

Statistical Discussion on Future Music Teaching-Learning Changes and Improvements in terms of Content, Method, and Environment

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Abstract

The purpose of this study is to explore the changes in the content and method of school music education in consideration of the changes in the future. The main research contents are analysis of previous studies on the trend of future education, extraction of key items and contents related to future education, gathering opinions on the direction and practice of future music education, and important improvement of music education. In methods, literature research, expert councils, questionnaires and interviews were conducted. The main results of this study are as follows. First, in future music education, personal choice education related to student life becomes important. Second, a communication environment between students and a collaborative interactive learning environment is needed. Third, individual cognitive and practical competency-based education is emphasized. Fourth, interdisciplinary learning and network learning, using technology, are important. Based on these findings, future music education should focus on sensory experiences, musical performances, and understanding of musical concepts.

Keywords: Future, Music, Teaching-Learning, Improvement, Content, Method

1. Introduction

Education takes place in consideration of the growth and development of learners. Therefore, the final learning goal is set while the learners pay attention to the appearance of life after being educated. Nevertheless, in fact, the previous education was more interested in the 'current point of view' education because the social change was not rapid. In other words, there was a strong view that what 'current' is needed, what learners want 'now', and that what they have learned now does not change in future life. Therefore, the primary and secondary education was mainly focused.

However, the speed of social change, such as the rapid development of ICT [1], such as the Internet, and the emergence of artificial intelligence, has accelerated, and it is not an exaggeration to say that the education of 'now' is at a point of being 'past'. Now is the time to discuss the 'future' education meaningfully.

With the recent era of knowledge-based information, countries and organizations around the world are exploring what the major social change words are and, accordingly, predicting the vision and direction of future education [2]. According to research, in future education, not only basic knowledge or skill acquisition, but also a variety of advanced thinking skills such as creativity, comprehension, and problem solving skills are required. It also stressed the need for a variety of personality aspects such as collaboration, tolerance, fairness and momentum. When it comes to future society or future education, the 'future' point of view can be very diverse, but the world is mainly referring to 2030 because it is realistically

insufficient to predict the future too far from the present point of view. Accordingly, in Korea, assuming that the next curriculum will be revised within about 10 years, 2030 is assumed considering the timing of application of the next curriculum [3].

As mentioned above, considering the future society in education is an effort to look at education from a more macroscopic perspective. In other words, as the pace of change in society, such as artificial intelligence, the fourth industrial revolution, and the recent non-face-to-face situation, has rapidly increased, education can change rapidly, so we must prepare in advance. In this regard, it is necessary to discuss how education will change in the future, how music education will improve, and in what direction the future society will change around 2030, and how music education will change. There are many studies on the direction of education in the future society, but research on future social discussions in the field of music education is not enough. Above all, discussions about future education are mainly presented in terms of general pedagogy, so discussions about music education future are not specific. Therefore, this study intends to review the studies discussed at the macro level of how the future society will change in 2030 in the future, and to examine the changes and practices of school music education contents and methods accordingly.

2. Theoretical Background

Future trends of education in the future society will be presented first, and researchers will examine future society-related trends in the field of music education.

2.1 Analysis of Education_Related Trends In The Future Society

Since education is linked to social change, it is necessary to first examine social change in order to look into future education. In this regard, the results of previous studies on the direction of change in the future society were first organized, and then the direction of change in future education was examined.

As a result of reviewing the data [4], [5], [6], [7] that predicted the changes in the future society and studied the direction of education, the changes in the future society and education are summarized as in Table 1. It can be seen that, according to the era of globalization, information, and diversification, changes will appear in various areas such as population decline, multicultural society, information technology development, and climate change. As a result, education will also change, and it is reported that changes such as education flexibility, emphasis on educational welfare, and future life such as careers and strengthening of networks will appear.

Table I. Changes in Future Society and Future Education

Categories	Contents
Future society changes	-> Globalization, Information, Diversification 1) Demographic change: low birth rate (decrease in population), aging population, multicultural society 2) Social structure changes: polarization, educational inequality, globalization 3) Economic structure change: Industrial structure based on knowledge economy, human resource demand change 4) Education change: Infant and childcare and educational services expansion 5) Science / Information Technology / Engineering Development: Innovative Technology, Information, Media, Technology 6) Environmental changes: climate, etc.

