melody making was difficult.	-.148	-	-.080	.118	.045
3. I was interested in the pentatonic scale.	.225*	-.080	-	.434**	.216*
4. The way I perceive J-POP has changed.	.158	.118	.434**	-	.326**
5. The use of ICT equipment enabled the students to be motivated to work on the project.	.328**	.045	.216*	.326**	-

*p<.05, **p<.01

Table 3

Elements and number of people who were devised

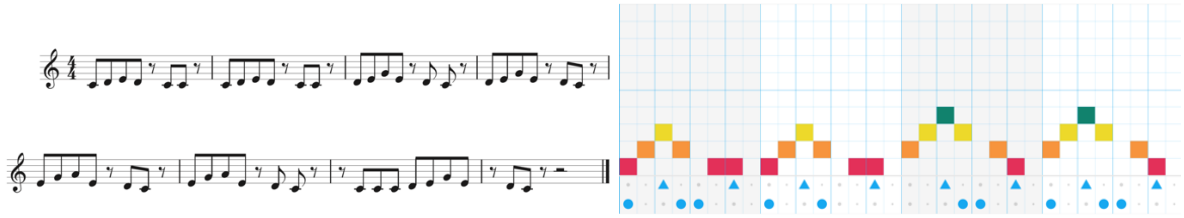
Elements that shape the music	No. of people
1. tone	1
2. rhythm	18
3. tempo	7
4. melody	48
5. texture	1
6. dynamics	0
7. form	0
8. composition	64
9. other	21

Analysis of Musical Structure

In many of the melodies created, it is clear that these were created by focusing on the elements that shape the music. In the following melodies, phrasing was devised by repetition and variation (Figures 1, 2, and 3).

Figure 1

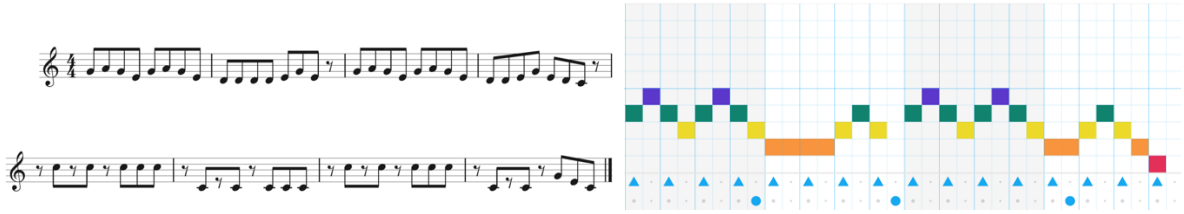
Students' Piece 1



https://musiclab.chromeexperiments.com/Song-Maker/song/5176805445337088

Figure 2

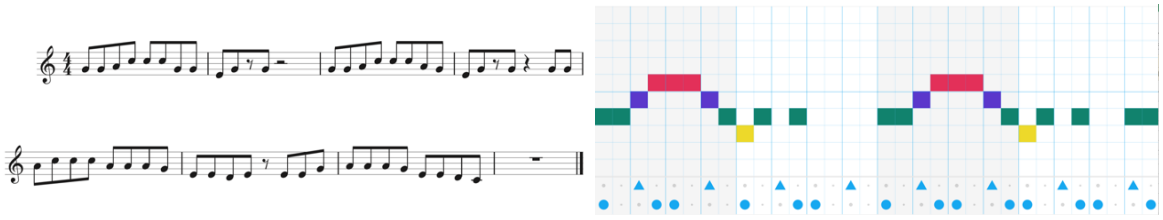
Students' Piece 2



https://musiclab.chromeexperiments.com/Song-Maker/song/5744872130871296

Figure 3

Students' Piece 3

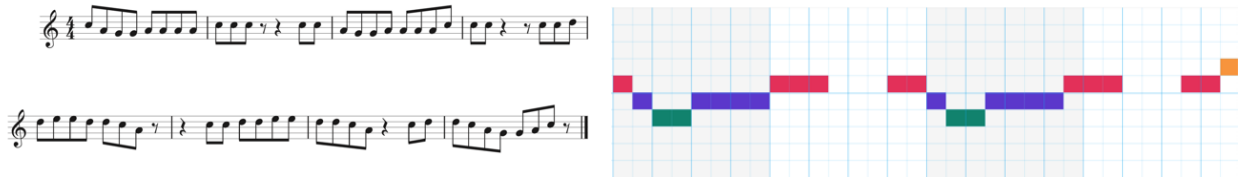


https://musiclab.chromeexperiments.com/Song-Maker/song/5954287354249216

On the other hand, some melodies were created with an awareness of composition, but the beat at the beginning of the phrase gradually shifted. Additionally, the Song Maker screen shows bar breaks not as bar lines but as different shades of color, suggesting that the melody was created with an awareness of phrase repetition and change, not with bar breaks in mind. It is possible that the phrase was created with repetition and change in mind, without being conscious of the bar break. Such a melody in which the flow of the beat and the beginning of the phrase are shifted requires a high level of skill in creating it while singing and feeling the beat. This is an example of Song Maker's ability to visualize phrases, and to allow the learner to create while experimenting, regardless of their musical ability.

Figure 4

Students' Piece 4

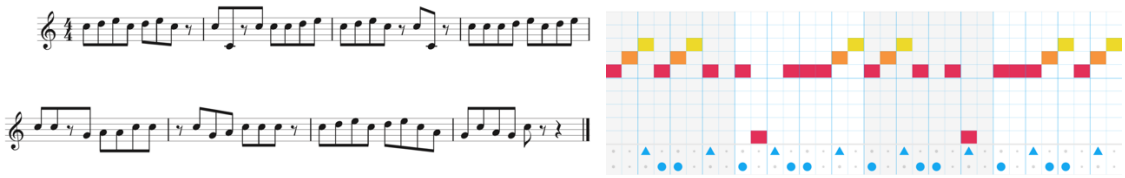


https://musiclab.chromeexperiments.com/Song-Maker/song/6199863048142848

On the other hand, there were melodies (see Figure 5) that seemed difficult to actually sing, although it could be read that they were created by taking advantage of the elements shaping the music. This melody has a descending octave in some parts, and the cohesion within the phrase is complexly created in relation to the flow of beats.

Figure 5

Students' Piece 5

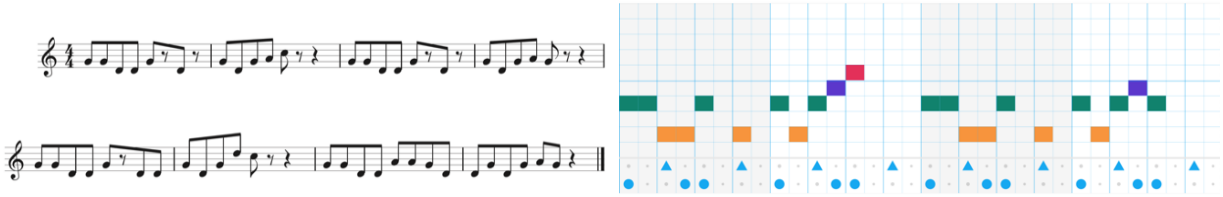


https://musiclab.chromeexperiments.com/Song-Maker/song/6708288794394624

In this activity, the central note of the five pentatonic notes was not set, so melodies with little sense of tonality were also created. The melodies in Figures 6 and 7 use a lot of Re and La, and the harmonic clash can be interpreted as tension notes, but the phrases by themselves have little sense of harmony.

Figure 6

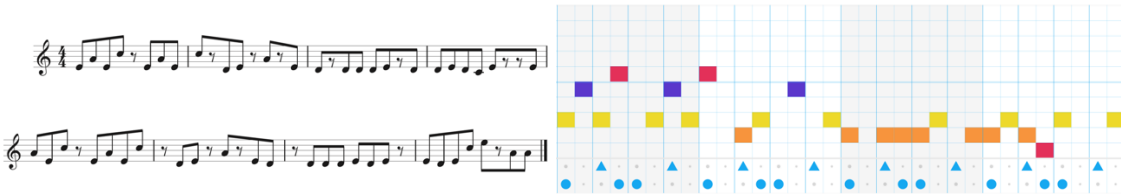
Students' Piece 6



https://musiclab.chromeexperiments.com/Song-Maker/song/6371373289308160

Figure 7

Students' Piece 7



https://musiclab.chromeexperiments.com/Song-Maker/song/6518751753404416

Other students created melodies shaped like waves that were drawn as patterns rather than phrases. Thus, it is not unnatural that the Song Maker's characteristics, which make it easy to obtain visual impressions, can give rise to a kind of playful behavior through drawing. Some students also extended the functionality of Song Maker by changing the tone and rhythm patterns, as well as the scale settings. Although these are deviations from the main purpose of the activity, they indicate that the Song Maker functions are sufficiently simple for some students to explore on their own.

From the analysis of the melody, the pentatonic activity with the Song Maker enabled it to be produced while avoiding deviations of the scale, like the Orff xylophone. On the other hand, the fact that the center note was not specified, and that there was no indication of how to connect chord tones according to the chord progression, created a somewhat unnatural melody when listened to along with the chord progression. This time, the ingenuity in making a J-POP melody that can be sung was entrusted to the students' listening experience; however, if they were to make them more aware of creating such a melody, it would be better to put the concept of the center tone inside.

If the melody is intended to be sung, it may be preferable to actually sing or imagine the melody since the creative process in Song Maker relies on a different physicality than that created through instruments or singing. Song Maker's inability to create long notes may have also encouraged them to bring movement to the melody. Thus, while Song Maker's characteristics have limitations in terms of creating melodies typical of J-POP, it was useful in that it allowed the participants to make the most of the composition and experiment with its various functions.

Conclusion

This activity again showed that the pentatonic scale is useful in that it allows students to focus on the elements and create melodies while having fun. In the process, we were able to transform the students' perception of J-POP from a pentatonic perspective. Song Maker was also shown to enable students to create a variety of melodies while experimenting with various functions, without being limited by their own ability to play instruments or sing. On the other hand, some of the melodies created were difficult to sing like actual J-POP songs. If singable melodies are to be created, it is necessary to incorporate physical trials such as actual singing to check whether the melody can be sung in terms of breathing and the up and down lines of the melody line. On the other hand, it is also true that in the case of music created entirely by inputting data, such as vocaloid music, music that requires a high level of skill to sing or play is created regardless of the creator's performance ability. The fluid nature of J-POP music means that it is possible to explore more diverse ways of creating such music, for example, in the style of a particular artist, vocaloid, or anime song. One can also find many pentatonics in American and British pop music, as well as in Asian pop music such as K-POP and C-POP. If we can unite

pop music from such diverse countries and regions with the common denominator of pentatonics, we will be able to construct a method of creating pop music in music education that is timeless and sustainable.

In addition, although we did not touch on it much in this analysis, when the musicians improvised an accompaniment to the music created by the students as a summary of the class, we could read the students' surprise at the sound when the melody and the accompaniment were combined and their delight when the accompaniment was added. This was probably due to the fact that the musicians improvised to the melody created by the students, changing the rhythm of the accompaniment or incorporating a part of it as a riff, which was done interactively. This class development was made possible through the collaboration between teachers and musicians. Unlike classical music, pop music, which is improvised in performance, is greatly influenced by this aspect of improvisational arrangement. Therefore, when introducing pop music into music-making, not only is the structure important, but also the improvisational nature of the actual performance and dialogue between players ; however, realizing this in performance by teachers has not been possible in the past. This is where the value of collaboration between guest musicians and teachers can be found, and in the future, it will be important to demonstrate through practice that musicians making music with children in schools enhances the quality of learning.

Annotations

1）For the purposes of this study, J-POP is defined as "a genre that collectively refers to Japanese popular songs from the 1990s onward".

References

Akitsugu Kawamoto (2013) *J-POP wo tsukuru!* , Felis books.

Fumio Koizumi (1984) *Kayoukyoku no kouzou,* Heibonsha.

Yoshiaki Sato (1999) *J-POP shinkaron*, Heibonsha.

Kazuhiko Kinoshita (2017) *J-POP no ongaku ouzou wo mochiita sennritsu sousaku no kenkyu,* Tokyo Gakugei University doctoral thesis.

Kazuhiko Kinoshita (2022) J-POP to Pentatonic, *Ongaku no Jyugyou Zukuri Journal* 7, 92-95.

Akihiko Nakamura, Kazuhiko Kinoshita, Yuki Nanjo (2022) The Pentatonic Scale Gives Everyone a Chance to Create Music, *International Journal of Creativity in Music Education* 9, 42-55.

Hisae Yanai (2015) *Statcel : The Useful Addin Forms on Excel, 4th ed.*, OMS Publication.

Turning Thoughts and Intentions into Musical Ideas

Using Lego bricks and Song Maker

Chika KOJIMA

University of Yamanashi

Author Note

Chika KOJIMA, Associate Professor of Faculty of Education, University of Yamanashi.

4-4-37 Takeda, Kofu-shi, Yamanashi 400-8510, Japan.

Contact: kozima@yamanashi.ac.jp

Abstract

In creative music-making, activities using non-musical objects or stories as starting points are easier to introduce because of the use of visual elements, such as concrete objects and images that can be associated with sound and music. However, the result of such activities tends to be sound effects or onomatopoeic. Therefore, instead of concrete objects, this practical study adopts Lego bricks, three-dimensional abstract models, in which the learners consider musical elements and structures, and then express their ideas in music. Learners listened to the music and represented its characteristics in three-dimensional models using Lego bricks; they then created music based on the models using Song Maker, a tool for sound play. Both tools involve composition by combining square forms, hence the musical elements and structures can be viewed as different parts and overall image in the Lego-brick model, and then be converted into actual music by transferring them into the squares of Song Maker. The three-dimensional Lego-brick model enables the learner to consider completely different musical compositions by changing the direction of view and is easy to check visually and correct the sound while listening to it in Song Maker. This method can transform the learner's thoughts and intentions into musical ideas and resolve technical issues when realizing them as musical expression. When conducted with university students, the overall

musical structure was devised from the shape of the Lego bricks, learners were able to compose music of a certain length independently and express the music they intended, regardless of their skills in musical expression.

Keywords: creative music-making, Intentions, musical structures, three-dimensional models

Theoretical and Pedagogical Background of

Creative Music-Making based on Visual Elements

The creation of sound and music within a certain framework has long been prevalent in creative music-making activities in school education. Elementary and junior high school music textbooks indicate that when some kind of melody is created, it is based on a predetermined scale or chord progression. Such activities may be likely to promote a sense of accomplishment in creating music because the framework of the music is somewhat determined, thereby allowing anyone to create coherent music. These activities are the creation of music focusing on melody, scales, and chords among other musical elements, which leads to the study of their characteristics. In addition, textbooks focus not only on musical elements, but musical structures as well, by presenting many creative music-making activities involving structures such as “repetition and change” and “call and response.” Even in the activity of creating music mainly based on resonance without a beat, the musical structure of “beginning, middle, and end” is shown, and consideration is given to enable the creation of coherent music. However, activities to create music more freely may also be necessary. Activities that may better reflect the learners' thoughts and intentions in the music they create, as well as their thought processes and decisions as they freely select musical

elements to compose the music are essential.

