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THE FORMATIVE PROCESS OF MUSICAL KNOWLEDGE  
BASED ON THE JAPANESE NATIONAL CURRICULUM:  
A PROPOSAL FROM THE VIEWPOINT OF  
'CONSTRUCTIVISM'

1. *Introduction*

The purpose of this study is to examine the characteristics of musical knowledge and the process of its formation from the perspective of 'constructivism'. In the rapidly changing and unpredictable modern society, where globalization and information technology are advancing, the meaning of knowledge acquisition and its methods are being reconsidered. Instead of making the goal of education to memorize or accumulate a lot of so-called 'one-line knowledge', it is crucial to think about the underlying principles, causal relationships, or systems and make discoveries from them.

In Japan's education sector, there has been increasing emphasis on developing skills that can be used in various real-life situations, such as PISA-type academic skills<sup>1</sup> and 21st-century skills.<sup>2</sup> For example, the report of the Central Education Council (2016) states that it is important "not only to [...] perform prescribed procedures efficiently, but also to [...] explore various trial-and-error activities, cooperate with diverse others, and acquire the necessary skills to create new value, so that each child can become a creator of a better society and a happy life by actively facing and engaging with unpredictable change [...] demonstrating his or her own potential in the process".<sup>3</sup>

It is important, however, not to underestimate the acquisition of knowledge

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<sup>1</sup> 'PISA-type academic skills' refer to the application of acquired knowledge and skills to problems in a variety of real-life situations and are measured by the Organisation for Economic Co-operation and Development (OECD) at the end of compulsory education (age 15).

<sup>2</sup> '21st century skills' are the skills proposed by the Assessment and Teaching of 21st Century Skills (ATC21s). They include creativity, communication skills, information literacy and the ability to use the working tools needed in an era of VUCA.

<sup>3</sup> CHŪŌ KYŌIKU SHINGIKAI (CENTRAL COUNCIL FOR EDUCATION), "*Youchien, Shougakkou, Chungakkou, Koutougakkou oyobi Tokubetsu Shien Gakkou no Gakushuu Shidou Youryou-tou no Kaizen oyobi Hitsuyou na Housaku-tou ni tsuite (Toushin)*" ("Improvement and Necessary Measures regarding the Curriculum Guidelines for Kindergarten, Elementary School, Junior High School, High School, and Special Needs Schools (Report)"), [https://www.mext.go.jp/b\\_menu/shingi/chukyo/chukyo0/toushin/\\_icsFiles/afieldfile/2017/01/10/1380902\\_0.pdf](https://www.mext.go.jp/b_menu/shingi/chukyo/chukyo0/toushin/_icsFiles/afieldfile/2017/01/10/1380902_0.pdf), 2016, pp. 10-11 (last accessed 30 October 2024).

itself. What matters is the quality of the learning process. So what kind of knowledge should be acquired in music learning, and how can teachers help students acquire musical knowledge?

The learning theory called ‘constructivism’ emphasizes the autonomy of the learner. Constructivism is an approach that opposes behaviorist learning theory, and believes that knowledge is constructed by learners themselves by actively working on something, interacting with others in a group, and so on.

In Japanese education, constructivism started receiving attention in the late 1980s, with the development of multimedia technology. With the rise of information and communication technology in the 20th century, the importance of the constructivist paradigm was recognized.<sup>4</sup> With regard to musical constructivist activity, Ritsuko Kojima has been conducting a series of studies since the late 1990s. These were theorizations of practices based on Dewey’s perspectives, which became the basis for many subsequent practices.<sup>5</sup> The 2017 revision of the National Curriculum shifted from a content-focused approach to one that emphasizes competencies.<sup>6</sup> The 2017 revision of the national curriculum shifted from a content-focused approach to one that emphasizes competencies. While the term ‘constructivism’ does not appear explicitly, I believe the principles are consistent with constructivist ideas, emphasizing learner agency, dialogue, and deep learning.