Future social education changes	1) Break away from space-oriented schools 2) Flexibility of school type and educational certification system 3) Emphasis on educational welfare point of view 4) Customized education for individual students 5) Focus on career, career, personality, and aptitude 6) Development of quality of life and understanding of cultural enjoyment 7) Student-centered cooperation and interaction 8) Online, distance learning 9) Global communication network formation training
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2.2 Analysis of Future Social Trends in Music Education

In this trend of change, discussions as summarized in the following Table 2 have been conducted in the field of music education. There is little discussion in the field of music education, and it was mainly studied by music education groups called NAFME(National Association for Music Education) in the United States. Besides, it has been studied intermittently in various countries. In summary, the use of technology is maximized in music education, interaction and networks are emphasized, and various musical expressions and small-scale music activities are expected to change.

Table 2 Changes of Music Education in Future Society

Categories	Contents
NAfME (National Association for Music Education)	<p>‘Vision 2020: The Housewright Symposium on the Future of Music Education’ (1999)</p> <p>: Future prospects of music education for the next 20 years ahead of the 2000s (21st century)</p> <p>: Based on topics such as why music is valuable to humans, why music is learned, how to teach the skills and knowledge of the American national standards, and how to keep them engaged in meaningful music, checking the status of music education</p> <p>: A study on how social and technological changes will change music teaching methods [8], and how the relationship between schools and other sources in music learning should be [9].</p>
	<p>‘Music Education In 2030: Technology, Education Reform, Future Challenges And Opportunities’ (2014)</p> <p>: When considering music education in 2030, what is the current educational policy issue and what is the future of music education?</p> <p>: Proposal of the future direction of music education from various perspectives, such as educational policy issues[10], factors influencing future music education[11], algorithmic approach[12], current issues and future connection of music education[13]</p>
etc	<p>‘Vision 2030’ (2007) by PPMC(Permanent Presidential Music Commission)</p> <p>: Emphasis on interaction with music in educational, cultural and economic activities[14]</p>
	<p>: Looking at 2037 and discussing the future of music education</p> <p>: Using technology, world music, music genre changes, artificial intelligence-based learning, network learning, online rehearsals / concerts, etc.[15]</p>

	: Discuss the future direction of music education in Hong Kong with the main issues such as technology-based music learning in the maximization of ICT power, integration between music in real life and other arts, and balance between physical, cognitive, metacognitive, and social elements[16]
	: Discussion of changes such as increased use of technology in music and curriculum, regional and small-scale music activities, creative music learning, and synthesis of various expression styles due to the development of engineering and economy[17]
	: Discuss changes in the curriculum that take into account not only the traditional large ensemble, but also various forms of small programs, technology innovation, and the combination of popular music idioms[18]

3. Research Methods

3.1 Research Subjects and Methods

Based on the results of studies considered in the above theoretical background, I would like to analyze in more detail how music education will change in the near future in the next 10 years. To achieve my research goals, I first analyzed prior research and data on future social education-related trends and future social response-related trends in the field of music education. Second, based on the results of this analysis, major items and contents to be considered in the future society were extracted. Third, the expert council was held twice to investigate the effectiveness of the main items and contents extracted by the researchers. The expert council consisted of two professors and one future educator in music education. Fourth, the main contents reviewed were prepared as a questionnaire, and were conducted for 127 experts and teachers in the music education field. Finally, the researcher interviewed six of the survey participants who responded diligently [Fig.1, Table3].



Fig. 1 Research methods and procedures

Table 3 Research subjects by research method

Research method	Research subject	Frequency of implementation
Expert Council	Music Education Professors 2 Future Educator 1	2 times
Survey	Music Teacher 98 Music Education Professors 20 Future Educator 5 Other Music Education Experts 4 (Total 127)	1 times
Interview	Music Teacher 3 Music Education Professors 3	2 times

3.2 Composition of Survey and Interview

The main survey and interview contents are as follows Table 4. First, the researcher looked into the future direction of music education, and examined the importance of what changes are required and what needs to be changed in the education system, content, method, and environment. Subsequently, in terms of emphasis on competency in the future society, the researchers specifically looked at what competency would be needed. Subsequently, it was divided into contents and methods of music education, and specifically analyzed what contents and methods were required. Finally, based on the above analysis, opinions were also gathered on what the current music education needs to be improved. The questionnaire was constructed to respond on a 5-point scale.