The free creation of music by learners with their own thoughts and intentions is associated with the philosophy of “creative music-making,” which began to spread in Japanese music education in the 1980s with the Japanese translation of Paynter and Aston's “Sound and Silence: Classroom Projects in Creative Music,” and became the basis for the current creative music-making philosophy. When this was first introduced, activities to create music using non-musical objects and stories as starting points were popular, especially in elementary schools (Tsubonou, 2004, p. 537). This may be due to the fact that the visual elements of concrete objects and stories can be associated with sound and music. Paynter (1970/1982, p. 90), one of the founders of “creative music-making,” introduced the development of ideas from sight into music, but stated that sight was only a starting point. However, there is an easy association between music that uses objects and stories as a starting point with sound effects and onomatopoeia, and it was considered problematic that many of the compositions created by children ended up being sound effects or merely onomatopoeic (Tsubonou, 2004, p.537).

While visual elements are an easy start point for making music and learners are more likely to have thoughts and intentions about the music they make, it was found that the

compositions became associated with sound effects and onomatopoeia, depending on the content. Creative music-making practices related to visual elements to date can be categorized in several ways.

1. Music is created with a story attached to a graphic score or picture (Matsushita, 1983, Kojima, 1984).
2. Music is created at a workshop at a museum based on discussions of the characteristics of paintings in the presence of a workshop leader (Nomura, 2012, pp. 80-81).
3. Music is created by creating a time axis based on the visual direction of how a graphic score or painting is viewed, such as from top to bottom, left to right, etc.

Since 1 was discussed above and 2 is a workshop leader giving preliminary guidance for creative music-making, I will consider 3. Examples of 3 include the case where learners create A-B-A three-part music based on a graphic score of the characteristics of environmental sounds discovered through sound listening (Kamiyama & Kimura, 2018); in one case, they draw lines and shapes in one color per person and create music by selecting one sound per person to match the colors (Nomura, 2010, pp. 80-81); in another case, they create music based on Richter's paintings by considering the sounds that match the colors in the paintings (Kojima, 2020). These practices reflect the learner's thoughts and intentions in

terms of how they see the visual object and express it through sound. However, music is not created by these practices alone, ideas were provided by teachers to give structure to the music, such as a three-part form or corresponding certain colors to sounds in advance. Transferring thoughts and intentions to musical ideas requires knowledge of musical elements and structures and a degree of expressive skill.

In this practical study, three-dimensional models created by the learners themselves are used as music-making tools to expand the learners' thoughts and intentions into music and solve the problem of lack of skills required in expression. I would like to clarify that relating the three-dimensional model to the music-making tool from the outset makes it easier for learners to reflect their thoughts and intentions contained in the three-dimensional model into the actual music, thereby enabling them to translate their personal thoughts and intentions into music. To this end, models were created with Lego bricks to serve as the basis of the three-dimensional model for music creation, and Song Maker was used as the tool for creating music. Although these two differ in being three-dimensional and two-dimensional, they both involve composition by combining square forms, so the music elements and structures can be viewed as different parts and the overall image of the Lego-brick model, and then converted into actual music by transferring them into the squares of Song Maker.

The three-dimensional Lego-brick model also enables the learner to consider completely different musical compositions by changing the direction of view. The ideas based on the Lego-brick model can be visually confirmed in Song Maker as they are made into music, and it is easy for the learner to listen to and modify what they have created until they are satisfied with the music. Accordingly, this method can transform the learner's thoughts and intentions into musical ideas and resolve the issue of lack of skills required to realize them as musical expression. When this practice was conducted with university students, the overall musical structure was devised from the shape of the Lego bricks, and the musical elements and compositions were conceived independently by the learners, who were able to compose music of a certain length. It was also clear that learners could express the music they intended, regardless of their skills of expression.

Focus of this Research

From Music Listening to Creative Music-Making

Listening to a variety of music is a method to gain knowledge of creative music-making. In this study, I use three-dimensional models as the starting point for creative music-making, and I believe it is important for the model to be a visualization of what the learners

heard and felt when they listened to the music.

The relationship between visual objects and music functions not only in the direction of creating music from visual objects, but also in listening to music and expressing it visually. While music classes have incorporated activities in which students listen to music and express it visually, such activities have not yet become widespread. A survey by Kojima (2014) inquired into the visual methods used in music appreciation instruction and found that drawing pictures while listening to music was used by 30% of elementary school teachers and 10% of middle school teachers, while drawing shapes while listening to music was used by 20% of elementary school teachers and 10% of middle school teachers.

In music classes it is important to listen to the musical elements, sense the qualities and atmosphere created, and think about the relationship between what one listened and felt (MEXT, 2017). What is listened to and felt are based on the characteristics of music, which are inextricable and exist simultaneously. It is sometimes difficult to express both such inseparable properties linguistically, hence visual representations that can express both at the same time are considered effective (Kojima, 2008). One of the practices to visually express what one hears and feels when listening to music in this manner is to make graphic scores by cutting and pasting colored paper (Kojima, 2011). Kojima suggested using colored pencil

drawings (Kojima, 2010; 2013), pipe cleaners, and Lego blocks to visually represent musical features in three dimensions, in addition to the cut-and-paste method of colored paper. I have also conducted activities in which learners create music based on these models. The advantage of creating music based on the model by which the learners express themselves after listening to the music is that since they have listened to the music and visualized its characteristics, they can reconfirm the characteristics of the music they first heard and either utilize those characteristics or conceptualize new music by looking at the model again when creating the music (Kojima, 2016). In other words, the characteristics of the model may facilitate thoughts and intentions when creating music.

In this practical study, the learners visually represent what they heard and felt during music listening – i.e., the characteristics of music – with Lego bricks, and create music using Song Maker based on their Lego-brick creations.

Lego Bricks and Song Maker

The Lego bricks used in this project have several protrusions on the top of the brick and several cylinders (fewer than the number of protrusions at the top) in the rectangular cavity at the bottom, thereby enabling them to be attached and detached from each other to form a variety of shapes. Melodic characteristics can be expressed by stacking them

diagonally in a linear manner, the structure of the music can be expressed by stacking them in two or three dimensions, and the various colors of the bricks (only three colors were used) can be used to express changes such as contrast and intensity in the music. In addition, such models can be constructed by groups as well as individuals, and have the advantage of facilitating the exchange of ideas about the characteristics of music in the process. Lego bricks are stackable and are considered to be particularly good for expressing the foundation (bass) and layering of sound in music, and the listening pieces used in this activity were based on passacaglia and canon.

Song Maker is a tool for making music on a computer or tablet device in the Chrome Music Lab, which is a tool for playing with sound developed by Google. Using Song Maker, learners reproduce sounds by clicking on squares that resemble notes on sheet music. The notes are color-coded with red for Do, orange for Re, and yellow for Mi, and the number of bars, beats, and scales can also be set, enabling learners to create music based on predetermined scales and harmonic progressions without the prerequisite skill of understanding staff notation. In addition, since the music created can be saved and shared with others through the Internet, there are many examples of its use in music classes because of the increased use of ICT education during the spread of COVID-19 [1].

Although Lego bricks and Song Maker differ in terms of bricks and squares being three-dimensional and two-dimensional, respectively, the visual impression of a collection of square shapes in both cases enables Lego-brick models to be connected with the sound squares in Song Maker. What makes the class in this study different from previous instances of music classes using Song Maker is that there are no limitations on the selection of notes, such as scales or chords, so the students can freely select the notes, musical structures, etc.

Summary of the Lesson

Participants. Students enrolled in a university liberal arts course “Analysis and Expression of Music” [2]

Dates. November 2021 and January 2022

Purpose.

1. To clarify that (2.) below can be achieved by creating music using Song Maker based on the learner's own Lego-brick models.
2. To generate thoughts and intentions about the music to be created, and to be able to easily translate those thoughts and intentions into musical ideas as musical expression.

Contents. “Analysis and Expression of Music” is a university liberal arts course, in which students learn about various musical systems from Western music with long histories. Throughout the semester, students listened to music, visualized its characteristics, and created music using the characteristics of the music they heard. The activities, in which the students listened to and visualized the characteristics of music, included: expressing their feelings when listening to the Gregorian chant “Ave Maria” using colored pencils; expressing the characteristics of J. S. Bach's “Passacaglia and Fugue in C minor, BWV 582” using Lego bricks; listening to “The Art of Fugue No. 7” by J. S. Bach and expressing its characteristics using pipe cleaner; and listening to the parts of two themes from the fourth movement of Beethoven's “Symphony No. 9” and expressing its characteristics by cutting and pasting colored paper. Music-making activities included using the Dorian mode, engaging in interactive music-making, canon-making, and improvisational music-making based on a passacaglia structure and pentatonic and whole-tone scales. In this practical study, I analyze the characteristics of the musical pieces created in January 2022 based on the Lego-brick models that the students created in November 2021 to express the characteristics of J. S. Bach's “Passacaglia and Fugue in C minor, BWV 582.” I show how students' feelings, intentions, thoughts, and decisions were reflected in the musical ideas and expressed in the

music. The students expressed the features of "Passacaglia and Fugue in C minor, BWV 582" with Lego bricks, either individually or in groups, and carried out creative music-making individually using Song Maker.

Results

Both the models expressing the features of the music and the emotions the students experienced when they listened to the "Passacaglia and Fugue in C minor, BWV 582" [3] in Lego bricks, and the music they created based on the Lego-brick models are presented with the students' comments.

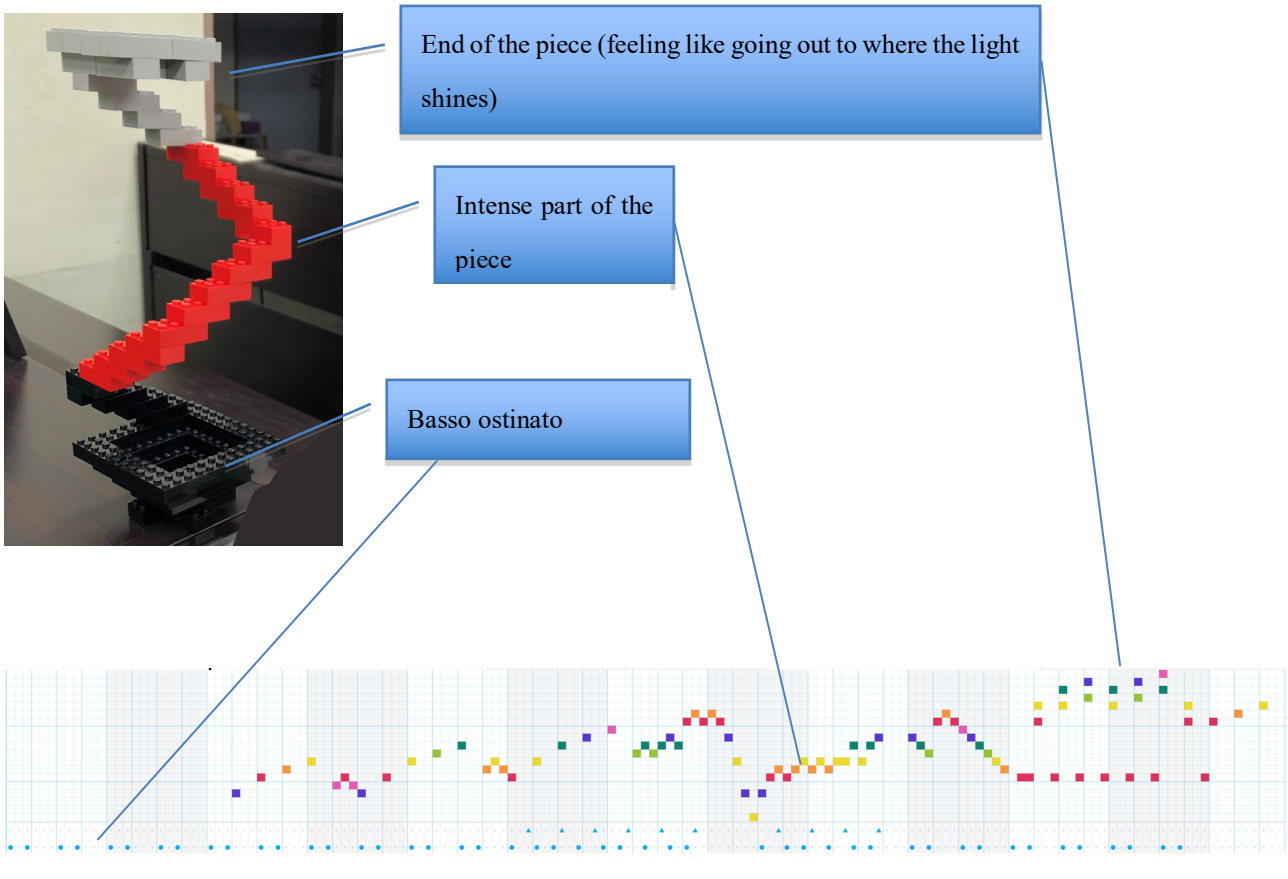
Case 1: Musical expression based on a brick model with an ascending structure (Figure 1)

Student T, the creator of a model and the music of Figure 1, had musical experience besides school music classes (piano from age 10 to 15). Student T commented on the relationship between the model and "Passacaglia and Fugue in C minor, BWV582" as follows.

> "The black stand is the basso ostinato. The hole represents the starting point for the song. The spiral staircase expresses the tune, and the intense parts are represented in red. The gray pedestal on top felt like finally going out to where the light shines."

Figure 1 https://www.icme.jp/jd/en10/figure1.mp3

Musical expression based on a brick model with an ascending structure



The piece finishes in a major key with a Picardy ending, and the student expressed this feeling as "going out to where the light shines." The structure of a Lego brick created by Student T ascended toward that end. Student T commented on the music based on this model of Lego bricks as follows.

"The piece begins with just heavy bass (rhythm) in order to express the hole in the black foundation. The image of an ascending spiral staircase is expressed by the gradual rise in the pitch of the sound. In order to express the red part, I made the

sound more intense, and also increased the difference between high and low sounds. The gray pedestal on the top of the brick model was expressed with high-pitch and first-appearing chords, as if going out into a new world, and ended with the three notes of Do, Re, and Mi to symbolize a beginning."

Case 2-1: Musical expression 1 based on a brick model with a stair structure (Figure 2)

A brick model with a stair structure of Figure 2 was created by Student I and Student U. Their comments on the relationship between the brick model and "Passacaglia and Fugue in C minor, BWV 582" are as follows.

"The black vertical bar on the right is the bass ostinato. The red and black spiral staircase on the left side represents the ostinato melody alternating between low and high notes in the first half. Bass tones are represented by black bricks, treble tones by red bricks, and mid tones by gray bricks. The staircase part on its side is the melodic part of the second half."

Student I, the creator of the model and the musical expression 1 of Figure 2, had been teaching himself guitar for two months prior to this music lesson. Student I's comments on the music are as follows.

"I considered the black bars and the red and black spiral staircase as the foundation and expressed it as a musical foundation through the rhythmic beat of the bass and percussion instruments. The bridge-like part of the staircase is represented by a musical scale like a staircase. I incorporated the canonical expression we learned in this lesson."

