

# Challenges of Education for Children Requiring Medical Care in Remote Environments under the Influence of COVID-19 Infection

- Focusing on Support for Their Participation in Educational Musical Activities -

Tomoko YAMAMOTO

**Abstract:**This paper examines the current status and challenges of support for children requiring medical care in remote environments to participate in educational musical activities. In musical activities as part of remote education, support using digitized textbooks and other materials that help listen to/play music and exchange with previous schools is being promoted.

In education for children requiring medical care, where they are supported to participate in such activities from the planning process, it may be necessary to evaluate and develop support approaches in terms of helping them further enjoy music.

**[Keywords:** school education, musical activity, COVID-19 infection, remote environment, children requiring medical care]

## I. Introduction

With the spread of COVID-19 infection, remote learning strategies are also being considered or adopted in education for children requiring medical care. Specifically, for musical activities, which are generally represented by singing songs and playing musical instruments, remote approaches are being considered as an overall tendency of education<sup>1)</sup>.

Diversity is characteristic of children requiring medical care and receiving home medical services. Many of such children have severe motor and intellectual disabilities, and their levels of medical device use are high. However, some of them do not have intellectual disabilities, or they are able to walk to school independently<sup>2)</sup>. As another characteristic of children requiring medical care, the care becomes unnecessary in the process of recovery or development in some cases.

In the case of children requiring medical care, however, remote education approaches have been actively provided at all times.

As some of these children have limited

mobility, information and communication technology (ICT) is applied to use virtual reality and remote manipulation systems for them to participate in diverse, experience-based learning activities, such as practical skill sessions, experiments, and surveys<sup>3)</sup>.

For children requiring medical care re-enrolled in special support schools, support is provided to promote their real-time communication with their ex-teachers and former classmates through regular exchange with previous schools and participation in events and class sessions at these schools, with a view to reducing their mental and physical distress, and increasing their motivation for coping and learning<sup>4)</sup>.

Some previous studies on education for children requiring medical care examined the role of comprehensive support, including education<sup>5)</sup>, and they also reported the current status and challenges of education during transitional periods, mainly the preschool and compulsory education periods<sup>6)</sup>. In these children, ensuring access to education is still thought to be the major challenge, and simultaneously ensuring the

quality of education itself is another challenge. Concerning the quality of education, determining appropriate teaching contents and methods may also become an important focus, and when considering teaching methods, it is necessary to respect the autonomy of children requiring medical care through support for their participation. Importance should be placed on the realization of such support in all education activities, including music education, where support for expression is being actively provided.

This paper examines the current status and challenges of support for children requiring medical care in remote environments to participate in educational musical activities under COVID-19 infection control.

## II. Objective and Method

The objective of this paper is to develop support for the participation of children requiring medical care by examining the status of educational musical activities for these children in remote environments.

The following section confirms the types of opportunities for children requiring medical care to access music through education based on the results of practice, while listing educational musical activities available in remote environments. Subsequently, based on these findings, it clarifies the current status and challenges of support for children requiring medical care in remote environments to participate in musical activities.

## III. Results

### 1. Children requiring medical care and music

First, children requiring medical care have opportunities to access music through education.

In music education, the following pieces of music are typically used: elementary school: "Sanpo" (lyrics: Rieko Nakagawa; composition and

arrangement: Joe Hisaishi) ; junior high school: film music (such as the themes of "Harry Potter"), and senior high school: "Sekai-no-Owari" and "Hatsune Miku". Thus, pieces that are familiar to learners are used to effectively promote their interest. Support for children requiring medical care in such education also aims to promote their personal expressions or those in groups, including healthy children, by singing or playing these pieces of music.

When providing support, consideration for the children to effectively learn individually or in a small group, regardless of the school year and variations in members among sessions, are made, according to the type and level of disability. For example, pieces and arrangements that promote their interest, as well as appropriate difficulty levels, musical instruments, and lyrics are selected, based on textbooks. Additionally, when music scores are used for learning, they are organized to make it easier for the children to sing songs or play musical instruments, without taking too much time for score-reading or tuning in some cases.

With the dissemination of iPads, musical instrument applications and exclusive amplifiers/speakers are increasingly used for concerts to be held with children requiring medical care playing the leading part. For example, Christmas party organizers and the children together select various Christmas songs and pieces of instrumental Christmas music, and allocate tasks, according to the level of disability and interest of each member. In such education, support is also provided by medical professionals for the children to participate in musical activities from opening to ending, mainly singing songs and playing musical instruments.

And second, children requiring medical care also obtain opportunities to access music through welfare support, represented by education and care for children with disabilities and music therapy.

In many cases, support tends to be provided

for the children to have fun through play activities in facilities or homes, and music is extensively used during these activities, from greetings at the beginning/end of the session and the introduction of each activity to “hand-play songs” to maintain the continuity of activities.