Table 4 The main categories and contents for questionnaire and interviews

Categories		Contents
Direction of music education	Future social education changes	Educational system, educational content, educational methods, educational environmental aspects
	Competency required in future society	Basic knowledge, personal competence, practical competence
Practice of music education	Content aspects of music education	Literacy (digital, musical), music of various genres and domains, sound and musical instruments, combining music and technology, combining music with other domains, music in real life, etc.
	Method aspects of music education	Technology use, collaboration and participatory learning, communication and networks, instant feedback, distance learning, connections between regions and communities, artificial intelligence, virtual music world
What to focus on in music education		<ul style="list-style-type: none"> - Direct experience learning of musical sense and emotion - Learning to understand core music concepts - Musical performance, activity-based learning - Personality cultivation music learning - Student-led, personalized music learning - Network-based collaborative music learning

4. Results

The results of the analysis are in the order of education system, content, method, evaluation, results on competency, results on the importance of music education contents, results on the importance of music education methods, and results for future improvements.

4.1. Results of Questionnaire Analysis on the Direction of Music Education

The results of the questionnaire response to the direction of education in the future society will be changed as follows. First, in terms of the education system, the most responses were that network-oriented education is emphasized and lifelong learning is emphasized rather than spatial division of school classrooms [Fig. 2]. In terms of educational content, it was found that customized educational contents considering students' aptitudes and aptitudes are important and that education related to jobs and careers is necessary [Fig. 3]. In terms of the method of education, there was a high response that student-centered network formation, student interaction, and cooperative learning were more important [Fig. 4]. Finally, in terms of the educational environment, it turned out that a global communication environment, a school environment that connects the workplace or the community, etc. are more necessary [Fig. 5].