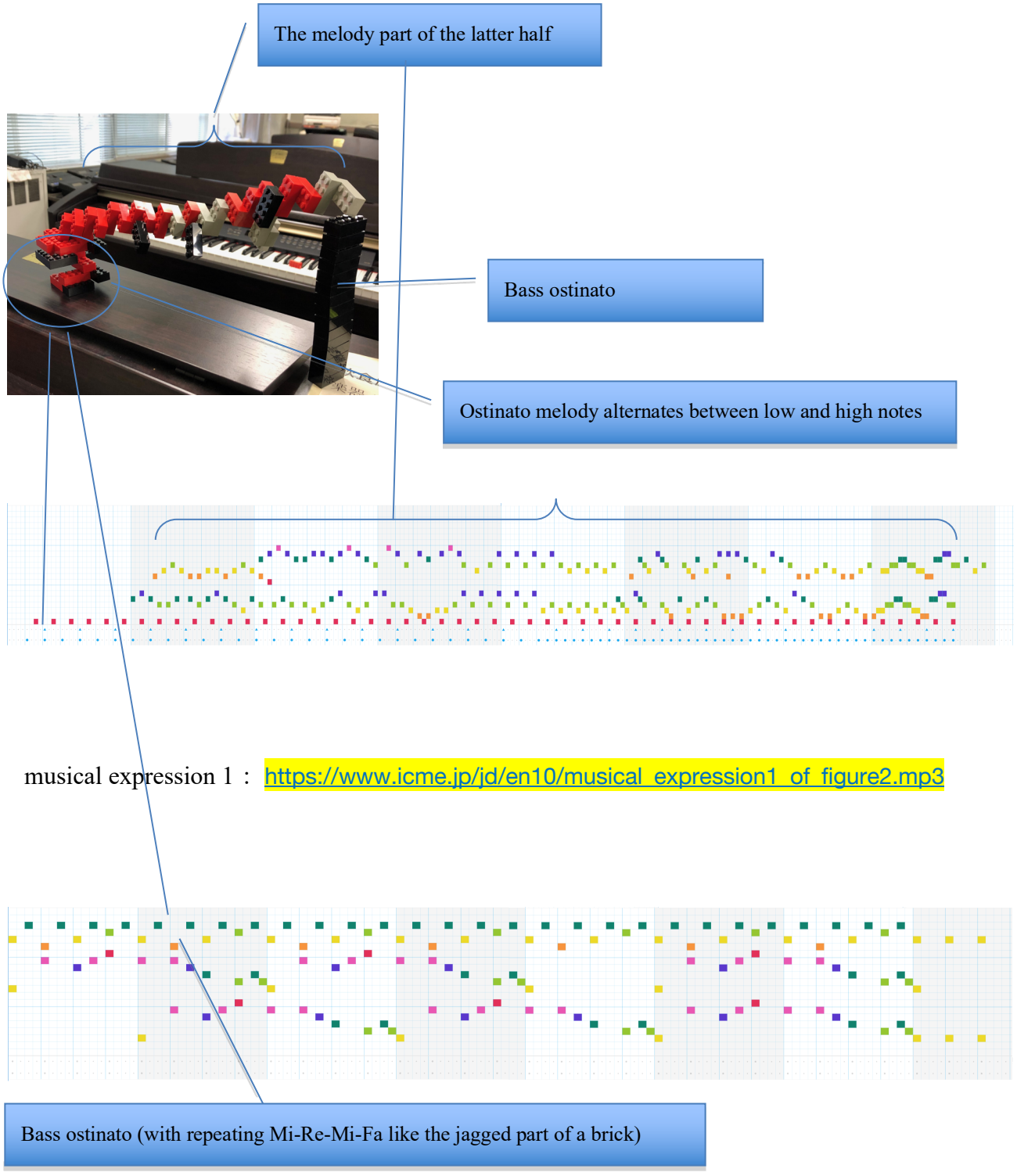
Case 2-2: Musical expression 2 based on a brick model with a stair structure (Figure 2)

Student U, the other creator of the model, had musical experience outside of school music classes (piano from age 4 to 12, trumpet from age 13 to 15). His comments on the musical expression of Figure 3 are as follows.

"Since red is used a lot in the brick model and red is defined as high notes, I thought of making the high notes the main melody, but instead I made the high notes the base and support them with inconspicuous notes. I repeated these high-pitched notes, like the jagged part of a Lego brick. The middle and bass parts are original rhythms and melodies, but I made them to fit the characteristics of the model as much as possible. I incorporated the canonical expression we learned in this lesson."

Figure 2

Musical expression 1 and 2 based on a brick model with a stair structure



musical expression 1 : https://www.icme.jp/jd/en10/musical_expression1_of_figure2.mp3

musical expression 2 : https://www.icme.jp/jd/en10/musical_expression2_of_figure2.mp3

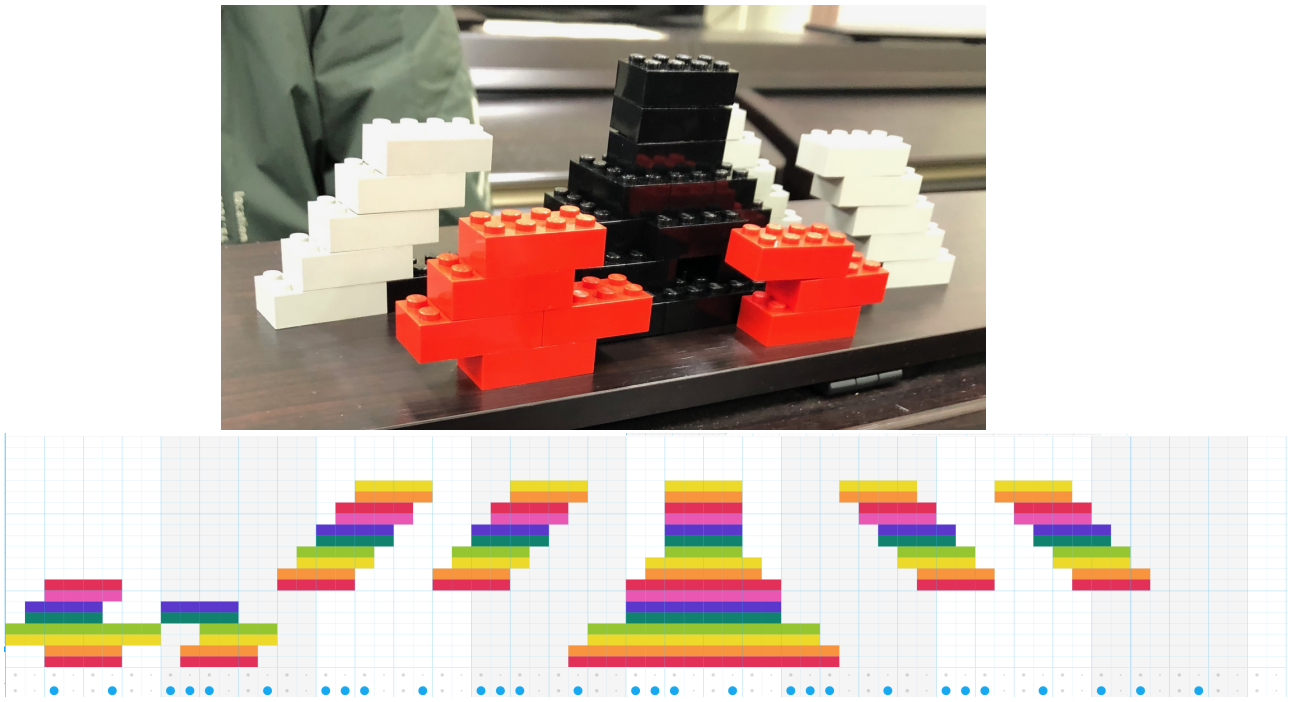
Case 3: Musical expression based on a castle Lego-brick model (Figure 3)

Student K, the creator of a model and the music of Figure 3, had musical experience outside of school music classes (piano from age 5 to 15, and euphonium from age 11 to 12). Her comments on the relationship between the model and "Passacaglia and Fugue in C minor, BWV 582" are as follows.

> “The tone of the pipe organ evokes the image of a Western-style castle. The melody is reminiscent of a dark forest. There are high-pitched notes in places, which makes me think of fireworks and flames.”

Figure 3 https://www.icme.jp/jd/en10/figure3.mp3

Musical expression based on a castle Lego-brick model



Student K commented on the music based on this model of Lego bricks as follows.

"The shape of the bricks is faithfully reproduced in the score. I felt I had successfully expressed the luxurious atmosphere of a castle and the sense of smoke rising to the heaven, so I added a rhythm to match."

Discussion

There were two types of Lego-brick models that were used as the basis for creative music-making: those that expressed the distinctive aspects of the music through color and shape, and those that were associated with an impression of the music, but all of the musical pieces reflected the characteristics of the Lego-brick models in their musical elements and composition. Students used the characteristics of their unique models to express the overall structure and parts of the music.

The overall structures of all musical pieces reflected the overall structures of the models on which they were based. The ascending pitches in the brick structure of Case 1 and its musical piece rises in the same way. In Cases 2-1 and 2-2, the horizontal stair-like brick structure was arranged in a similar way to the repetition of rippling sounds and their canonical shifting and overlapping presented in the musical piece. However, the two pieces

have completely different compositions in terms of the bass and expressions in other aspects. In Case 3, the form of the model was directly transposed into sound. In the musical piece portion of Cases 1, 2-1, and 2-2, the students focused on each part of the Lego-brick model and reflected it in their own musical elements and structures. These musical pieces all had musical basses in ostinato, but were expressed in different ways. In Case 1, the expression was percussion beat-like; in Case 2-1, it was percussion beat-like with a repetition of the note Do; and in Case 2-2, it was a repetition on a high note with an afternote Sol to the Mi-Re-Mi-Fa. In other parts of the musical piece in Case 1, the notes were arranged to ascend like a spiral staircase, associating the red brick with intensity, and increasing note density and pitch differences from the middle. At the end, chords not used earlier were used for the gray section. In Case 2-1, the nested arrangement of three-tone mountain shapes (Fa-Sol-La-Sol-Fa, Re-Mi-Fa-Mi-Re, etc.) was used to represent parts of a stair-like block. In Case 2-2, the stair-like block section was expressed in a canonical manner by arranging a zigzag melody consisting of three rising and falling notes (La-Ti-Do, Ti-La-Sol, etc.) similar to the repeated notes in the bass (Mi-Re-Mi-Fa).

As described above, the characteristics of Lego bricks were reflected in the elements and structure of the music, but the musical elements and structures were all expressed

uniquely by the students. Although the students' previous musical experiences varied, no differences were found in their musical technique.

Conclusion and Implications for Music Education

We demonstrated that it was possible for students to have thoughts and intentions about the music to be created by creating music using Song Maker based on the learner's own Lego-brick models. Students were easily able to translate those thoughts and intentions into musical ideas as musical expression.

While composers have various motivations for creating music, creative music-making in education is an activity that takes place under certain conditions set by the teacher. In such a situation, it is important for learners to have an idea of what kind of music they want to make, to be able to easily transfer that idea into music and to engage in a series of trials-and-errors while listening to the music they have created. By looking at Lego bricks and connecting visual impressions with sounds and image, and putting such indistinct non-musical objects into Song Maker, they can convert these into musical ideas and create music through trial and error. A series of activities with Lego bricks and Song Maker can be considered as one of the ways to do this.

Xenakis (1975), a contemporary music composer and architect, created “truly three-dimensional architecture” that cannot be reduced to two dimensions based on a musical idea consisting of various continuous glissando surfaces and a discontinuous pizzicato surface. In the future, I would like to consider activities that would enable consideration of the musical structure and composition by observing three-dimensional models from various directions, demonstrating the advantages of three dimensions over two dimensions.

Acknowledgment

This study was supported by JSPS KAKENHI Grant Number JP17K04760.

References

Kamiyama, R. & Kimura, A. (2018). Music Department Study Guidance Draft [in Japanese]. 2018 Open Research and Presentation Meeting [Collection of Study Guidance Drafts], pp. 30-35, pp. 90-95.

Kojima, C. (2008). A Practical Study on the Teaching and Evaluation of Music Appreciation: Focusing on the Relationship between Various Musical Elements and Visual Images in Western Music [in Japanese]. *Japanese Journal of Music Education Practice*, 5(2),

142-149.

Kojima, C. (2010). Visual Representation of Polyphony: Its Use in the Teaching and Assessment of Music Appreciation. *Journal of Applied Educational Research*, 15, 134-143.

Kojima, C. (2013). Evaluating the Effectiveness and Practical Use of Musical Examples for Discerning Musical Elements through the Assessment of Visual Images. *Journal of Applied Educational Research*, 18, 126-132.

Kojima, C. (2014). Teaching Musical Elements and Structure: An Investigation of Methods of Instruction [in Japanese]. *Bulletin of the Faculty of Education & Human Sciences, University of Yamanashi*, 15, 317-328.

Kojima, C. (2016). Understanding Music with Modeling Activities and the Resulting Work as a Mediato [in Japanese]. *Bulletin of the Japan Music Expression Society*, 14, 19-28.

Kojima, C. (2020). Creative Music-Making Based on Color and Painting: As a Framework for Learner Originality [in Japanese]. *Bulletin of the Japan Music Expression Society*, 18, 21-32.

Kojima, R. (1984). Developmental Aspects of Children's Creative Music-Making (I): The Case of the First and Second Grades at Tajiri Elementary School, Nose Town [in

Japanese]. *Memoirs of Osaka Kyoiku University. V*, 33(1), 33-43.

Kojima, R. (ed.) (2011). *New Appreciation Class for Children to Be Active: Let's Listen to Music and Express It with Figure*s [in Japanese], Ongaku No Tomo Sha Corp.

Matsushita, Y. (1983). A Study on Creativity and Creation in Music Education [in Japanese]. *Bulletin of the Education Faculty, Shizuoka University. Educational Research Series*, 14, 97-107.

Ministry of Education, Culture, Sports, Science and Technology. (2017). *Courses of Study for Elementary Schools and Junior High Schools* [in Japanese].

Nishimura, M. (2022). Creative Music-Making with Song Maker and Miraiseed: Let's Make to Melodies to Match the Chords [in Japanese]. *Music Appreciation Education Quarterly*, 50, 62-65.

Nomura, M. (2010). *Tips for Making Music: Composing Music is a Piece of Cake!* [in Japanese], Ongaku No Tomo Sha Corp.

Nomura, M. (2012). *Makoto Nomura Workshop at Shizuoka Prefectural Museum of Art "Let's Make Music from Pictures!* [in Japanese]. https://www.jafra.or.jp/library/letter/backnumber/2012/206/4/1.html

Paynter, J. & Aston, P. (1970). *Sound and silence: Classroom projects in creative music.*

Cambridge University Press.

Paynter, J. & Aston, P. (1982), *What music tells us: Creative music learning from the origin* (*ongaku no kataru mono genten kara no sōzōteki ongaku gakushū*) [in Japanese] (S. Yamamoto, Y. Tsubonoh, & M. Hashito, Trans.). Ongaku No Tomo Sha Corp. (Original work published 1970).

Tsubonou, Y. (2004). Creative Music-Making [in Japanese], *Japan Music Education Encyclopedia* (pp.535-539). Tokyo: Ongaku No Tomo Sha Corp.

Xenakis, I. (1975). *Musique Architecture (translated by Yuji Takahashi)*, Zen-On Music Company.