With their autonomy as persons or members of groups respected through support, children requiring medical care produce sounds using musical instruments, such as bells or bell trees, create rhythms, and enjoy sounds and rhythms produced from maracas or other musical instruments they created by themselves. On some occasions, tablets are also actively used to promote their expressions through sounds and rhythms, according to their levels of disability and interests.

There are also activities where other participants express familiar animals and common natural phenomena using their bodies to the sounds and rhythms produced by the children, or improvised music accompanies these sounds and rhythms as a support approach.

Basically, music is an enjoyable activity. For children requiring medical care, it is not only a measure to support them in education or welfare, but also an activity to personally enjoy in daily life. Some of these children play music for learning or original pieces using personal computers or other ICT tools. Thus, musical activities for personal enjoyment provide opportunities for the children to communication with diverse people in and outside Japan, acquire skills for social participation, restore self- confidence, and develop these aspects.

## **2. Support for educational musical activities in remote environments**

Support for educational musical activities in remote environments is expected to contribute to the maintenance and development of communication while preventing infection. In children requiring medical care, it also attracts attention as an approach to discover new activities

and possibilities, in addition to compensating for limited mobility and reducing difficulties.

As a general tendency of support in educational musical activities, an increasing number of textbooks are digitized. In music education, digitized textbooks are utilized for learning, including: appreciating traditional music from Japan and other countries, understanding and acquiring rhythms through games and playing music in an ensemble, experiencing conducting techniques, and learning recorder finger movements. Furthermore, in elementary schools, programming has become compulsory from FY2020, when the New Guidelines on School Curricula were put into full operation <sup>7)</sup>.

When focusing on remote education, the active use of ICT tools, represented by personal computers, tablets, and monitors, is being promoted, as shown in a status survey on the use of ICT for school education <sup>8)</sup>.

In education for children with health impairments, the use of ICT for music class sessions, where main and branch or previous and current schools exchange using web meeting systems, for example, has already been active<sup>9)</sup>. Installing software in personal computers and tablets to communicate with others online is a representative approach. When large-scale exchange takes place between schools, televisions are occasionally used to ensure the stability of communication through exclusive terminals and lines. During these sessions, support is provided for children with health impairments to sing the school songs of their previous schools, sing and play pieces of music for learning at their previous and current schools, and participate in events such as concerts.

In some cases of ICT-based music education for children in remote environments, support is provided for them to listen to songs and pieces of instrumental music, including those live-streamed, and participate in musical performance. In the latter, systems for learners in different places to simultaneously participate in musical

performances while listening to each other, as if they share the same space, are used. It is expected to develop such education practices more and more in the future.

#### IV. Discussion

In support for singing songs and playing musical instruments as representative support approaches, digitized textbooks are effectively used, and pieces of music are selected according to the levels of disability and interest. Children requiring medical care can obtain support to express themselves personally or in groups through these activities.

As part of such support, familiar pieces of music are selected for individual children requiring medical care, and arrangements and music scores for them to easily sing songs and play musical instruments are prepared, with their types of disability and developmental stages taken into consideration.

Specifically, in education for children with health impairments, support is also provided for them to participate in musical performances, in addition to singing songs and listening to instrumental music, and exchange with previous schools using web meeting systems also takes place.

Among these approaches, special attention should be paid to support for children requiring medical care to participate in musical activities. In Christmas parties, for example, the children select pieces of music, and determine their order with organizers. They are supported to participate from the process of planning each party, such as choosing a song to be sung and piece of music played by each member, and designing the start, progress, and end of the party. In this process, children requiring medical care in remote environments can also participate with support.

In short, support for children requiring medical care to participate from the planning process is expected not only to promote their

musical expressions through singing songs and playing musical instruments, but also to help them acquire extensive knowledge and skills for planning to realize such expressions.

An increasing number of children requiring medical care participate in musical activities for enjoyment nowadays. Sharing pieces of music for learning or original pieces is one of their ways to enjoy music. As a future perspective, support approaches for these children to participate in educational musical activities from the planning process should be evaluated and developed in terms of helping them further enjoy music.

#### V. Conclusion

This paper examines the current status and challenges of support for children requiring medical care in remote environments to participate in educational musical activities.

In educational musical activities for children in remote environments, support for them to appreciate musical pieces, understand and acquire rhythms, experience conducting techniques, and learn recorder finger movements is provided effectively using digitized textbooks.

In education for children with health impairments, music class sessions are held with support for the children to sing songs and listen to pieces of instrumental music, as well as to participate in musical performance. In the latter, systems for learners in different places to simultaneously participate in music play, as if they share the same space, are used. Furthermore, in some cases, support is also provided for exchange with previous schools using web meeting systems. These support approaches include support to sing the school songs of previous schools, sing and play pieces of music for learning at previous and current schools, and participate in events such as concerts.

In education for children requiring medical care, where they are supported to participate in

such activities from the planning process, it may be necessary to evaluate and develop support approaches in terms of helping them further enjoy music.

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