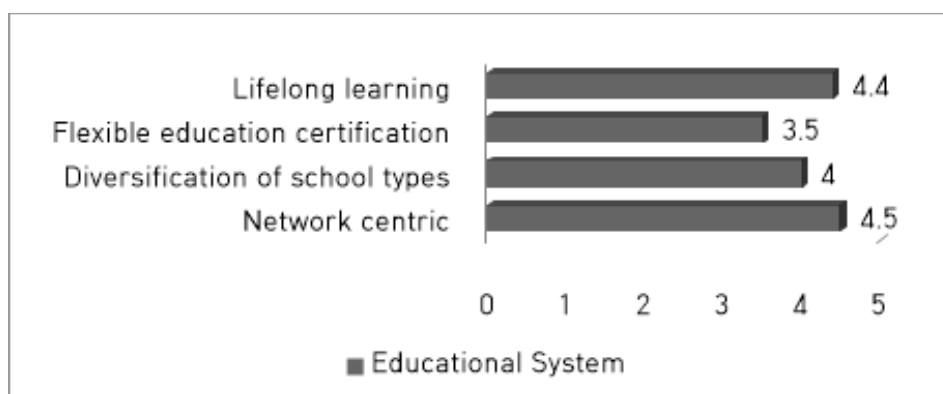


Fig. 2 Analysis of music education directions considering educational system

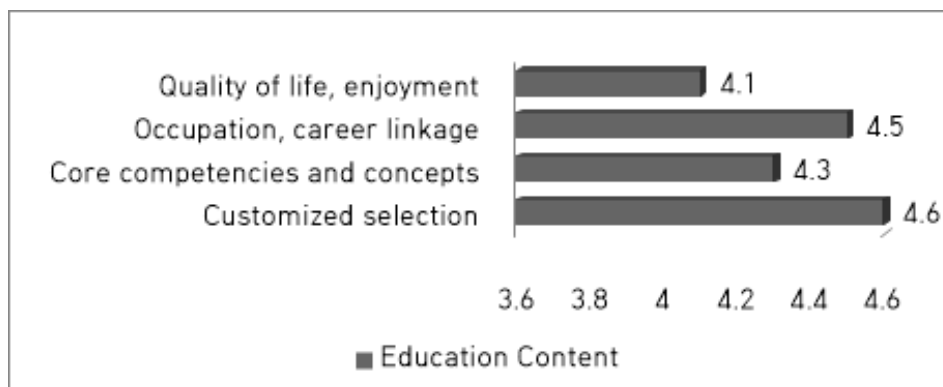


Fig. 3 Analysis of music education directions considering education content

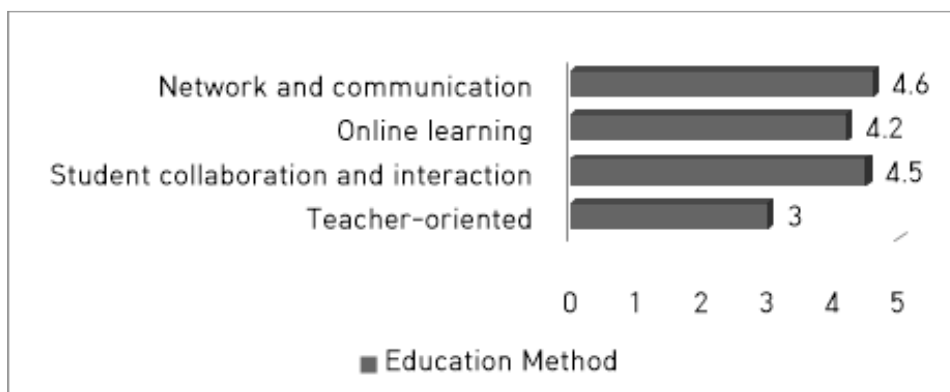


Fig. 4 Analysis of music education directions considering education method

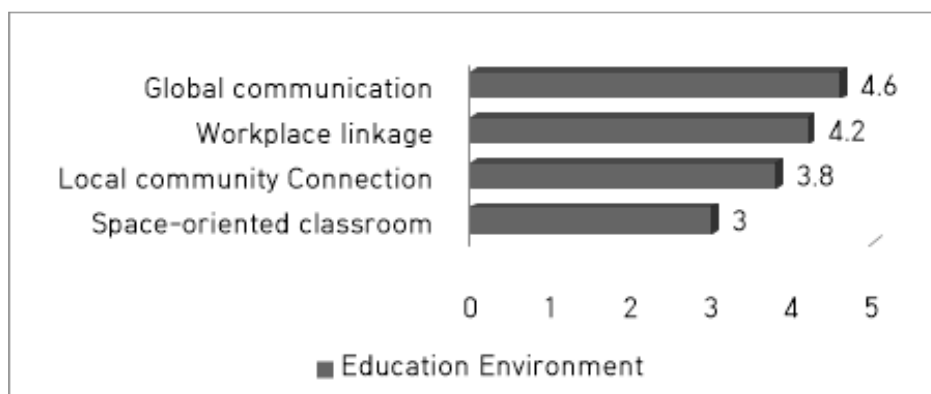


Fig. 5 Analysis of music education directions considering education environment

The results of responses to music education-related competencies required in the future society are shown in Fig. 6. It was found that more music education competencies that can be connected with daily life or society than basic knowledge or concepts in music are needed. The results of previous studies were summarized, and the competency factors were classified into three perspectives: basic knowledge competency, personal competence, and social competence. As a result, it turns out that the music education competency that can connect with everyday life and society is needed more than the basic knowledge or concept of music. In other words, it can be seen that as the society changes, more competency is needed to communicate and empathize with each other.

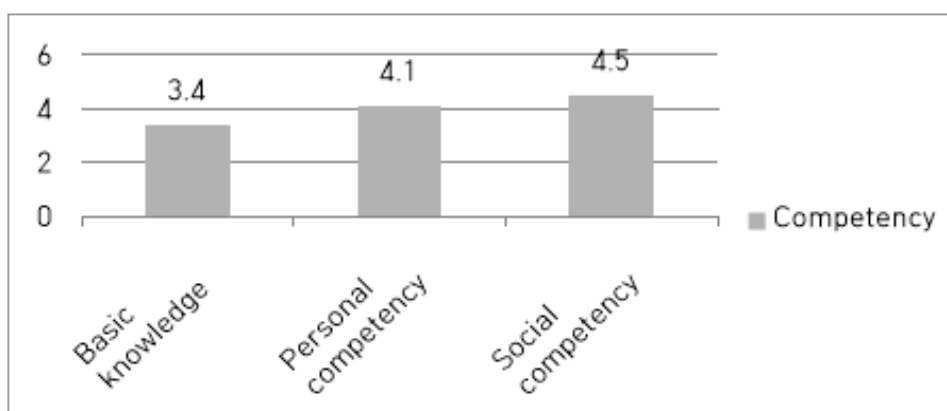


Fig. 6 Results of competency analysis for music education in future society

4.2. Results of Questionnaire Analysis on the Practice of Music Education

The result of the response to the contents of music education is as shown in Fig. 7. There was a high demand for learning about music that can be encountered in real life and learning that combines music and

other domains. Musical knowledge that reads and writes music is relatively less demanding. In other words, it is a result of emphasizing that the contents of music education should be helpful for communication between people and daily life, not staying in 'in' music.