Footnotes

1. There are examples of practices such as changing the original *Kaeru no Gasshou* song, creating melodies from the notes of a I-IV-V-I chord (Nishimura, 2022), and using a *yona nuki* scale (meaning the omission fourth and seventh degree of a major scale).
2. There are 11 students in this lesson, of which 9 have musical experience outside of school music classes.
3. “Passacaglia and Fugue in C minor, BWV 582” is a 10-minute piece, and not all of its

musical elements and compositions can be expressed in a model. However, it is a pipe organ piece with a heavy basso ostinato melody, and it varies while the ostinato melody rises in pitch and changes in rhythm. The second half is a fugue on the theme of an ostinato melody, and one can hear the changes in ostinato melody throughout the piece. I thought that this feature would enable the visualization of changes in bass and theme.

A Collaborative Learning Regulation Process of Junior High School Students in Creative Music-Making

Hiroshi Suga

University of Miyazaki, Miyazaki, Japan

Author Note

Hiroshi SUGA, Professor of Graduate School of Education, University of Miyazaki.

1-1 Gakuenkibanadai-Nishi, Miyazaki-city, Miyazaki 889-2192, Japan

Contact: e05107u@cc.miyazaki-u.ac.jp

Abstract

The purpose of this study was to identify the issues involved in promoting independent and interactive learning in music classes, by analyzing the process of collaborative learning regulation for creative music-making undertaken by junior high school students. In this study, the students' dialogues during collaborative learning activities and the teacher's utterances in the creative music-making classes of a junior high school were coded from the perspective of the intent of the statements. The resulting codes were classified using a bottom-up approach to generate the higher-level categories. The results indicate that the students actively engaged in dialogue related to task analysis and goal setting, which correspond to the Forethought Phase[1]. However, they did not speak much about the Performance and Reflection Phases, which include self-observation and self-judgment. The teacher's suggestions for the group to consider were limited to the length of the piece being close to the target of one minute. Although there were some instructions given during the Forethought Phase in learning coordination, such as suggestions for working strategies and musical ideas, there was no mention of the Performance or Reflection Phases, which may include information such as carefully monitoring performances and offering a point of view when evaluating their own performances.

Keywords: creative music making, self-regulation, collaborative learning

[1] Zimmerman & Campillo (2003) model self-regulation as a cyclical process consisting of three phases: the Forethought Phase, the Performance Phase, and the Refrection Phase.

Introduction

Zimmerman & Schunk (2011) define to self-regulation as the processes whereby learners activate and sustain cognitions, affects, and behaviors that are systematically oriented toward the attainment of personal goals. Successful collaborative learning requires three types of coordination: self-regulated learning, in which each member of the group takes responsibility for regulating their own learning; co-regulated learning, in which each member supports each other to successfully regulate their learning; and socially shared regulation, in which the group comes together to collectively regulate learning processes in a synchronized and productive manner (Järvelä & Hadwin 2013). Previous studies on self-regulated music learning have focused on relatively professional lessons that are conducted one-on-one. However, few studies on collaborative learning in general music classes where learners from various backgrounds collaborate in learning situations (Suga 2022).

Therefore, the research questions for this study are as follows:

1. What kind of dialogues do junior high school students engaged in collaborative music-making develop during group activities, and what kind of interactions occur?
2. How can these interactions be viewed from the perspective of collaborative learning regulation? What are the problems that students face in collaborative music learning?
3. What impact does teacher instruction have on collaborative learning regulation? What are the problems in supporting cooperative music learning?

Method

Participants

The subjects of observation and analysis were 41 third-year students at a public junior high school in the suburbs of Miyazaki City and a junior high school music teacher with more than 30 years of teaching experience.

Observation period

Six music classes were observed at the school from November to December 2020. The main contents of each class were as follows:

The first class

Students appreciated J. Cage's "Sonata for Prepared Piano" and understood that a variety of tones are created by inserting various objects into the strings of the piano. They explored their favorite tones by inserting erasers, bolts, and other objects into the strings of the Koto (Japanese harp), and by tapping the strings with mallets or playing with a bow.

The second class

Students continued their exploration of the tones that they could possibly extract from the Koto. They formed groups of three or four and presented short, improvisational pieces of about 15 seconds in length, by combining favorite sounds of the members of the each group.

The third class

Each group aimed to expand the short 15-second piece they had created in the previous class into a one-minute piece.

The fourth class

A guest, who was a professional Koto player, gave a demonstration performance of a contemporary musical piece ("Like a Bird" composed by Tadao Sawai) to the students. The

students were asked to pay attention to the modern techniques exhibited in the piece. A duet, consisting of the professional player and the teacher, performed “Kibana Sarashi,” which was composed for this class by the researcher. After the performance, the composer-researcher himself explained the composition of the piece as follows:

- The two players were assigned to the roles of the main melody and accompaniment, respectively.
- The accompaniment was made up of ostinatos, which are repetitions of short note shapes called “Sarashi.”
- The entire piece was composed of three parts of ABA.
- The melody of the old Japanese song “Sakura Sakura” was excerpted in the middle of the piece.

The fifth class

As a recap of the previous session, the teacher explained that modern techniques, the division of roles among performers, and the repetition of a note pattern, short melody, or a whole section could be used to develop music. The students continued to work in groups to create a one-minute musical piece.

The sixth class

They presented their musical pieces in front of the other students.

Data collection

The students’ dialogues during group activities and the teacher’s in-class utterances were recorded during the fifth and sixth class. The recorded data was transcribed by the researcher.

Analysis

The students' dialogues during the group activities were segmented by each speaking turn, and each utterance was coded using the QSR Application NVivo from the following perspectives.

1. What is the intention of the utterance?
2. Toward whom in the group is it directed?

The teacher's utterances during class included those directed at the class as a whole and those directed at specific groups. No utterances directed at specific individuals were observed. Both types of utterances were segmented and coded according to their content from the perspective of the intent of the utterance.

The resulting coding was classified in a bottom-up approach to generate the higher-level categories.

Researcher's position

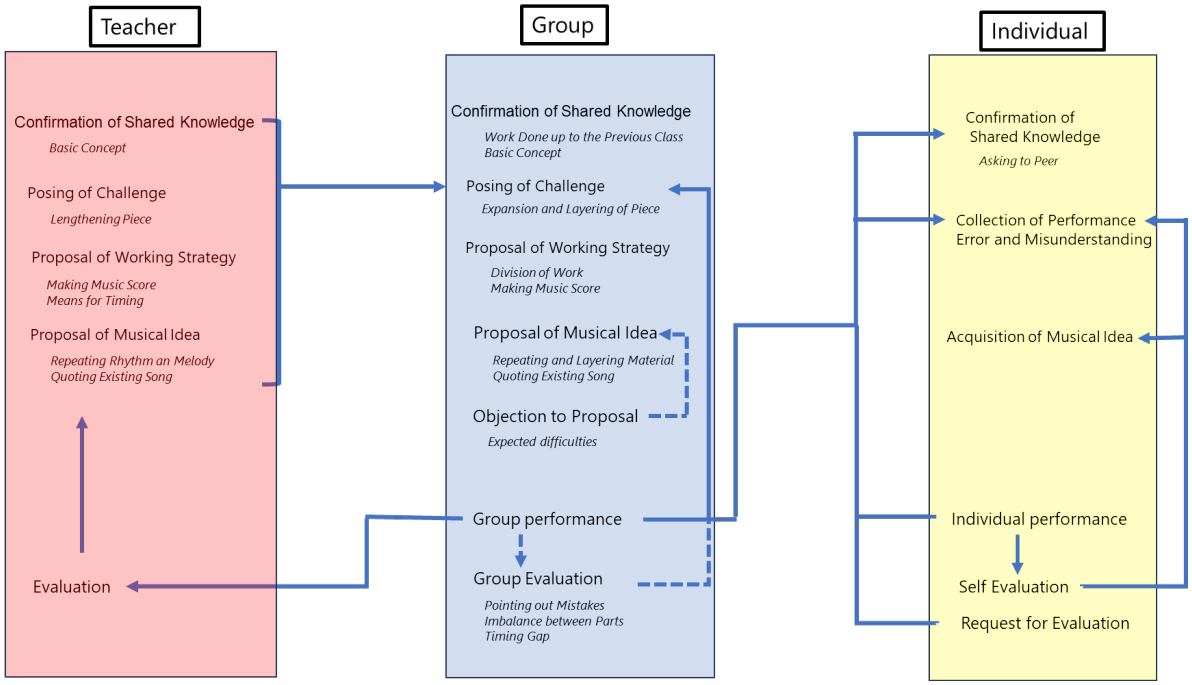
The data were analyzed by the researcher. The researcher collaborated with the teacher from the planning stage and provided advice on the lesson plan for the class. Additionally, the researcher composed a piece for a Koto duet with the guest professional Koto player and the teacher, which was played during the fourth class. As a result, the researcher had a unique perspective that him to easily interpret the intent and purpose of the students' group interaction and the teacher's utterances in class. However, it is possible that the content of the teacher's utterances may have been influenced by the researcher to some extent.

Results

Figure 1 is a graphic representation of the results of the analysis of the students' dialogue during group activities and the teacher's in-class utterances.

Figure 1

Category map of the students' dialogue during group activities and the teacher's in-class utterances[2]



Analysis of group dialogue

The analysis of the content of the students' dialogue during group activities yielded the following six categories: *Confirmation of Shared Knowledge*, *Posing of a Challenge*, *Proposal of a Working Strategy*, *Proposal of a Musical Idea*, *Objection to a Proposal*, and *Performance Evaluation*. An example dialogue is shared in each of the categories below.

[2] The dotted line in the figure indicates that very few statements connected the two categories.

Confirmation of Shared Knowledge

Dialogue within the group did not begin immediately after the teacher initiated the group activity. The first step was often to devise playing techniques to create new tones individually and to explore and play a fragment of a rhythm and melody. The dialogue began with a statement by one of the members, such as "Let's talk about it" or "What are we going to do?" which prompted the transition to dialogue. Next, Work done up to the previous class was confirmed.

—All the members were playing individually.

Hiromi[3]: What are we going to do?

Takeshi: What is my part? Am I supposed to do that? Am I supposed to play a certain rhythm?

Hiromi: No, no, no, I will play a certain rhythm. Ah, here it is.

Posing of Challenge

A new challenge was raised. Most are related to Expansion and Layering of a Piece, such as creating a theme, adding an accompaniment, and creating a continuation.

Hiroshi: What shall we do? This is the main theme, right? (Performing) I think that's good. This is fine. Next, let's play the accompaniment.

Akane: Wait a minute – regarding the accompaniment. This is the main theme, right?

Hiroshi: Yup. That's the theme. Now let's talk about what to do for the accompaniment.

[3] All personal names are pseudonyms.

Akane: Well, let's have two people play the theme and two people play the accompaniment, shall we?

Proposal of Working Strategies

Once the challenge was shared, a specific proposal was made regarding the challenge, such as the Proposal of a Working Strategy and Proposal of a Musical Idea. For the working strategy, the students suggested distributing their work to subgroups or individuals and creating a music score to record the work.

Masa: Then we need to talk about it two-by-two first.

Mitsu: What are you going to do, Masa? You are the percussionist, aren't you?

Masa: We do this in two pairs, don't we?

Mitsu: Yeah. So, we have to talk about it in pairs, right?

Masa: Somehow, we have to discuss who will play the melody and who will play the rhythm.

—After discussing about the plan

Noriko: Write it down on the sheet.

Chika: OK.

Noriko: I think it's easier to understand when you show it in a graphic and textual form.

Yuki: You can graph it like a wavy line. Just use whatever way you can understand.

Chika: I'll put it right here.

Musical ideas we sometimes created through new suggestions for techniques, rhythms, and melodies. However, in many cases, they tried to develop their music by assigning musical material they had already created to roles such as theme or accompaniment. They also tried repeating, layering and reusing the materials, such as quoting past ideas or rhythms and melodies of existing pieces:

—One of the members, Masa, created fragments of the melody in his exploratory playing.

Yuko: Let's go with this for now. Hey Masa, keep playing it. We won't know without it.

Miki: So, why not just use Masa's melody as the theme?

Yuko: And while he was playing, we will…

Miki: Masa plays the melody. We'll play the accompaniment.

Yuko: Let's play it once. Masa is playing and we should play something along with him.

Objection to Proposal

For the most part, these working strategy and musical idea proposals were readily accepted by the other members and rarely challenged. Especially in groups in which a particular member assumed the role of a leader and the others followed them, no objections were made to the leader's proposals, and the other members performed accordingly. The few objections included the anticipated difficulties, such as difficulty in timing.

—They confirmed the work done up to the previous class, but were unable to able to create a continuation for the same.

Fumi: Hey, hey, what are we going to do?

Miho: Let's improvise and make it in a flash.

Fumi: No, we can never play in sync with each other that way!

Performance Evaluation

After the musical idea was accepted by the other members, they moved on to the actual performance. Although comments on *Performance Evaluation* should have followed immediately, there were few comments on this evaluation, as well as *Objection to a proposal.* The most common comments made on the few *Performance Evaluations* were Pointing out the mistakes of a particular member who did not perform as planned. Additionally, there were comments on Imbalance between parts, such as "the accompaniment was too strong," and Timing gaps in each other's performances. Often, the group moved on to the next issue without any particular comments.

—After their performance session

Yumi: Hey, hey, aren't we in rhythm? Is this what it should be like?

Atsuko: I think our timing was too early.

Yoshi: You had to wait until Akira finished playing.

Instructional and suggestive situations for specific individuals

The transition from a situation where group issues are shared and each member shares responsibility to solve them to a situation in which others provide guidance and suggestions to solve a specific member's issue often occurs when *Performance evaluation* reveals a mistake or misunderstanding by the specific member.

—After their performance session

Kodai: (To Kumi) How many times are you going to keep playing?

Yasu: (To Kumi) It's too long. Four times, four times.

Kodai: Four times.

Kumi: I'm going to do this (playing) four times, right?

Kodai: No, no, no. Four times like this (playing). Do this four times.

Certain members would confirm plans that had already been agreed upon and ask questions about shared knowledge, which were then taught by other members.

Keiko: Where should I start with this melody?

Minoru: After this is done twice.

Yoshi: He does this twice, ta-da-, here you start.

They also frequently checked with each other about the basic concepts necessary for creative music-making.

Aki: Hey, what do you mean by "accompaniment?"

Miku: It's like an accompaniment, right?

Ken: So (playing) like that.

Miku: You must keep a certain rhythm going, mustn't you?

These instances of guidance and suggestions for specific individual members were usually short-lived, and as soon as the problem was resolved, the group returned to group discussions.

Analysis of teachers' utterances

During class, the teacher sometimes gave feedback or instructions to the entire class, while other times she directed comments to specific groups during group activities. In the analysis, we did not distinguish between the two types of comments, but instead focused on the kind of assignments given to the students by the teacher regarding music production, as well as the kind of instructions she gave them regarding their pieces.

From the analysis of the teacher's utterances, as well as the content of the students' dialogues during the group activities, we identified five higher-level categories: *Confirmation of Shared Knowledge*, *Posing of a Challenge*, *Proposal of a Working Strategy*, *Proposal of a Musical Idea*, and *Performance Evaluation.*

Confirmation of Shared Knowledge

The teacher confirmed the basic concepts that are prerequisites for music making, especially in her comments to the whole class.

—To the whole class

Teacher: After all, a theme is a memorable, central melody. Do you remember that the Koto player was playing the melody gloriously all that time? What was I doing then? What was I doing in rhythm? What role? In Ravel's Bolero, there was a theme, and? Yes. It's an accompaniment. I was the accompanist.

