

Research Articles and Essays**Learning Crisis (1) School Closure and Learning Crisis of Special Education by COVID-19**Yoshimi Matsuzaki¹ & Kuniomi Shibata²¹ Department of Sociology, Toyo University and Counter Learning Crisis Project² Department of International & Cultural Studies and Inclusive Education Support Division,
Tsuda University**Abstract**

COVID-19 pandemic caused a "Learning Crisis" for children with disabilities, which deprived them of their learning motivations and chances of keeping to learn. We surveyed special education schools in Japan in order to identify practical issues they had experienced during the school closures at the height of the COVID-19 pandemic.

Keywords: COVID-19, special education, school closure

COVID-19 impact on learning

COVID-19, which has spread significantly since late 2019, has had a major impact on the world. Since the first infected case appeared in Japan in January 2020, the country, to date, has been unable to stop the spread of the disease. COVID-19 has not only affected people's health and economic activities, but it has also had a serious impact on children's learning. At the end of February 2020, the Japanese government requested schools throughout the nation to close (Prime Minister's Office of Japan, 2020). Schools were reopened at the end of March that same year, as a response to a decrease in the infection rate in Japan. However, a declaration of a state of emergency was ordered in early April and schools were once again forced to close for an extended period of time.

Although the national closure of schools was enforced under the premise of protecting children's health, the sudden closure of schools caused a great deal of confusion and shock because all schools, households, and children were impacted by the decision. In particular, the school closures presented many challenges such as the need to cancel major school events (e.g., graduation and/or entrance ceremonies), and/or to develop school assignments that would allow children to study at home, given that they could no longer study at school. Families where the parents/caregivers were effectively absent from home due to work commitments were also forced to adjust their work schedules and working methods so that children could stay at home (JIJI Press Ltd., 2020; . KYODO NEWS, 2020)

It should be noted that in Japan, graduation ceremonies are held in March and the new school year (i.e., the move to the next grade) starts in April. Children were, thus, forced to adapt to major shifts in their learning curriculum at this particular turning point in the academic year. They were, as a result, deprived of an opportunity to start learning at the very

moment that they were ready to start afresh and had high expectations for new academic year (47 NEWS, 2020).

There is further evidence that special needs schools, as places of learning, were most negatively affected by the COVID-19 pandemic (Greta Anderson, 2020; Faith Hill, 2020; Samantha Libreri, 2020; Anya Kamenetz, 2020). Currently, Japan provides support in the following areas for children with disabilities for the purpose of “providing appropriate guidance and support in diverse places of learning by such measures as having a class with a small number of students and special curricula” by 1) offering transportation to special needs schools or special needs classes attached to elementary and middle schools, and 2) establishing a format that enables students to attend regular classes while receiving special guidance at certain times in accordance with their disabilities (Central Council for Education, 2012). However, children in Japanese special needs schools were not almost being reported in media compared overseas; therefore, many people did not care about their learning crisis under COVID-19. This current study was, thus, conducted in order to identify practical issues that special needs school across Japan had experienced during the school closures at the height of the COVID-19 pandemic.

Methods

This research conducted a survey of approximately 1,244 special needs schools across Japan. In this survey, special needs classes were not included. The main subjects of the study were special support schools that provide highly specialized education to children with relatively severe disabilities.

The respondents were asked to complete an online survey using Google Forms and, where necessary, Microsoft Word; a printed questionnaire was also sent to the respective schools to ask for their cooperation. The survey consisted of four parts that covered questions related to, "The state of the school during the long-term school closure," "The state of the school after the national school closure," "Lesson/learning status by subject," and "Other situations pertaining to school children." In total, the survey consisted of 32 items. Requests for cooperation with the survey were sent out at the end of August, 2020 and focused mainly on the Tokyo metropolitan area and other ordinance-designated cities. Responses were received up until December 2020. The survey was conducted with the cooperation of special needs schools nationwide, and data were collected from a final total of 196 schools (response rate: 15.8%).

Results

3-1. Outline of special needs schools under COVID-19

The surveyed schools included prefectural schools (80.7%), the most common operation format, followed by national schools (9.1%), municipal/ward schools (7.6%), private schools (2.0%), and other (0.5%).

The most common type of school among those included in the survey was those specializing in intellectual disabilities (55.4%), followed by physical disabilities (20.2%), deaf and hard of hearing (10.3%), blind and visually impaired (9.9%), and other illnesses and developmental disorders (4.3%).

The survey was primarily completed by teachers in managerial positions (e.g., vice

principals, 44.7%) and full-time teachers (43.0%).

The cooperating schools were asked when their period of long-term school closure ended. The chart maps out, in the form of a line graph, the timelines for when each school ended its long-term school closure. Overall, three peaks were confirmed. (see Figure 1.)