However, Yayoi Sutani, who specializes in educational methodology, points out that educational practices based on such models of knowledge creation have already become obsolete in some cases, and that the lack of attention to the ‘process of knowledge construction’ is the cause of this.<sup>7</sup> Therefore, based on the learning content described in the curriculum guidelines, I will now consider the process of musical knowledge formation and how it can be supported from the perspective of constructivism.

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<sup>4</sup> K. KUBOTA, “*Kōsei-shugi ga Nagekakeru Atarashii Kyōiku*” (“New Educational Practices based on Constructivism”), *Computer & Education*, 2003, XV, pp. 12-18.

<sup>5</sup> R. KOJIMA, *Dewey no Okyūpeshon Gainen ni motozuku Geijutsuteki Kōsei Katsudō* (*Artistic composition activities based on Dewey’s concept of occupation*), Tokyo, Kazamashobo, 2021, pp. 11-15.

<sup>6</sup> MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY (MEXT), *Chūgakūkō Gakushū Shidō Yōryō Kaisetsu (Ongaku)* (*Lower Secondary School National Curriculum Standards Explanation (Music)*), [https://www.mext.go.jp/content/20220419-mxt\\_kyoiku02-100002608\\_06.pdf](https://www.mext.go.jp/content/20220419-mxt_kyoiku02-100002608_06.pdf), 2017, pp. 2-4 (last accessed 30 October 2024)

<sup>7</sup> Y. SUTANI, *Shakaiteki Kōsei no Gakushū-ron ni okeru Gengo to Shintaisei ni tsuite no Kyōiku-gakuteki Kenkyū* (“An Educational Study on Language and the Embodiment in the Learning Theories of Social Constructivism”), Doctoral dissertation, Hiroshima University, 2021, Abstract, p. 3.

## 2. What is Constructivism?

Constructivism is a concept that has been used in various academic fields such as philosophy, political science, sociology, and psychology, and it is common in that it considers “knowledge always to be constructed by us”.<sup>8</sup> In this section, I will first look at the theory of learning in constructivism. Then, I will provide an overview of two significant types of constructivism: ‘psychological constructivism’ and ‘social constructivism’. Finally, I will consider constructivist learning theory.

### (1) Psychological Constructivism

Psychological constructivism is a position that focuses on individual learning, represented by Jean Piaget (1896-1980) and Ernst von Glasersfeld (1917-2010). We have a framework called ‘schema’ for recognizing external events, and when we encounter new external events, we incorporate them into this schema (assimilation). However, if the existing schema does not fit the event, we modify it (accommodation). This process of assimilation and accommodation is called ‘equilibration’, and cognitive functions develop through this process.<sup>9</sup>

In psychological constructivism, ‘meaning’ is a personal and subjective construct, and learning is a process of “assimilation and accommodation caused by confusion in the environment”. The role of the teacher is to create an environment in which conceptual differences emerge as the critical points of learning from confusion in the process of mental construction of pupils and students and to evaluate the developmental stage of each child.<sup>10</sup>

### (2) Social Constructivism

On the other hand, social constructivism posits that society plays an essential role in the construction of knowledge. The subject of learning is the ‘subject in society or community’, and ‘meaning’ is socially and intersubjectively constructed.

The roots of social constructivism can be traced back to John Dewey (1859-1952) and Lev Semenovich Vygotsky (1896-1934). Based on the theory of Kenneth J. Gergen (1935-), who was influenced by Ludwig Josef Johann Wittgenstein (1889-1951), Keiko Nakamura, who specializes in educational psychology, states that “the meaning of human action is expressed in language.

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<sup>8</sup> K. NAKAMURA, “*Kōsei-shugi ni okeru Manabi no Riron: Shinrigakuteki Kōsei to Shakaitteki Kōsei no Hikakushite*” (“Theory of Learning in Constructivism: Comparative Study of Psychological and Social Constructivism”), *Niigata Seiryō Daigaku Kijō* (Bulletin of Niigata Seiryō University), 2007, VII, p. 168.