—To the whole class

Teacher: We started at the beginning, we improvised a little bit in the middle, and then what happened next? The first part? Yes. The first part was back, wasn't it? This is also repetition. Understand?

These statements on the theme and accompaniment, or repetition, are the vocabulary that students will need to discuss music in group activities, as well as to emphasize the musical characteristics that a piece must have to reach the goal the students are aiming for.

Posing of a challenge

A prominent instruction given by the teacher to each group during the group activity was a remark urging them to bring the length of their pieces closer to the one-minute target.

—After hearing one group play.

Teacher: To extend the time, for example, why don't you lengthen the time you are playing solo by a little bit, or lengthen the time between you and Yoshi after Atsuko has played?

Proposal of Working Strategy

As a strategy to facilitate group activities, the teachers gave repeated instructions and suggestions regarding Making a Music Score.

—To the whole class

Teacher: Be sure to write it on the drawing paper. Make a note of it. Kazu, show us the score of your music. They wrote down in the score what they are going to do next. You guys will be looking at this when you perform, and you'll be like, "We can do it and even if we forget, we can do it if we look at this."

Basically, the students developed their pieces by building on their improvisational performances. However, they faced difficulty retaining their ideas in memory, which frequently resulted in stumbling when trying to play together. To facilitate the students' work and help them avoid failures during their performance, the teacher recommended using a music score.

Guidance from teachers based on this same consideration was the Use of Means for Timing.

—To a group having trouble with timing during a performance.

Teacher: Why don't you just wait and see? You can do this and be done with it, and then you can all go on to the next part together with saying "Se-no[4]."

Proposal of a Musical Idea

The teacher sometimes suggested musical ideas to develop the students' pieces. The most common suggestion was Repetition of the rhythm and melody.

[4] Calling used for timing.

—To a group whose piece was too short

Teacher: Why don't you just keep doing all of that over and over again? Now then, your performance wasn't impressive at all. I wondered what you guys were doing. I think the time is too short. Make it long enough for an audience to tell who is doing what.

—To the whole class

Teacher: It is the same as Mozart's piano sonata, right? You can repeat that musical unity one more time. If this were 10 seconds of music, you could earn another 10 seconds by repeating it. It's a very good way to lengthen the music, and it helps the listener remember the music better, because they hear the same music again.

The teacher also suggested Quoting an Existing Song. This was adopted and used by many groups.

—To the whole class

Teacher: You could use pop music or something else as material. There is a group doing it with "Tulips[5]." They improvise and play using that rhythm of "Tulips" while everyone sings "Saita (the lyrics)" in their head.

Performance Evaluation

During the group activities, there were several occasions where the teacher listened to each group's performance of the work in progress and evaluated it positively.

[5] Japanese children's song.

Teacher: I think it's a very good idea that the pitch of the melody of "chan chan chan" (singing) changed, and then you changed the note twice more and played the same melody. I think it's perfect up to that point.

It is apparent that both statements were related to *Repetition of rhythm and melody* as well. This indicates that the teacher highly valued the pieces that were organized in a unified manner with a theme or a certain rhythm.

Discussion

Most students' group activities were always organized toward the Expansion and layering of the piece in their compositions. When a new musical idea was proposed in the group, it was rarely refuted by other group members, but if it was not accepted, an alternative was offered.

After a new idea was proposed and was performed to test it, there were few appreciative comments on how the adoption of the idea had transformed the sound of their piece, except as to whether the performance had been performed according to their prior plan. In other words, the students did not decide to experiment with an idea and then modify or reject it because it did not produce the expected results.

Applying the above results to the three phases of self-regulation by Zimmerman & Campillo (2003), the results indicate that the students actively engaged in dialogue related to task analysis and goal setting, corresponding to the Forethought Phase. However, they did not speak much about the Performance Reflection Phases, which include self-observation and self-judgment.

The teacher was concerned with facilitating the creative process and avoiding failures in the performance. For groups that were stuck in the process of creating a piece, she offered ideas to develop the musical materials already acquired. Many of these suggestions were adopted by groups in their production.

The teacher's suggestions for the group to consider were limited to the length of the piece being close to the one-minute target. Although there were some instructions during the Forethought Phase in learning coordination, such as suggestions for working strategies and musical ideas, there was no mention of the Performance or Reflection Phases, such as carefully monitoring performances and offering a perspective when evaluating their own performances.

In sum, the group activities of the students actively adopted the strategies suggested by the teacher. Their evaluation was limited to whether their performance went as planned and whether there were any mistakes. There was no evaluation of the qualitative transformation of their performance expression and modificational activities based on it, neither did the teacher provide guidance on this matter.

In a study by Suga et al. (2021), which analyzed the utterances of teachers and students regarding metacognitive thinking in an elementary school music class in which the task was to create melodies in groups, it was clear that the subject matter of the students' thinking during group study was not their own musical values, but rather their compliance with the rules provided by the teacher and the performance of the melody they created. They ended up checking consistency with standards external to themselves.

In formulating musical expression, not limited to creative music making, it is important to not only solve technical problems and aim for expression that is considered "good" according to external standards. Rather, it is also important to develop metacognitive thinking

to evaluate current expressions in light of the kind of sound one is aiming for; in light of their own internal standards, and to move closer to their ideal expression[6].

It is difficult for learners to acquire metacognitive thinking based on their own experiences alone, and it is important for teachers to consciously guide learners, especially at the beginner and intermediate levels, in a planned and designed approach (Hart 2014).

Carefully designed verbal prompts given by teachers have been shown to be effective in promoting self-regulation, or a socially shared regulation (Michalsky & Cohen 2021; Järvelä et al. 2016).

For example, prompts for students to monitor and reflect on their own performance could include the following:

1. Has the new approach changed your sound?
2. Are the changes consistent with your prior expectations?
3. Did you feel any discomfort or deficiency?
4. What steps, if any, should be taken to resolve them?

By presenting these questions to the leader of the group and having them verbally ask the other members of the group these questions each time the performance is finished, and by having them verbalize their thoughts to each other, we can expect to promote the socially shared regulation of the learners in the musical creation activity.

Currently in Japan, to promote “individualized and optimal learning,” it is required to “encourage children to grasp their own learning situation and to adjust their learning

[6] Hoffding and Schiavio (2021) describe musical expression as an exploration of the sonic world created by musical action and behavior, as well as an exploration of the inner world opened by the sound.

independently" (Central Council for Education 2021, p.18). Compared to other fields, however, research on self-regulation in music learning is just beginning (McPherson et al. 2019, p. 21), and there is still minimal research on learning regulation, especially in collective music learning. For students to continue learning music independently even after they graduate from school, and to develop the attitude and ability to be familiar with music throughout their lives, it is necessary to continue research on the kind of classes that should be developed as well as the requisite competence levels of music teachers.

References

Hart, J. T. (2014). Guided Metacognition in Instrumental Practice. *Music Educators Journal*, 101(2), 57-64.

Høffding, S., & Schiavio, A. (2021). Exploratory expertise and the dual intentionality of music-making. *Phenomenology and the Cognitive Sciences*, 20(5), 811-829.

Järvelä, S., Järvenoja, H., Malmberg, J., & Hadwin, A. F. (2013). Exploring socially shared regulation in the context of collaboration. *Journal of Cognitive Education and Psychology*, 12(3), 267-286.

Järvelä, S., Kirschner, P. A., Hadwin, A., Järvenoja, H., Malmberg, J., Miller, M., & Laru, J. (2016). Socially shared regulation of learning in CSCL: Understanding and prompting individual-and group-level shared regulatory activities. *International Journal of Computer-Supported Collaborative Learning*, 11(3), 263-280.

Michalsky, T., & Cohen, A. (2021). Prompting Socially Shared Regulation of Learning and Creativity in Solving STEM Problems. *Frontiers in Psychology*, 12.

Schoor, C., Narciss, S., & Körndle, H. (2015). Regulation during cooperative and collaborative learning: A theory-based review of terms and concepts. *Educational Psychologist*, 50(2), 97-119.

Suga, H. (2022). Trends in Research on Self-Regulation and Metacognition in Music Education. *Japanese*

Journal of Music Education Research, 52(1), 36-45.

Suga, H., Fujimoto, I., Sakamoto, M., Ura, Y., Sakai, Y., Haseba, Y., Takeuchi, M., Kai, M., & Ueno, M. (2021) How can music teachers support students to develop their metacognitive skill for music learning? *Journal of the Center for Collaboration and Development in Educational Practice and Management*, 29, 39-53.

The Central Council for Education (Chuo-Kyouiku-Shingikai) (2021). *Toward the Construction of " Japanese-Style School Education in Reiwa": To realize individualized and optimal learning that brings out the potential of all children, and collaborative learning*. Retrieved from https://www.mext.go.jp/content/20210126-mxt_syoto02-000012321_2-4.pdf.

Zimmerman, B. J., & Campillo, M. (2003). Motivating self-regulated problem solvers. In J. E. Davidson, R. J. Sternberg (Ed.), *The Psychology of Problem Solving* (pp. 233-262). Cambridge: Cambridge University Press.

Zimmerman, B. J., & Schunk, D. H. (2011). Self-Regulated Learning and Performance: An Introduction and an Overview. In B. Zimmerman & D. H. Schunk (Eds.), *Handbook of Self-regulation of Learning and Performance* (pp. 1-12). New York: Routledge.

A new perspective on creativity: Gendlin's "A Process Model"

Satoko Tokumaru

Kaichi International University

Author Note

Faculty of International Liberal Arts, Kaichi International University, 1225-6,

Kashiwa, Kashiwa-shi, Chiba, 277-0005, Japan.

Professor Satoko Tokumaru

Email: satoko.tokumaru@kaichi.ac.jp

Abstract

A Process Model is a philosophical work by Eugene Gendlin. In this work, he develops a unique theory of generating meaning and proposes a new perspective on creativity in art. In this model, the source of creativity is “the direct referent,” and the development of creativity is creating “patterns themselves.”

Human beings can feel the much larger order that transcends existing culture forms and develop them as “patterns themselves” (sound patterns, visual patterns, movement patterns, etc.). Furthermore, it is possible to give each other the physical effects of “patterns themselves.” Art makes it possible.

Keywords: body process, pattern, art, creativity, direct referent

Introduction

A Process Model is a philosophical work by Eugene Gendlin (Gendlin, Eugene T., 1926–2017). He was a philosopher and psychologist and well known for Focusing, a psychotherapy technique, and for "Thinking at the Edge" applying Focusing. The "Philosophy of the Implicit," which he developed in this work, provides the background theory for "Focusing" and "Thinking at the Edge."

This work, which took a long time to write after his major work, *Experiencing and the Creation of Meaning* (Gendlin, 1962), has been in dissemination since the 1980s through private editions and online editions, and it was published by Northwestern University Press in 2018. In recent years, there has been growing interest in his philosophy. As Robert Parker states in the foreword, a cornerstone of Gendlin's thinking is the role of the body in the generation of meaning. While creating new concepts one after another, Gendlin develops a theoretical model of the process by which meaning is generated from the body. The crux of Gendlin's interest is "language," and there are not many passages that touch on art, but the work is unique and provides a new perspective to reconsider the creativity of art. This paper introduces Gendlin's theory by focusing on *A Process Model* and discussing the creativity of art.

Gendlin's theory is layered, with the upper containing the lower. The first layer is

living body processes; the second layer is behavior; the third layer is language and culture; and the fourth layer is symbols that transcend language. A change from the lower layer rises and spreads to the upper, and a change in the upper develops in the lower. As a result, all layers always interact.

The following is a passage in "(f-10) New expressions" in Chapter VII, where the language of the third layer is discussed.

When patterns first emerged for humans, they were not art. They were culture-forming and human-making. Then as now the patterns versioned ordinary contexts (versioned = sequenced, let us feel, have, spend time having). Then as now these patterns are symbolic of our living contexts, because they version. Although just patterns, they are also a bodily feeling and having of the life-contexts they reconstitute. But there is a big difference: now such patterns are art, that is to say, a separated and different context, not life but art. But it isn't art that has changed—in art a new pattern still does what it always did: it versions our living in a new way, and it also elaborates and re-creates our living. What has changed is that now there is language, and our living situations (our interaction contexts) are structured with language.

There is therefore (with the exception of VIII, to come) no way, now, for visual

or sound or movement patterns to act like a "first dance," and to regenerate the whole culture. This effect is now minor (although very precious). （pp. 179–180）

From this passage, we can pull out his perspectives that "patterns are art," "a bodily feeling and having of the life contexts they reconstitute," "symbolic of our living contexts," "culture forming," and "separation of language." But without understanding Gendlin's concepts such as patterns and versioning, it is hard to get to the bottom of what this passage means. We don't even know what "VIII" means. First, l would like to take a quick look at Gendlin's philosophy and understand his unique concepts.

"Recognition" in the first layer (body process)

Implying

The "body" in this model is the "body-environment process." The body and the environment are mutually implicit. We inherit not only the lungs but how we breathe, and not just the stomach but how it digests and what food it can take. A body process is modeled as a whole process in which subprocesses interaffect each other. Every subprocess is a crossing of everything by everything. This is called "eveving".

In eveving, separation only occurs when there is a "missing" in some part of the interacting environments. It is felt as "absence" by the body. Everyone has the experience of being surprised by a step while walking. You were surprised because the ground that

would have been there was “absent.” It can be said that the body knew (“implied”) what “it” should “be.” We can say that the body implies the missing aspect of the environment. The “it” that the body knows is called the “implying.” The “absence” implies “implying.”

When walking smoothly, a “functional cycle” is going on, and neither “absence” nor “implying” is felt. Only when the ground that the body implies is missing does the walking (subprocess) pauses and “absence” becomes differentiated. The pausing process interacts with certain aspects of the environment, resulting in a cooperative differentiation of whole processes. In most cases, the foot lands on new ground; “absence” is “filled,” and the whole process regains balance and walking continues. This encounter is “recognition” because it encounters “implying.” This “recognition” of “implying” is a rudimentary symbolic relation.

Patterns

The ground on which the next step treads is not the same to the “implying” as before. A new “similarity” is created during the pause. The sequence of “similarities” is the “pattern.” Just as morning and night are repeated, and sunny and rainy weather are repeated, environments have a certain repetitiveness. Each one is a little bit different, never exactly the same, but similar. Only those organisms that have acquired the ability to create patterns that correspond to their similarities with changing environments have

survived. “Implying” is retained and inherited in the body as a similar pattern generation function, not as a concrete form. As long as a creature does not die, “absence” is focused in the direction of continuing life, and “similarity” arises in that direction.

In “eveving,” when “similarity”“ is recognized as sufficiently similar to “implying” (it is almost the same), the mutual influence of processes is focused “many into one” (this is called “focalling”). And the next step occurs differently from the first. If not, a creature will die. As long as a creature continues to live, the next move (one step) will always be formed.

> *if a chemical that damages the cell wall is introduced into the solution in which certain living cells exist, the cells produce a new chemical which exactly repairs the cell wall damage.*
>
> *The cell does not need to adapt itself to the new chemical over millions of years. The very first time it ever forms in this chemical, it forms in a differently patterned way.* (p. 75)

Even the most primitive life process already has a pattern-generating function.

Three Universals

“Implying” sequences as a “pattern” is called the “second universal.” Gendlin defines the so-called “universal” in a general sense as the “third universal” and creates

two concepts, the “first universal” and the “second universal.”