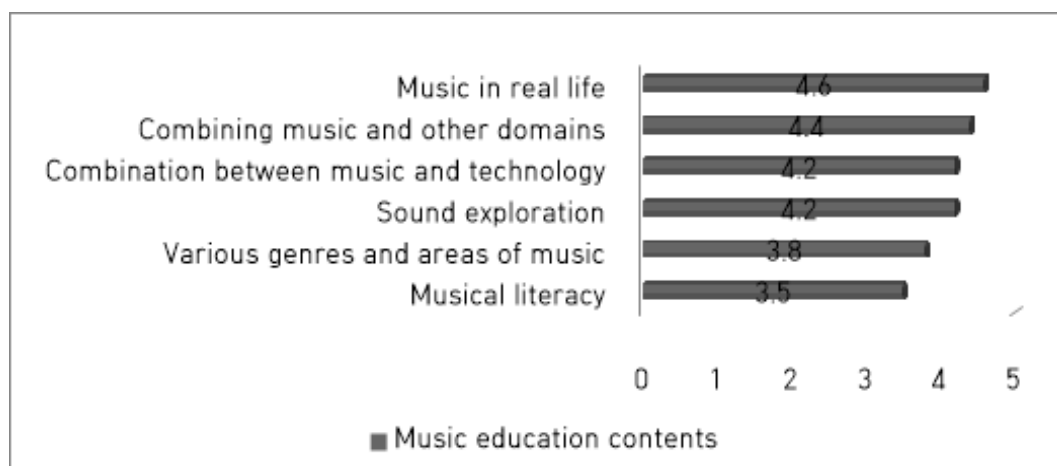


Fig. 7 Analysis of the content of music education in the future society

The result of the response to the method of music education is as shown in Fig. 8. It was found that communication with others and learning through a network were the most necessary, and the utilization of various technologies was important, and that cooperative and participatory learning, not alone, was important.

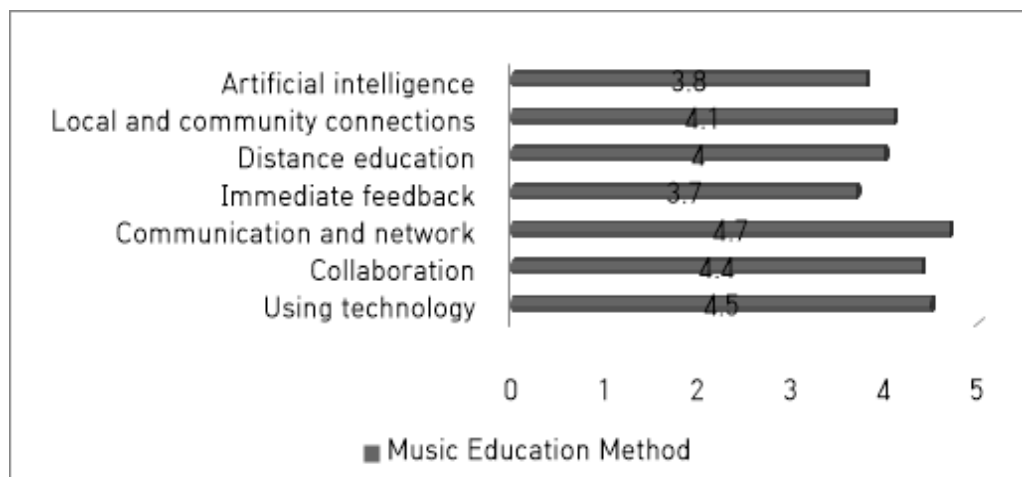


Fig. 8 Analysis of the method of music education in the future society

4.3. Results of Questionnaire Analysis of Key Improvements in Music Education

In order to prepare for the future society, the results of the response to what is to be improved in the field of music education are presented as shown in Fig. 9. In order to live a musical life well in everyday life, learning about musical sense and emotional experience was the most important. It has been reported that this learning is done properly by performing music directly and actively working. In addition, it was replied that music activities and performance learning were meaningful music learning only based on understanding of the main music concepts. And it was replied that student-oriented network and cooperation are important in learning music activities and understanding concepts. In addition, it has been shown that students should improve through self-directed education. In other words, students should focus on student-centered education, not teacher-centered education.