<sup>9</sup> *Ivi*, p. 170.

<sup>10</sup> *Ivi*, p. 171.

Language is not private but shared”.<sup>11</sup> Teachers of social constructivism are expected to play roles such as coordinators, supporters, advisers, and coaches and to provide “practical and contextualized education” that brings learning experiences on practical problems to pupils and students.

### (3) Learning Theory Based on Constructivism

Nakamura compared Glasersfeld and Gergen and identified two common characteristics between them. One is that learners are inherently motivated to learn, and the other is that learners are considered participants in the learning process. She also states that “the view of psychological constructivism that analyzes ‘individuals’ and the social constructivism that analyzes ‘social groups or cultures’ complement each other”.<sup>12</sup>

The perspectives on the process of meaning formation differ in psychological and social constructivism. It is necessary to be aware of the social background in which each position was born. However, both are complementary in music learning theory. This is because the subjectivity of individuals and the social context are equally crucial in music learning. On the one hand, music is undoubtedly embedded in a social and cultural context in its occurrence. On the other hand, at the core of this recognition lies the function of the perception and sensibility of persons confronting the music. Freedom of sensitivity and emotion must be guaranteed for persons with different characteristics and backgrounds.

This constructivist way of thinking has influenced various aspects of Japan’s school education, such as its philosophy, learning content, evaluation framework, and learning methods. Therefore, in the next section, I examine the educational curriculum and the process of developing musical qualities and abilities in Japan’s learning guidelines.

## 3. *The Music Curriculum in Japanese School Education*

### (1) Framework for Educational Objectives and Content in the National Curriculum

Japanese school education is legally based on the National Curriculum, which is established by the Ministry of Education, Culture, Sports, Science and Technology to ensure the quality of school education. The National Curriculum specifies the objectives and contents of school education and the objectives and contents of each subject. The current National Curriculum was published in 2017 for primary and middle schools, and in 2018 for high schools. This time, the qualities and skills to be developed are organised into three pillars:

- (a) ‘knowledge and skills’ needed for life and work,
- (b) ‘thinking, judging and expressing’, to respond to unknown situations,

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<sup>11</sup> *Ibid.*

<sup>12</sup> *Ivi*, p. 173.

(c) ‘attitude to learning and humanity’, which seeks to apply learning to life and society.

## (2) Objectives of Music Education in Japan

The aims of music education in secondary schools are as follows.

Through a wide range of activities in making and appreciating music, we aim to develop the qualities and abilities to interact extensively with sound, music and musical culture in everyday life and society, while activating the musical approaches outlined below:

(a) helping students to understand the relationship between musical taste and the structure and diversity of music, and to acquire the skills necessary to express music with creative ingenuity.

(b) To create musical expressions with creative ingenuity and to develop the ability to appreciate the value and beauty of music through listening.

(c) To cultivate a love of music, enrich the students’ sensitivity to music and develop an attitude of familiarity with music, while nurturing their feelings through experience.

The aims of primary and secondary education are similar, but the keywords ‘musical culture’, ‘background’ and ‘diversity’ are not used in primary education. In addition, high school music education is elective, and the objectives include keywords such as ‘cultural and historical background’ and ‘self-image’.

## (3) Contents of Music Education in Japan

Figure 1 shows an overview of the contents of music education.

First of all, the content of music education consists of two areas. One is ‘making music’, which includes singing, playing instruments and creative music-making. Its purpose is to create and invent musical expressions and to acquire the necessary skills. The other is ‘appreciation’, which aims to appreciate the value and beauty of different types of music and to understand the characteristics of music through its cultural and historical background and diversity. In addition, ‘common matters’ are necessary for qualities and skills in two areas: perceiving the elements of music, feeling their effects, thinking about their relationships and understanding the role of music.