In a life process, a “universal” appears in a sequenced form as a “second universal,” that is, a pattern, when it appears for the first time. However, universality is only implied in both the “first universal” and the “second universal.” The “first universal” is pre-formed and goes unnoticed. In the “second universal,” similarities arise and are felt (“recognized”). The “third universal” is the one in which the similarity relation becomes its own unit, and it assumes language. It is discussed later.

Four Environment

For this model, it was necessary to conceptualize the “environment” in detail. Gendlin puts aside the observable environment in the ordinary sense as “environment #1” and the “interacting environment” as the central “body-environment” in this model as “environment #2.” The environment generated as a result of the interaction and directed to further interaction is defined as “environment #3.” The environment that has never interacted are designated as environment #0. This model is open to the possibility that what was not the environment for the body becomes the environment. The body-environment proceeds under the much larger order.

“Re-recognition” in the second layer (behavior)

Leafing

When an environmental change is large, it is difficult to form patterns, subprocesses continue to stop, and functional cycle opens. At the end of the process, the moving and stopping movements interact, and the end of the process repeats itself in small bits. This is called “leafing.” “Leafing” allows the organism to maximize the chance of new occurrences being generated. With generating the new reiterating cluster, the implying “bites” into the changing environment. A new “first universal” becomes implied, and “another set of implying” (different from the original implying) emerges, when environment #0 becomes environment #2 . As “similarities” are created with another set of implying, “universal” becomes implicit as a “second universal.” Successful creation of the “similarities” sequences as a pattern and restarts the whole process. When it resumes, a new cluster will be in eveving.

Gendlin infers that in certain organisms, clusters of rhythms during leafing formed repetitive departments in the body that became sensory organs. The body moves through the interaction of two avenues: perception by the whole body (whole-body perception) and perception by the sensory organs (sensory perception). This is a behavior (second layer). Behaviors are always related to bodily processes（first layer.) This is called

"doubling." Therefore, the behavior space is constrained by the body structure. Many animals cannot drink while running. The behavior space is a mesh of related clusters.

The cat keeps the bird steady in front and chases it while reconfiguring its perception of the violently passing wind and trees. The "absence" of nutrient uptake (first layer) motivates capture (second layer). Animals recognize "prey" in the second layer (behavior) and recognize "nutrition" in the first layer (body processes). The process is always finished at the first layer. It's called "consummation." Consummation is that event which is both behavior and body-process resumption. Animal behavior involving two "recognitions" is schematized as "re-recognition."

"Re-re-recognition" in the third layer (language and culture)

Versioning

Species members are an important environment for life processes, and organisms have an innate ability to know their own species. Plants are pollinated and bear fruit within species (first layer). Animals search for a species member (second layer) and complete mating and reproduction (first layer).

In some species of birds, a mating dance precedes copulation. A simple movement, such as spreading wings or hopping, which is unique to the species, invites them to "mate." This repetition of slightly different "same" behavior (second layer) is called "versioning."

It also does not promote reproduction (first layer) during versioning. The cessation of action and the cessation of bodily processes are “doubled.” A somewhat different body-look and sound in one body create in the other a somewhat different connection of bodily processes (first layer) and therefore different body-look and sound (second layer). A continuum of “body-looks” occurs. If a “re-recognizable” pattern of similarities is formed between two birds, the behavior of “mating” (second layer) occurs, and the bodily process of “reproduction” (first layer) is “consummated.” The scheme that has developed “recognition” in bodily processes (first layer) and “re-recognition” in behaviors (second layer) develops into “re-re-recognition” (third layer) here. A pattern of body-look is doubled with a behavior context. A pattern is "about" a behavior context.

These small changes in body looks, moves, and sounds come very close to being something like symbols inasmuch as their small occurrence drastically shifts the behavior context, which is to say that they “mean” so much more than they are, in that certain movements are more than just movements. However, animals are merely behaving, not expressing anything.

Patterns themselves

Among animals who live together in the same territory there is typically a social

hierarchy. In certain species of monkeys, a monkey with lower status avoids fighting by showing his back to a monkey with higher status. But if this behavior does not occur for some reason, a “dance” sequences by a threatening gesture between them.

In highly developed humans with complex social lives, the relationships between individuals are even more complex, and the contexts in which individuals interact are not easily carried forward and are versioned. Gendlin infers that when a “dancing” human being suddenly has a moment in which he sequences, has, feels, namely, his being in that behavior context, he has “a feel of the feeling.” Human beings for the first time have a level of “aboutness.” For humans, “objects” such as other species (animals, plants, and things) are always doubled and come to exist at the level of “aboutness.” This is called seen-formation.

Moreover, since humans (being of the same species) can be carried forward by the same pattern, when multiple humans gather and one makes a gesture toward a certain object, the others on the spot are also carried forward. They are looking at the individual. They are carried forward by just watching, not by having their own body effect make a renditon on the other body in turn. Patterns carry forward not between two bodies but between body and pattern. Since body-look as a whole is already a pattern, Gendlin calls these new ones “patterns themselves.”

The object comes into human pattern space. While the behavior space is a mesh filled with clusters and is constraints of interrelationships between clusters, the pattern space is freed from these influences. Pattern clusters can be freely formed. It's called "empty" space. Gendlin infers that "dance" moves away from being onomatopoeic of the context which it derives from. And it comes to gather due to the familiarity of the "patterns themselves", and a new pattern arises and a cluster is created. This is a "kind." New patterns are created to version and re-create our living situations in new ways. It is "culture formation."

Once the "patterns themselves" had developed, the various sensations were differentiated, to be only sound, or only visual, or only movement. Why was it sound that developed language? Gendlin infers that one major reason may be that sound travels in all directions, so people don't have to keep looking at the person they're talking to. An infant's cry reaches her mother, even if she was looking somewhere else at the moment. Another reason may be that sound patterns, such as the ohmic sound, affect us physically due to their unique physical effects due to their nature.

Art and language

The first words, long ago, were syllabic units. At some point, however, new sound

formation stopped. Gendlin infers the critical point (called the "flip") as follows. The interaction context became too wide to be wholly versioned by a new sound. The new sound remained in the context in which the sound was currently occurring, and only the context(s) in which the sound collected was restructured and carried forward instead of being versioned. A word or phrase reconstitutes its context(s). Gendlin says that this way of writing the plural "s" marks how, in one sense there are many contexts reconstituted, while in some other sense it is all one universal kind of context. And when the next move occurred, the first bit of sound that remained in that context emerged and became a "word-unit." New marks develop to mark distinctions between the collected context(s), "this" context, and "a." "A bit of sound" becomes a sound-part in its own right, something that can recur as itself, something that can be both its other occurrences and this occurrence; in short, something that can be such: "such" is the third universality. New sound-forming ceased, and words began to work with other words, not in terms of sound quality but in terms of the system of other words and sequences which the word implies. The word is "used."

Each unit must first have its own effect, and only then do these effects build to a whole that modifies each. The effects are in terms of meaning, not sound. It is the "re-recognition" the meaning. Schematically it is "re-re-recognition." One responds to the

meaning one has expressed. So, “re-re-recognizing” applies to the achieved meaning in a self-enclosed way.

On the other hand, any artwork is a fresh new whole, not made up of units each of which its own whole. When a painter “uses” a tree that was drawn by a famous artist, it is still the quality of the visual pattern that affects us. The tree also has to work together visually in terms of line and color patterns with the rest of the painting. A painted tree is a visual pattern. A melody affects us through the quality of the sound pattern. Art still has an effect in terms of sound and visual qualities.

Importantly, the clusters of similarities categorized by language are only a part of what patterns collect. Every human action and experience is kinded: it is “a” such. But it is not at all only along those kinds that we can verbalize in existing words and phrases, much bigger than that. Even now, art continues to express and reconstitute them by expressing through sound and visual patterns. It includes aspects of similarities that language cannot express. This is the function of art in the third layer of the model. A series of beautiful sounds played according to the rhythm of the trend is enough to impress us. It versions our living in a new way, and it also elaborates our living.

ART in the fourth layer（direct referent）

Transcend kinds

Gendlin's theory of meaning does not end at the third layer (language and culture). Even after a language is developed, the kinds are not an independent system. Rather, they are new versions of the much larger order that existed before and that is now lived, felt, sequenced, and elaborated. Environment #0 also exists that has not yet entered into interaction with the body process. But is it possible to express something that transcends its kind? Gendlin's answer is "yes." "VIII" is related to that.

"VIII" arises from the current culture forming impasse. Isadora Duncan, who opened up a new field of dance, is drawn as an example. Gendlin, citing Duncan's writing, states that Duncan stopped dancing and stood still for a long time, paying attention to her bodily feeling. It is interaction with a right feel, a new kind of feel which will come in a new place. She stood still, was seeking, looking for, waiting for the right feel to come, willing to let it come. The new kind of "feel" comes. It is the evev-evev-evev side response. It is the "yes . . . yes . . . yes" of direct referent formation, the new kind of carrying forward of the whole, and new self- understanding. This understanding is fundamentally without words.

The body process might physically meet something differently than evev implies in

its concrete bodily way, it can “surprise.” There are murky bodily changes, and only after some seconds of these is there then a distinct datum, a “this,” the felt sense, the direct referent. It comes, something has gelled, fallen into place. A direct referent forms (falls out). It implicitly involves a whole cluster with the “first universal” from a much larger order. The system of such VII-universals from a direct referent is called a “monad.” It is doubled. It can give rise to many clusters of VII-sequences any of which are equally universally valid in the old VII way and which hint at “one whole” in some way we cannot think about clearly yet. Monad can be applied to everything to work out its second sequences as patterns. It is called “monading out.”

Duncan who got “this” was able to dance from there. The new dance is the sequence of the second universality. The first universality that precedes has occurred. The second sequence creates many big changes. The formation of direct referent leads to a myriad of new universals, promoting aspects that are never capable of being sensed within VII.

Duncan’s dance is an instance of movement patterns through direct referent. Art can come from a direct referent of artists and develop to painting (visual patterns), to music (sound patterns). Each work is an instance of the artist’s direct referent, and by sequencing the universal as new patterns, it expresses the much larger order implicitly.

In addition, Gendlin proposes “diafil” as another “concept of “VIII.” When the

direct referent monads out, it stays “the same.” The whole cluster of statements from it, instancing it, and all the “applications” of those statements, is like one large comprehension of the direct referent. But in the opposite direction, “diafil” letting the other be a direct referent “monading into”. In diafil, metaphors work and new similarities are created. Talking about music, it means that when listeners listen, “diafll” arises in them.

Good music has the effect of creating “diafll” in listeners. It will also unfold as the next “monad.” In this way the “monading-diafilling” process continues.

> *Art creates new patterns of sight, sound and movement. They function in most other actions and interactions. For example, even today new art influences the way we perceive it. The way we see nature, the design of furniture, the arrangement of rooms are influenced by visual arts, and the sounds we hear in music make us first perceive the influence of pleasant sounds. And also the effect of sound that is not. Conversely, of course, art creates new patterns by versioning aspects of the world that were not previously pattern-versioned. For example, industrial machinery and noise are his versions in music and painting, and the patterns themselves are then also used in the design of new industrial products.* (p. 179)

So far, we've seen art along the layered structure of *A Process Model*. Art can not only express things that cannot be said in words but also create completely new expressions.

Conclusion

Finally, I would like to clarify the new perspective to creativity in art. In this model, the source of creativity is the "direct referent" and the development of creativity is creating "patterns themselves."

Human beings can feel the much larger order that transcends existing culture forms and develop them as "patterns themselves" (sound patterns, visual patterns, movement patterns, etc.). Furthermore, it is possible to give each other physical effects of "patterns themselves." Good art makes it possible. Physical effects can be further developed as "patterns themselves" in any field, including art.

The act that makes it possible is the focusing on the interaction with oneself and paying attention inside the body. This means letting the interaction version. Then, the direct reference that implies much larger order comes (implied as the first universal). It is not noticed initially but is noticed when it sequences as a pattern (implicit as the second universal). Expressing from a direct reference makes it possible to express the universality implicitly (implicit as the second universal), such as in music, a picture,

dance. (When we speak in language, the third universal is involved, but I will discuss this in another article.) I would like to confirm that in "patterns themselves," universality can be developed and interact while it is implied. And a work of art makes it possible.

In this layered model, all layers are constantly interacting with each other. As far as this theory is concerned, the desire for art arises from bodily processes and is consummated toward the bodily processes. The whole process is guided by the human ability to generate "patterns themselves." It is always "about" "being in this context (here now)." Therefore, art can be said to be a symbol of life processes. This human capacity is based on the pattern-generating capacity of all life processes common to animals, plants, and cells. Therefore, art activates human beings from the ground up.

Reference

Eugene T. Gendlin (2018) *A Process Model*. Illinois: Northwestern University Press Evanston.

Rethinking "Singing" in Music Education:

From the class practice of "Dialogue Singing," referring to the Bhutanese folk song "*Tsangmo*"

Yoshihiro Ino

Niigata University, Professor Emeritus

Kiyoko Kuroda

Kinjo Gakuin University

Yumiko Watanabe

Hayadori Minami Elementary School, Niigata City

Author Note

Correspondence concerning this article should be addressed to Yoshihiro Ino, Professor Emeritus, Niigata University, 8050 Ikarashi 2-no-cho, Nishi-ku, Niigata 950-2181, Japan.

Email: ino@ed.niigata-u.ac.jp

Abstract

In Japanese school education, “singing” is often understood as expressing one’s feelings about a song as a composed work. However, the meanings and forms of human singing are more diverse. We conducted a case study on “Dialogue Singing,” in which elementary school students create a song, pass it on to others, and others respond, which is based on the Bhutanese Playful Singing Dialogue *Tsangmo*. Consequently, we proposed a framework for teaching Dialogue Singing. Analyses of the students’ comments revealed that they realized the importance of interactive communication through singing, found new forms and values, and enjoyed singing.

Keywords: Bhutanese “*tsangmo”*, Class practice, Dialogue Singing, Interactivity

1 What is “singing” in school education?

In Japanese school education, “singing” tends to be viewed as a way of facing a piece of music, interpreting its meaning as an expressive person, and conveying one’s feelings to others. This is not unrelated to the fact that music education in modern Japan began with “*Shoka* (singing a song),” and later, school music focused on the expression of songs as “works” using Western music techniques. The songs that students study are composed by a third party represented by the composer, and it has become important for students to convey the creators’ thoughts with their own interpretations. In this case, songs as teaching materials are secured as works of art, and melody and lyrics are fixed and unchangeable. In addition, in its expression, a unidirectional relationship between the expressor (singer) and audience (listener) is fundamental. Musicologist Tomiko Kojima is critical of this, saying that we have definitively forgotten that singing is a way to directly express what we feel and that it is something familiar that we can enjoy in a more direct way (Kojima 1981, p. 230).

Originally, the meaning and form of human singing would have been more diverse. For example, if we look at singing from the perspective of “Dialogue Singing,” we find that there are such songs not only in Japan and Asia but all over the world. In Dialogue Singing, a creative world emerges in which singers remake and sometimes improvise

songs in interactive communication. Focusing on the interactive communication of such songs, Kuroda et al. (2017) describe the aspects of musical expression utilizing verbality, responsiveness, improvisation, and theatricality through the description and analysis of fieldwork of Bhutanese Dialogue Singing "*tsangmo*." The paper also argues that by taking a broader view of musical culture, "singing" as a subject content can become more diverse.