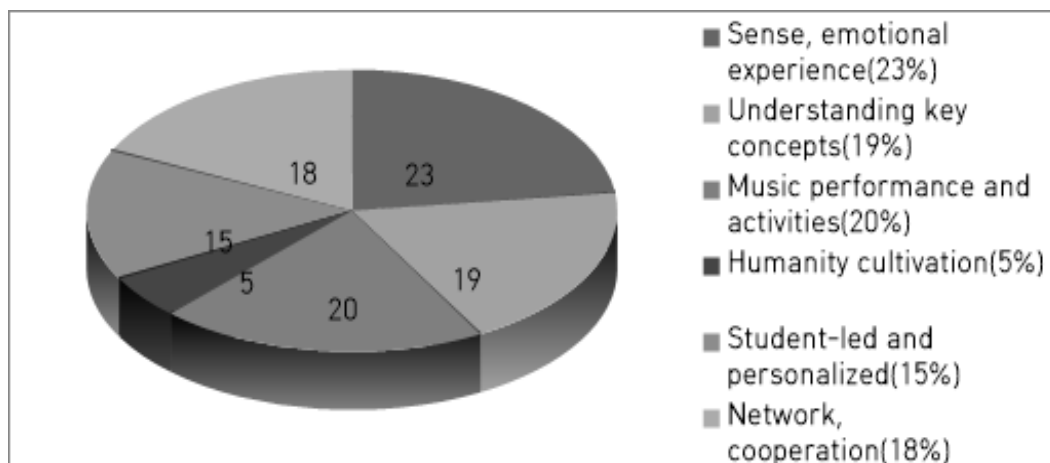


Fig. 9 Analysis of key improvements in future music education

On the other hand, the lowest response was found to be character training. As a result of further examination of the interview results, it was confirmed that personality education is not important, but because it is already performed well in music education, it is a reflection of the aspect that it is possible to pay less attention to improvement in the future. Quoting the interview that proves this is as follows:

- Teacher A comments: “While learning music such as chorus and choir, students harmonize with friends and help each other. I feel proud when I see such students.”
- Professor B comments: “Personality education is doing very well right now. This is not a problem.”

5. Discussion

5.1. Discussion Of Future Music Education Direction

Discussing the results so far, first, it was analyzed that music education requires more network-oriented education in the education system. These results can be seen as reflecting the fact that there are many musical activities with several choirs and choirs in music education. In addition, it can be seen as a reflection of the opinion that music activities with the community will be more active than individual music activities alone, in that the emphasis is more on connecting learning than individual learning [19].

In the educational content, there was a high response to customized choices and links to careers and careers. This reflects the fact that each student's musical talent and potential may be different. For example, playing the violin well does not sing well, so it can be said that it is a result that shows that a personalized selection class considering individual aptitude and talent is desperately needed in music education. And it is emphasized that these results need to be linked to the job world. In other words, it is interpreted as an opinion that it is necessary to directly connect with life because there are not many cases where music is educated in school and is not connected in life afterwards.

Next, in terms of the method of education, network and cooperation appeared to be important. This can be considered to be linked to the contents of music education. In other words, it is interpreted that it is more important to communicate and interact with each other in the method because many music activities collaborate together.

In terms of educational environment, the response to global communication was the highest. This seems to be a reflection of the fact that music is a common language. For example, multicultural music education is important to understand other countries or cultures through music learning, which is more important in future music education. It can be said that the future society itself will become more globalized and music will play a more important role in this process.

In addition, in terms of competence, the social aspect was more emphasized than the personal aspect. This is a result of the importance of thinking that music education should not only stay within music but also work together in society. In other words, it is not only necessary for individual music activities, but also needs to be reborn as community music that can play a role in society.