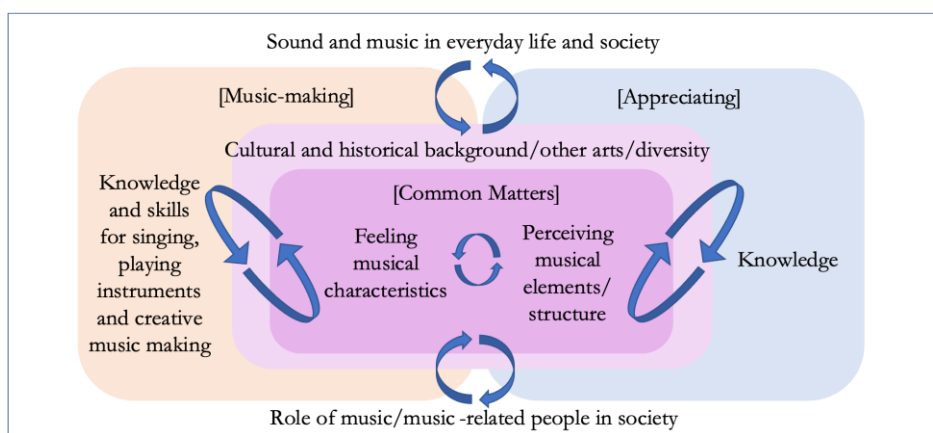


FIGURE 1: Overview of the content of music education in Japanese schools (my illustration)

In elementary school, children understand the relationship between musical characteristics and musical structure. In other words, they understand the relationship between the feelings received from music and the functioning of musical elements.

In junior high school, students understand the characteristics of music together with its cultural and historical background and other arts.

In high school, we expect students to deepen their understanding of the characteristics of music and its cultural and historical background, the diversity of music, and the role that music and people involved in music play in society.

#### 4. The process of forming musical knowledge

In this section, I present three music lesson plans that aim to develop musical knowledge by the goals and contents of the National Curriculum.

##### (1) Understanding the Dynamics of Music (6th Grade)

The topic of this lesson is to deepen the understanding of the relationship between music and movement by appreciating *The Sorcerer's Apprentice*.

*The Sorcerer's Apprentice* by Paul Dukas (1865-1935) is a type of music based on a ballad and featured in the Disney movie *Fantasia*.<sup>13</sup> Pupils can deepen their understanding of the relationship between music and movement by listening to this music.

<sup>13</sup> *The Sorcerer's Apprentice in Fantasia* (DVD), The Walt Disney Company (Japan) Ltd., 2011. It is a collection of eight animated stories set to classical music performed by the Philadelphia Orchestra, conducted by L. Stokowski. The music and images are so perfectly matched that it has been said to be "music for the eyes and film for the ears".

Step	#Objectives – Activities	Formative Process of Knowledge
1	<p>#To appreciate music by feeling the relationship between music and movement.</p> <p>-Watch the beginning of <i>The Sorcerer's Apprentice</i> with the sound off, imagine that the music is playing and exchange opinions.</p> <p>-Watch the same part with the music on and feel the connection between music and video.</p> <p>-Listen while conducting and feel which parts are easy and which are difficult to match to the beat.</p>	<p>Imagination Sharing</p> <p>Verification</p> <p>Conflict and Adaptation</p>
2	<p>#Understand the richness and variety of musical dynamics.</p> <p>-Walk when the main theme appears, stop and listen when it does not.</p> <p>-Understand how the recurring themes change in terms of timbre and dynamics, and represent them in graphical notation.</p> <p>-Share graphical scores with friends and listen to music through them.</p> <p>-Create an introductory text to <i>The Sorcerer's Apprentice</i>.</p>	<p>Application</p> <p>Conversion</p> <p>Sharing</p> <p>Reconstruction</p>

TABLE 1: Music lesson plan for 6th grade

(2) Understanding the Relationship between Music and Work (8th Grade)

The theme of this lesson is to deepen the understanding of the relationship between music and work through the appreciation of “Sakaya-uta” songs. These are traditional Japanese folk songs sung during the sake brewing process. *Motosuri Uta* is sung by several brewers, synchronising their breathing, and has a rhythmic beat. On the other hand, *Oke-arai Uta* is sung while the barrels are washed individually and has a free rhythm. By feeling the characteristics of these songs, students can think about the relationship between music and work.