In Japan's current elementary school music curriculum guidelines, A. Expression (3) Music-making activities are defined as "making sounds and music that are valuable to oneself while exercising creativity" (Ministry of Education, Culture, Sports, Science and Technology 2018, p. 23). The curriculum expects students to "obtain various ideas for music-making through improvisational expression," understand "the characteristics of connecting sounds and phrases," and develop "skills for making music using musical mechanisms" such as "repetition, call and response, and change." Naturally, this activity does not exclude the possibility of creating songs.

In this paper, we examine a case study focusing on "Dialogue Singing," in which students compose songs, convey those songs to others, and respond to them with songs.[1] Regarding "Dialogue Singing," we introduced the case of *Tsangmo*[2] in Bhutan, which retains rich aspects and arouses the interest of students. Also, through exchanges with

people from Bhutan, we have uncovered the content of “Dialogue Singing.”

This study aims to explore what opportunities for new learning about “singing” can be created by interactive “Dialogue Singing.”

2 Previous Research

Ino et al. (2016) conducted a study on the practice of singing dialogue in music education in Japan. The study identified the following basic framework and results through practice in elementary and junior high school music classes:

> (1) Repeat the enjoyable experience and have students embody the original song. (2) Creating a structure of dialogues and lyrics. It is important to take a step-by-step approach so that students can create lyrics without any difficulty or inevitability. It is also effective to use the rhythm of embodied words. (3) Two people or two groups sing in a dialogue using the lyrics created by the students. A moderate sense of competition enlivens singing. (4) Presentation and listening to each other are effective ways to enjoy singing. Involving classmates (audience members) in the singing activity enhances the enjoyment of singing. (p.98)

While the practice in this study has similarities with this framework, it is unique in two aspects.First, the students learn the notes that make up the melody and create a new melody using a pentatonic scale after learning a dialogue using the original song. Second, they watch *Tsangmo* of Bhutanese students and ask questions directly to the Bhutanese teacher,[3] which are then used in the dialogue of a reference song. The expectation is to provide a framework that differs from previous practices. This approach provides the unique opportunity to learn dialogue singing through the analysis and discussion of students' comment cards.

3 Purpose and Methods

The purpose of this paper is as follows:

1. Propose a basic framework on how learning “Dialogue Singing” can be structured in classroom practice through case studies.
2. Analyze the students’ learning and clarify what the students’ learning from the singing interaction brought to them.
3. Rethink the concept of “singing” in music education.

As a method, we practiced “making dialogue singing” classes at elementary schools and found the basic framework of the classes through an analysis of the class

process. In addition, we clarified their learning through analyses of the students' activity records and descriptions on comment cards. Subsequently, we reconsider the concept of "singing" in music education.

4 Practical Research

From September to December 2022, one of the authors, Watanabe, conducted "making dialogue singing" practices in classes continuously.[4] The target group was 91 students at B Elementary School in A City, divided into three fourth-grade classes: 28 students in class 1, 32 students in class 2, and 31 students in class 3 . The activities can be roughly divided into two stages. The first stage included "activities to familiarize the students with dialogue singing and examine the notes that make up the song," and the second stage included "activities to create their melodies and play singing dialogue."

First stage ：Activities to familiarize the students with dialogue singing and examine the notes that make up the song (September-November).

We played with *Warabeuta* (Traditional Japanese children's play songs) as a regular activity by fmiliarizing students with lyrics from the Warabeuta songs "*Antagata Dokosa* (Where are you from?)," "*Usagi* (Rabbit)," and "*Hana ichi monme* (The flower

is Ichi monme)," which are based on the "question and answer" structure. Next, we changed the lyrics of these songs and had the students interact with each other. Some examples are provided below. The numbers indicate the order in which the songs were sung.

Figure 1

The lyrics of "Antagata Dokosa." Original lyrics (left) and Changed lyrics (right)

Question	Answer
1 *Antagata doko sa* (Where are you from?)	2 *Higo sa* (from Higo)
3 *Higo doko sa* (From where in Higo?)	4 *Kumamoto sa* (from Kumamoto)
5 *Kumamoto doko sa* (From where in Kumamoto?)	6 *Senba sa* (form Senba)

Question	Answer
1 *Antagata doko sa* (Where are you from?)	2 Echigo sa (from Echigo)
3 *Echigo doko sa* (From where in Echigo?)	4 *Niigata sa* (from Niigata)
5 *Niigata doko sa* (From where in Niigata?)	6 *Sado sa* (from Sado)

Figure 2

The lyrics of "Hana ichi monme." Original lyrics (left) and Changed lyrics (right)

Question	Answer
1 *Tonarino obasan chotto kite okure* (Hey, neighbor lady, come here a minute)	2 *Oni ga kowakute ikaremasen* (Can't go, I'm afraid of the demons)
3 *Ofuton kabutte chotto kite okure* (Put a futon on your head, come here for a minute)	4 *Ofuton yaburete ikaremasen* (Can't go, my futon is torn)

Question	Answer
1 *Tonarino ojisan chotto kite okure* (Hey, neighbor uncle, come here a minute)	2 *Gikkurigoshi de ikaremasenn* (Can't go, I have a strained back)
3 *Isu ni suwatte chotto kite okure* (Sit on the chair. Come here for a minute)	4 *Isu ga ugokanaikara ikaremasen* (Can't go, my chair doesn't move)

1. First, we examined the notes that make up the *Warabeuta* melody (September–November).

   The constituent notes were then checked by playing keyboard instruments and recorders. Finally, we displayed the constituent notes of *Warabeuta* that students researched in the music room.

2. In October, the appreciation and performance of Japanese folk songs, in which the students listened to the Japanese folk song "*Kokiriko* (two bamboo pieces)" and

confirmed the notes that made up the song. The teacher played the *shinobue* (Japanese transverse bamboo flute), and the students danced and sang "*Kokiriko*" while playing traditional rhythm instruments *kokiriko, binzasara* (108 pieces of wood tied together with string)*, bozasara* (rub the uneven two sticks)*, hiradaiko* (flat drum), and *kuwagane* (hoe gong).

3. From October through November, the students made *Ohayashi, which is* an instrumental ensemble used in the traditional Japanese festival *"Matsuri."*.

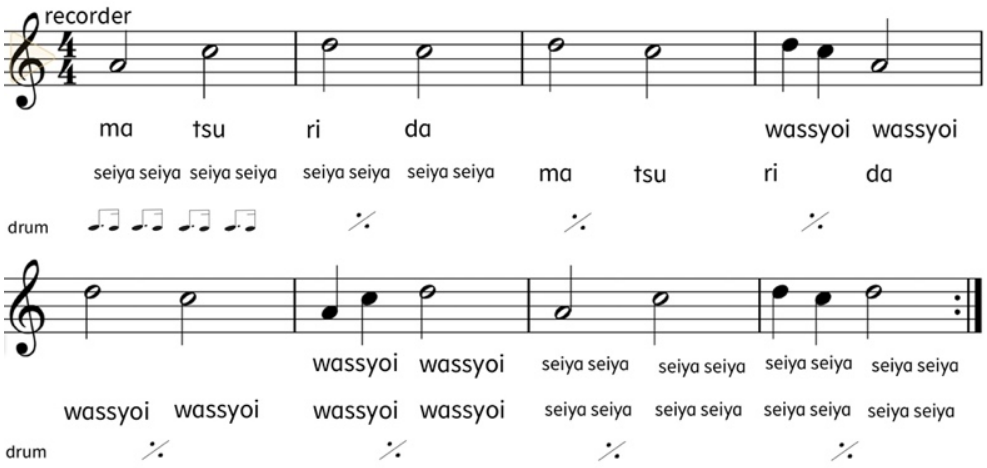
The students worked inn groups of 2–3 people to create a rhythm ensemble using words related to *Matsuri.* They added a three-tone la-do-re melody to the rhythm ensemble and played it on the recorder (Figure 3). In addition, the call and rhythm of *Taru daiko* (barrel drum) were also added to the ensemble.

Then, we held a workshop with *shinobue* player Mr. Yashukazu Kano.[5] At the workshop, the students joined Mr. Kano and his *shinobue* flute to improvise and recreate *Ohayashi.* On November 5, they presented the new *Ohayashi* at a community event.

Figure 3

The lyrics attached to the Ohayashi created by the students. Ma tsu ri da (It's Matsuri

festival). Wasshoi is one of the Call at the Matsuri festival.



Second stage: Activities for students to create their own melody and play singing dialogue (November-December)

In the second stage, we conducted seven lessons, each lasting 45 minutes. These are divided into two units.

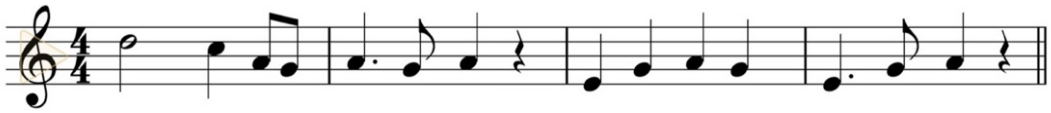
First unit: Create a melody using the pentatonic scale (mi-so-la-do-re).

Time 1: Play with improvisational dialogue on the Orff instrument or *koto* (Japanese zither). Students improvise a melody of about two measures each, with four beats per measure, and interact with other students.

Time 2: Each group decides on a rhythm and creates a coherent melody of four measures of four-four time signatures, making use of repetition and variation.

Figure 4

A melody created using the pentatonic



Second unit: Create Dialogue Singing

Time 3: Sing improvisationally while thinking about the lyrics of the dialogue.

Figure 5

The lyrics of "Dialogue Singing" improvised

First group	Second group
1 *Kyo- no hiruyasumi nani de asobitai* (What do you want to play during lunch break today?) 3 *Sakka- mo iikedo dozzibolu ga iina* (Soccer would be nice, but We'd rather play dodgeball) 5 *Kotti ga kattara dozzibolu wo shiyou* (If we win, let's play dodgeball)	2 *Kyo- no hiruyasumi sakka- ga iina* (We'd like to play soccer at lunchtime today) 4 *Janken wo site asobi wo kimeyo* (Let's play rock-paper-scissors to decide who gets to play!) 6 *Kotti ga kattara sakka- wo shiyou* (If we win, let's play soccer)

Time 4: Watch a video of a Bhutanese student singing together (https://fb.watch/fooxGCXDDC/) and think about how they sing and express themselves. Think about questions to ask Bhutanese. Online exchange sessions with Bhutanese teachers by representative students from each class. The following are the questions asked by the representative students and the answers and advice from Bhutanese.

Table 1

Student's question and the Bhutanese teacher's answer

Question	Answer
Q1: In Bhutan, do you make up lyrics on the spot, or do you remember having decided on them before?	A1: About 80% of the lyrics are traditional lyrics that were learned by listening to their parents sing them. About 20% of the lyrics are words that have been changed or made up on the spot.
Q2: The Bhutanese children sang so loudly and with their whole bodies; it was like a drama. Please advise me how they can sing so happily.	A2: The first song is called *nyen lue*, which is about getting along, and then it becomes *da lue*, which is a song about fighting. You are trying to pick a fight with your partner, but you should not get angry. They choose more appropriate lyrics and say them back. In this way, the song gets increasingly exciting and interesting for the audience.

Q3: Why do they sing songs about fighting in this land of happiness?	A3: Good question. We don't fight over songs but see how smart the other person is and what kind of reply he or she can give. It is also important to be patient from a Buddhist point of view. It is a check on a person's mindset. Since the time of the Buddha, we have been asking such tough questions to check the wisdom of the other person.
Q4: When you have a *tsangmo* competition in a school, what are you judging?	A4: The presentation is about whether the pronunciation is clear and understandable to everyone, whether the answers to the questions are correct, and whether the facial expressions and movements are correct. If you cannot answer the question, you lose.

Figure 6

Photo from the online interview

Time 5: Watch a video of the online exchange meeting. Exchange opinions about what has been learned and understood. Students desire to try making it more fun and creative by referring to the Bhutanese. Creating new lyrics or new singing dialogues. While having fun, try to make pronunciation, facial expressions, and movements more effective in communicating with others. Write reflections on comment cards.

Figure 7

Examples of lyrics to the previous Time

First group	Second group
1 *Kyo- wa gozikan zyugyo ga arune* (We have five classes today) 3 *Nigen wa ongaku tanosii ne* (2nd period is Music. It's fun) 5 *Yogen kokugo ri-furetto owatta* (4th period is Japanese, Leaflet making has finished)	2 *Ichigenn wa sansuu noto kaku no ooi* (1st period is math. Lots of note-writing) 4 *Sangen wa rika zikken ga yaritai* (3rd period is Science, I want to do experiments) 6 *Gogenn wa taiiku tobibako tobu* (5th period is PE. Jumping box)

Figure 8

Example of lyrics after the exchange with Bhutan (After listening to the story of the Bhutanese people, students started to make a song about fighting)

First group	Second group
7 *Kaerinokai nittyoku yatte* (Do a day duty at the return meeting) 9 Y*ada yo anatatachi yatte* (No, no, no. You guys do it) 11 *Bokutachi mo asobu anatatachi yarinasai* (We'll play, too. You guys do it) *Janken!*	8 *Bokutachi wa yada kimitachi yatte* (We don't want to do this. You guys do it) 10 *Bokutachi wa asobu kimitachi yatte* (We want to play, You Do It) *Janken! Oo mai ga*

(Rock, paper, scissors (won))	(Rock-paper-scissors (lost) Oh My God!)
	12 *Demo bokutachi yaranai*
	(But we won't do it)
13 *Demo maketakara anatatachi yarinasai*	14 *Anatatachi yarinasai*
(But you lost, so you do it)	(You guys, do it)
15 *Janken imi nai jan*	16 *Bokutachi kaeru anatatachi yattoite*
(Rock, paper, scissors. It makes no sense)	(We're leaving. You guys finish up)
17 *Sassa to yatte kure yo*	18 *Mou ii minna kaero aitsura no koto wa hottoite*
(Get on with it)	(That's enough. Let's all go home. Leave them alone)

The example lyrics demonstrate that the singers had a friendly and enjoyable exchange until they heard the Bhutanese people's story and started making a song about quarrels. Lyrics 12 are heated, and lyrics 15 and 17 shorten the melody and attack their opponents.

Figure 9

Link for a video of practical classes

https://youtu.be/RT-uwjRk6IM

Time 6: Presentation. Each class finishes what they started to make in the fifth period, and each class gives a presentation and listens to the songs sung by each other—listening to them while judging.

Time 7: Two groups from each class gave presentations to all students.

Figure 10

Photo of the presentation

5 Basic Framework for Classroom Practice of Singing Dialogue

While fostering interest and motivation, the practice centered on singing dialogue and embodiment, acquiring the necessary knowledge, and melody-making skills. The

basic framework of the Creative Dialogue Singing class can be summarized into the following key points:

Continuity: The practice was carried out gradually over three months, from September to December as it takes a certain period to be able to create Dialogue Singing.

Step-by-step approach: In the introductory stage, students acquired the necessary knowledge and skills while enjoying singing together using traditional songs and games. They gradually progressed to creating their own songs.

Motivation: Initially, students experienced the joy of singing dialogues and were motivated by exchanging cultural examples with others. In the latter half of the class, the presence of an audience and the presentation of a judging competition effectively stimulated students.