5.2. Discussion of Future Music Education Practice

The music education practice consists of contents and methods, and first, the results of the contents will be discussed. It turns out that music in real life, the combination of music with other domains and technology, is the most predictable future music education. So far, music education has tended to focus on music, such as learning elements in music and learning various instruments in music. In the future, however, the future society will require various roles of music in society, and it is a result reflecting the aspect that music, which people enjoy and communicate naturally in their lives, will become more important. Also, in the previous music education, the actual acoustic instruments were studied. However, in the future, it can be said that the era of combining various technologies such as digital sound sources has arrived.

Next, when discussing in terms of the method of music education, the communication and network method, the method of using technology, and the method of cooperation and participatory learning were the most important. As discussed above, it can be seen that collaborative music education together becomes very important. In addition, it was confirmed that the use of ICT needs to be actively embraced in the music education community [20], [21].

In addition, the result of understanding the core concepts should be improved to be linked to competency-oriented and understanding-oriented training. In other words, it is necessary to emphasize the education to extract the key elements that can cover various music and to understand them, so that the understanding can be applied to other new music situations. In this learning, network communication and collaboration are essential.

5.3. Discussion of Music Education Improvements

Based on the results and discussion described above, the researcher examined how the current music education should be improved when considering the future social direction. As a result, it was found that the sensory and emotional experience should be improved the most, music performance and activity should be improved next, and understanding-oriented concepts, networks, and cooperation should be improved. In order to improve the quality of life and to learn music linked to life in a lifetime, it is necessary to cultivate the auditory sense that is the basis of music learning and to have a lot of emotional experiences. Previous music education has focused on this aspect, but what needs to be improved in the future is to mention that it is necessary to emphasize various music sensations in real life beyond so-called classical music sensations or experiences. In other words, it is necessary to broaden the scope of music to recognize a more receptive emotional experience.

Subsequently, it can be interpreted in the same context as the above discussion that music performance and activity should be improved. In other words, it is necessary to accommodate not only traditional musical instrument-based performances and activities, but also the performance and use of musical instruments that reflect various engineering and digital developments. In addition, it can be interpreted as a result of increasing acceptance of a type of performance that can be made more freely in the community beyond the form of performance of previous music.

6. Conclusion

6.1. Summary and Conclusion

In a rapidly changing society, education also requires efforts to prepare for the future. In this regard, this study aimed to examine how our society will change and how education will change within the next 10 years, and more specifically to draw a picture of music education. First, through the results of previous studies, the overall direction of future society and aspects of education were examined. Based on this, the contents and methods of future music education were foreseen for specific subjects called music education, and methods for improvement were examined.

The changes in future education can be viewed in various ways. In other words, network-centered education, not space-centered, flexible type rather than segmentation of school division, life-long life or education linked to the world, not focused only on elementary and junior high school education, student-centered collaborative learning rather than teacher delivery, etc. It was confirmed that it was the education direction.

According to this future direction, it was confirmed that music education should also change. The following matters were found to be the most important through research and discussion in various aspects. First, the social role of music becomes more important, and the network, communication system, and cooperation are very important in music education. Second, it is important to implement customized selective education to link with the real life and career world. Third, it is necessary to break away from the previous form of music learning and accommodate more instruments and sound search using various technologies. In other words, it must be reborn as a music experience that respects various senses. Lastly, it should be an education that cultivates the ability to apply the core concepts when learning music in life and knowing the core concepts of music.

6.2. Suggestions for Follow-Up Research

This study is meaningful in that it considers the contents and methods of music education in more detail than previous studies, and suggests ways to improve them, considering the future social direction. In the future, it would be more practical if the following studies were conducted.

First, differentiated research is required for each learner, such as primary and secondary, and university and social education. Since this study does not classify the subjects of learners, there is a limit in practical applicability. In other words, even in the same direction, the importance may be different depending on the level of the learner and the object.

Second, it is necessary to study in more detail the advantages and disadvantages of music lessons using technology. The use of various ICTs is essential in the trend of the times, but this may raise the quality of learning in the 'musical' aspect. Therefore, it is necessary to look at the state of music education using technology in relation to the quality of learning.

Third, research is also required to diversify the classification of music types and genres. Beyond the previous method of music type, individual or community can devise various types of music activities as needed. It would be the role of the music education community to show various examples of what types are possible.

Finally, various studies are needed to predict future music education from a more macroscopic perspective, rather than in the near future, such as 2030. The rapid change in society is accelerating, so the future we expect now can arrive faster than we think. Therefore, research should be conducted to show the future music education as a road map from a long-term perspective.

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