Step	#Objectives – Activities	Formative Process of Knowledge
1	<p># To appreciate music by feeling the relationship between music and movement.</p> <p>-Listen to <i>Motosuri Uta</i> (which has a rhythmic beat) without video, imagine what kind of scene the song is sung in, and exchange opinions.</p> <p>-Listen to the same song with video and understand the relationship between music, body movement, and breathing.</p>	<p>Imagination</p> <p>Sharing</p> <p>Verification</p>

	-Listen to <i>Oke-arai Uta</i> with video and notice that the beat is difficult to perceive.	Diversity
2	#Research the relationship between music and work. -Divide into groups and research music that is closely related to work. -Summarise what each group has researched and present it with music. -Develop understanding of the role of music in life and society.	Application Sharing Overarching concept

TABLE 2: Music lesson plan for 8th grade

## (3) Understanding the history of change in popular music (Grade 12)

Popular music is familiar to many students. However, most students need to be made aware of the social roles that popular music has played. For example, rock music developed alongside social movements, and breakdancing is said to have developed as a substitute for the shooting that gangs used to settle disputes. Furthermore, when we trace its roots, we can go back to the music of different ethnic groups.

By investigating the roots and changes of familiar music and its relationship with social and cultural backgrounds, students can deepen their understanding of the power and role of music by planning a concert to convey its content.

Step	#Objectives – Activities	Formative Process of Knowledge
1	#Investigate the history of the popular music that the students want to play. -Listen to the performance of David Bowie, one of the rock singers who is said to have led to the fall of the Berlin Wall <sup>14</sup> and consider the role of this music. -Think about the perspectives involved in studying the transition of popular music: social and cultural background (social issues, changes in musical instruments, use of electric recording and microphones), social roles (relationship with philosophy or religion, resistance to the system, etc.). -Divide into groups and carry out research.	Historical awareness Questioning Anticipation of learning Verification
2	#Think about what kind of concert to give. -Summarise the findings of the research. -Summarise the considerations made through the research. -Think about what kind of musical concert would	Formation and overarching concept Application

<sup>14</sup> D. BOWIE, *Bring down the Berlin Wall 1987* (CD), Helden, 2021, DEN-138/139.



	effectively communicate the newly acquired knowledge and reflections.	
3	<p>#Present the results of the research in the concert.</p> <p>-Present newly acquired knowledge and reflections through performance, explanation and exhibits.</p> <p>-Consider the role that music should play in solving contemporary social problems.</p>	<p>Creation</p> <p>Reflection on learning</p> <p>Application of knowledge</p>

TABLE 3: Music lesson plan for the grade 12

5. Summary and future tasks

In this paper, I have examined the process of forming students' musical knowledge from the perspective of constructivism based on Japan's National Curriculum. In conclusion, in order to design an environment for self-directed learning, the following scene settings are necessary:

- Ensure that personal mental movements and complementary approaches to music are guaranteed.
- Create scenes where musical concepts are formed or updated through collaboration.
- Create scenes that generate mental movements such as questioning, conflict and adaptation, allowing for foresight and reflection on learning.
- Gain different perspectives, but also aim for higher order conceptualisation.
- Create opportunities to use knowledge to interpret the complexity of the current social situation.

In the future, I will clarify the formative process of knowledge over a longer period of time by observing pupils and students.

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