Embodiment: Songs should always be accompanied by an element of play, so they are embodied through repetition. The lyrics should be varied, and the students should be challenged with longer dialogues. It is also important to accompany the performance with the use of the whole body. The song becomes more exciting when it incorporates elements of fighting.

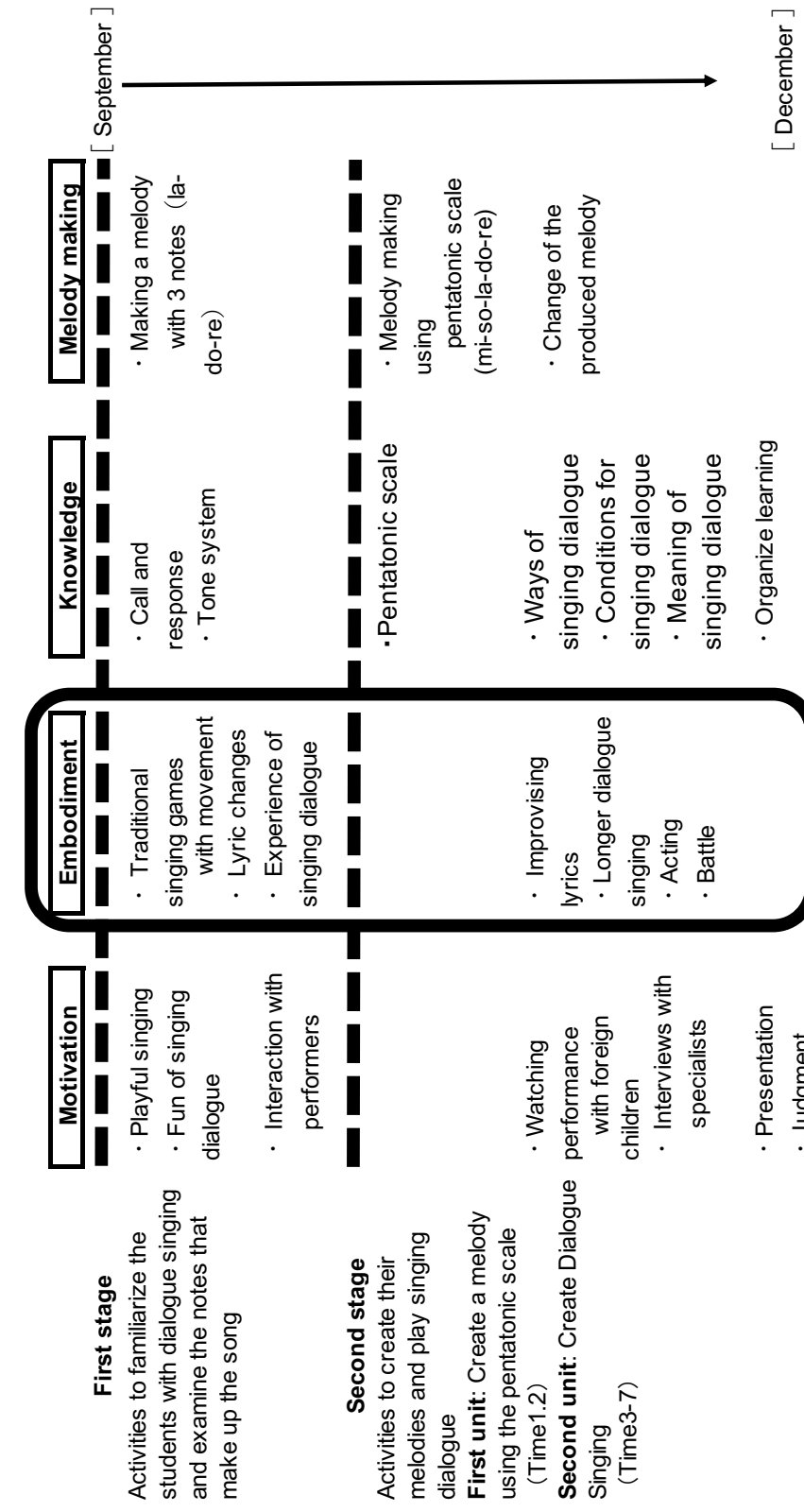
Acquisition of knowledge: The students acquired basic knowledge of the call and response, notes that make up a melody, pentatonic scale, and other musical concepts. The

students were also able to effectively study the methods, conditions, and meanings of calls and answers through examples from other cultures.

Melody making: Along with the practice of singing dialogues, the students acquired melody-making skills step-by-step. The students experienced the dialogue between the melody and lyrics they created and were allow to change the melody they had created through dialogue.

Figure 11

Basic Framework for Classroom Practice of Singing Dialogue (Ino2022)



6 What did the students learn?

Here, we analyze the student's comment cards and summarize their learning. The three questions were as follows:

Q1. What we learned from the Bhutanese in response to our questions.

Q2. Did you enjoy singing?

Q3. Why did you sing that way?

Learning from *Tsangmo* in Bhutan

Table 2

Aggregate results of comments on Question 1

comment	4-1	4-2	4-3	real number	composition ratio
	23	30	28	81	100%
Singing lyrics that insult or ridicule the other person is to check the other person's wit, such as whether the other persSinging lyrics that insult or ridicule the other person is to check the other person's wit, such as whether the other person will respond well without getting angry. With such lyrics, the song becomes a dialogue, singing becomes fun, and the dialogue song becomes lively. It is also a judging point for the song competition.	9	19	11	39	48%
Pronunciation, facial expressions, and body movements are important when singing. It is also a judging point for the song competition.	9	6	19	33	41%
In Bhutan's *tsangmo*, 80% of the lyrics are memorized and sung from long ago, and the remaining 20% are sung by changing words or creating new ones. (It's amazing to be able to create lyrics. With such lyrics, the song becomes a dialogue, singing becomes fun.)	15	9	7	31	38%

After watching a video of a Bhutanese student singing *Tsangmo*, students watched another video of a Bhutanese answering questions, and filled out comment cards. Table 2 summarizes the responses to Question 1, “What we learned from the Bhutanese in response to our questions.”

The most common response (48%, or 39 students out of a total of 81) was that singing lyrics that insult or ridicule the other person is a way to test their wit and make the song more lively and fun. This is also a key criterion in the judging of song competitions. The second most common response (41%, or 33 students) was that pronunciation, facial expressions, and body movements are important when singing, and are also factors in judging.

Many students also commented that in Bhutanese Tsangmo, 80% of the lyrics are traditional and memorized, while the remaining 20% are created by changing or adding words. This shows that the creation of new lyrics is a valued aspect of the song-making process, and can make the singing more dynamic and engaging.

Overall, the comments indicate that the students gained an understanding of the importance of continuing to enjoy "Dialogue Singing" and appreciated the advice from the Bhutanese. It is particularly noteworthy that the use of "fight-like lyrics" was seen as a positive aspect of the dialogue singing tradition.

The joy of "Dialogue Singing"

Table 3

Aggregate results of comments on Question 2

comment	real number	composition ratio
	81	100%
I enjoyed singing.	55	68%
I almost enjoyed singing.	6	7%
I didn't enjoy singing.	2	2%
Other comments.	18	22%

Table 4

Details of "others" (18 students, 22 %)

comment	real number
I really enjoyed singing.	5
I really, really enjoyed singing.	3
I had a lot of fun singing.	2
I really enjoyed singing (in other words).	3
It was really, really fun to sing.	1
The most fun I have ever sung.	1
I had the most fun singing in my elementary school life.	1
I sang happily like a god.	1
I had a lot of fun singing (in other words).	1

Responses for question 2 on the comment card, "Did you enjoy singing?" was tabulated. Among the total of 81 students, 68% (55 students) said, "It was fun," 7% (6 students) said, "It was mostly fun," 2% (2 students) answered, "It wasn't very fun," and 22% (18 students) answered "others." However, looking at the detailed comments given

for “others,” there were only comments such as “it was a lot of fun” and “it was amazing fun,” indicating that the response of “It was fun” was insufficient to measure their reaction to the activity. As a result, the 98% (79 people) who had answered “It was fun,” “ It was mostly fun,” and “Others” also commented that they enjoyed “Dialogue Singing.”

What Students Learned from “Dialogue Singing” Experiences?

Table 5

Aggregate results of comments on Question 3

comment	4-1	4-2	4-3	real number	composition ratio
	23	30	28	81	100%
(According to advice from a Bhutanese) I sang with clear pronunciation, expressions, and body movements.	15	17	17	49	60%
Because I made the lyrics myself (Because I made the lyrics myself (we all cooperated, improvised freely, it was difficult to make the lyrics, but I thought about it)	6	8	7	21	26%
Because I put bad words in the lyrics and made it look like a fight.	1	12	0	13	16%
Because I made a lot of lyrics and continued for a long time. I want to continue.	1	1	8	10	12%
Because I made the lyrics considering the rhythm and melody of the song. because it's a fun song	3	0	0	3	4%

Finally, we aggregated the comments to question 3, “Why did you sing that way?”

to uncover what the students had learned from the “Dialogue Singing” experience.

The most common comment in all three classes was, “(According to advice from a Bhutanese) I sang with clear pronunciation, expressions, and body movements,” accounting for 60% (49 students) of the total (81 students). This includes students who performed “rock-paper-scissors” and “Daruma-san ga Koronda” in the “Dialogue Singing.”

Overall, the next most common comment was, “Because I made the lyrics myself, we all cooperated, improvised freely, it was difficult to make the lyrics, but I thought about it,” which was made by 26% (21 students). The students felt a sense of accomplishment as they created their lyrics through trial and error in groups.

The next most common comment was, “Because I put bad words in the lyrics and made it look like a fight,” accounting for 16% (13 students) of the total comments, but most of them (12 students) were in the 4-2 class. In fact, in class 4-2, many lyrics gave negative responses, such as “Do the daily duty,” “No, you guys should do it,” “Let’s eat fried chicken,” and “No, let’s throw away the fried chicken.”

The most common comment in the 4-3 class was, “Because I made a lot of lyrics and continued for a long time. I want to continue,” which was given by 12% (10 students) of the total comments, of which 8 students were in the 4-3 class. In class 4-3, new

proposals and questions were sung, and there were many cases where the dialogue developed into a story. Moreover, an emphasis was placed on continuing the “Dialogue” for a long time.

Only 4% (3 students) of the 4-1 class made comments regarding musical characteristics, such as “Because I made the lyrics considering the rhythm and melody of the song because it’s a fun song.”

7 Rethinking “Singing” in Music Education.

The students’ reactions and comments indicated that they enjoyed making songs and playing. The interactive communication activities that developed through songs they created, accompanied by performances, created a world of fun songs. With the guidance of the Bhutanese, the students added liveliness to their “Dialogue Singing” by expressing themselves with clear pronunciation, facial expressions, and body movements while singing the theatrical fight song. It seems that they understood the point of communication through songs. In contrast to the understanding and expressive ability to sing that have been emphasized in the music course, the students were able to discover new forms and values of singing through the practice of “Dialogue Singing.”

Although *Tsangmo* of Bhutan is a standardized lyric consisting of four lines of six

syllables, 80% of which are sung using traditional lyrics and phrases, some of which are changed or newly created, the lyrics created by the students contained almost no fixed patterns. This may be due to the fact that the melody used in this practice was not a known traditional phrase, but a new melody created using a pentatonic scale and the students had not learned about syllables and fixed phrases. To further promote the practice of "Dialogue Singing" as a form of interactive communication, these issues must be resolved.

In addition, the insulting and ridiculing expressions used in *Tsangmo* in Bhutan are not simply to show disdain to the other person but to encourage a song competition to see how strongly the other person can express and respond in a "song battle". The students' expressions differed greatly in this respect as well. For example, one student responded to a lyric about a brother who runs away from home by singing, "But, brother, I do not have any money." Another responded to a lyric about wanting to see the snow together from the window but "there is no window" by singing, "Let's make a new window." As another example, when someone sang, "Get on with the day duty," another responded, "That's enough, let's all go home and leave them alone."

While some lyrics, such as "get on with it" and "those guys," might be inappropriate expressions for singing in music classes, the students were excited in their exchanges, and this exchange did not cause contempt toward the other party; rather, the

intimacy of the group was observed. The students seemed to understand and enjoy the meaning of dialogue and exchanging ideas through *Tsangmo* of Bhutan. This practice provides new perspective on how singing can be taught in schools.

Notes

1) “Dialogue Singing” in this paper refers to a form of interactive communication through singing, in which one person calls out to the other person in the song, and the other person responds in song. This type of call and response does not include the audience’s response to a performer’s call at a concert.

2) *Tsangmo* is a Bhutanese play song in which a fixed six-syllable, four-line acrylic is sung to a fixed melody. The lyrics are often improvised, while there are fixed lyrics and phrases. There are several forms of singing, but this paper focuses on *Tsangmo Cheyni* (see https://youtu.be/lLcMa5_2sdI for a video reference), a style of singing and fighting. For more information on *Tsangmo*, refer to Ino et al. (2022).

3) From the Bhutanese perspective, Mr. Tshewang Tashi (Paro College of Education) and Mr. Pema Wangchuk (guide, interpreter) participated with the cooperation of BJMRN (Bhutan Japan Music and Research Network) and HEPDC (Paro College of Education Heritage Education and Professional Development Center).

4) This practice was organized with the inspiration of Ino’s (2022) article “Music in Bhutan and Pentatonic.”

5) The event was organized by the Agency for Cultural Affairs as an “FY2021

supplementary budget project for the revitalization of appreciation and experience of culture and art for children.

Acknowledgments

This work was supported by the Japan Society for the Promotion of Science (JSPS) KAKENHI Grant Number JP21KK0035.

References

Ino, Yoshihiro (2022), *Būtan no ongaku to pentatanic* (Music in Bhutan and Pentatonic). Journal of Music Lesson Building No. 7, Association for New Music Education, Tokyo, pp. 102–107. https://www.icme.jp/ja/wp-content/uploads/2022/10/icme-journal07.pdf

Ino Yoshihiro, Kato Tomiko, Kuroda Kiyoko, Gondo Atsuko, Yamamoto Yukimasa, Nabuqi. (2016) "Education studies: dialogue song Part 3: Inheriting culture to the future." *Japanese Journal of Music Education Research,* Vol. 46, No. 2, pp. 97–98, Tokyo, Japan: Japan Music Education Society.

Ino Yoshihiro, Kuroda Kiyoko, Gondo Atsuko. (2022) *Research on Playful Singing Dialogue Tsangmo in Bhutan for 21.5th Century Music Education*. Niigata, Japan: Japan Society for Bhutanese Folk Music Studies.

Kojima, Tomiko (1981), *Uta o wasureta nihonzin* (The Japanese Who Lost Their Songs). Ongaku no Tomo Sha, Tokyo

Kuroda Kiyoko, Ino Yoshihiro, Gondo Atsuko. (2017) "Reconsideration of Singing in Curricula from the Perspective of Musical Culture: Focusing on the Interactivity of Singing Dialogue in Bhutan." *Japanese Journal of Music Education Research,* Vol. 44, No. 1, pp. 25–36, Tokyo, Japan: Japan Music Education Society.

Ministry of Education, Culture, Sports, Science and Technology (2018), “Elementary School Courses of Study (Notification in 2017) Commentary Music Edition,” Toyokan Publishing Company, Tokyo