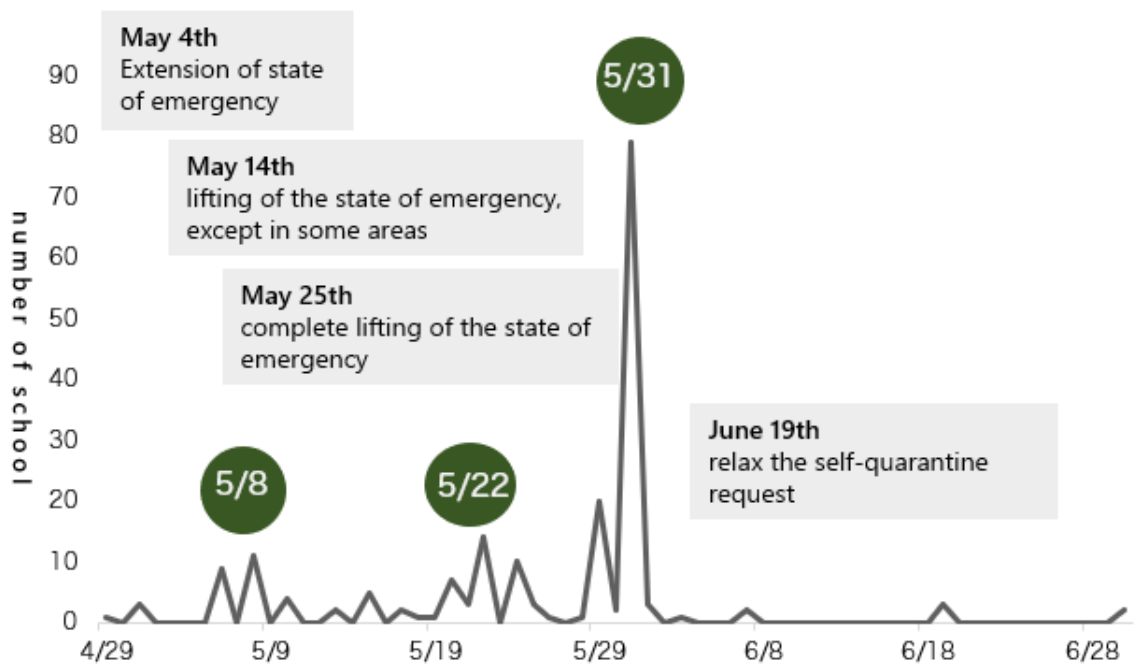


Figure 1. A Japanese special needs school's trend of the period of long-term school closure ended

Image description: the form of a line graph, the timelines for when each school ended its long-term school closure. There are three peaks, May 8, May 22, and May 31. In this graph, four events also noted; May 4th Extension of state of emergency, May 14th Lifting of the state of emergency, except in some areas, May 25th Complete lifting of the state of emergency, June 19th Relax the self-quarantine request.

The first peak can be seen around May 8, when the consecutive holidays were over. The second peak is evident around May 22 and was likely influenced by the May 14 "lifting of the state of emergency, except in some areas (Kyodo News, 2020)." The third peak appears around May 31 is associated with a general understanding that the end of May would be a good time to end school closures (i.e., specifically after the "complete lifting of the state of emergency" on May 25) (Prime Minister of Japan and His Cabinet, 2020).

During the school closure period, many schools engaged in "distributions of assignments and print-outs" and "checkups and guidance provided by telephone and fax." There were some schools that offered "home visits" or "set school days." Among all the participating schools 57.9% of the schools provided online support, which indicates that more than half of these schools were engaged in online education. Specifically, schools conducted online education used their websites to distribute videos and assignments, attempted interactive initiatives using ZOOM, Skype, and Google Meet, and provided education using the YouTube social media platform.

Many media reports have noted that there is a disparity between households in their use of the information and communication technology (ICT) environment (Asahi Shimbun Digital, 2020; AERA dot., 2020). This study's survey also discovered such disparities, however, these disparities were not limited to the ICT environment. In many cases, parental cooperation was found to be essential for children's effective online education. From this perspective, the schools' varied success in "obtaining parental cooperation in relation to online education" seems to be related to "discrepancies between households." In many families parents or guardians were not able to spend sufficient time with their children during the period of long-term school closure. As a result, a few schools provided childcare options for families who could not look after their children during this period. Some schools reported that

approximately a third of their students came to school every day.

Many respondents further highlighted the stress suffered by the children during the school closure period. There were reports of "symptoms such as decreased appetite, constipation, and allergies" and children "showing less expressions of emotions or being unable to control their emotions" during the periods of school closure. From participants' responses, it appears that the increased time spent with their families led to some children accumulating stress, particularly in relation to parents' over-engagement in their schoolwork, and/or children with heavy disabilities becoming unstable as a result of not being able to understand why the schools were closed. There were also many respondents who noted that the children's daily routines had been severely disrupted. Some respondents also indicated that children who had a general tendency toward refusing to attend school lost the opportunity to attend school.

Stress in children was further noted after the schools had re-opened. In addition, some respondents indicated that some children suffered from body contractures immediately after the schools re-opened. Such contractures are commonly seen directly after the summer holidays; however, the contractures seen after the end of the school closure period were deemed to be more severe. In addition, respondents indicated that, upon returning to school, some children were not able to adjust effectively to the rhythm of the school day, some would not get on or off their school buses, and some panicked at any sudden change in daily routine. There were also indications that the children tended to experience or display more problematic behaviors than usual, that children had lost sight of their goals due to the cancelation of school events and/or club activities, that some children had become mentally unstable due to not having a place to release their excess energy, and that some children felt unwell despite not being sick.

In addition, the survey gathered data related to COVID-19 infections. There were reports

that some children were highly sensitive to reports on the changes in the daily number of infected people, with some becoming very anxious when the number of new cases increased in comparison to the previous day. There were also reports that wearing masks as a countermeasure against COVID-19 infections caused some children to become “anxious because they could not read other people’s facial expressions, which led to them engage in behaviors such as pulling out their hair.”

Analysis I: the period in which the long-term school closure ended

As confirmed previously, the period of long-term school closure could be divided into three groups. Therefore, an analysis was conducted in order to compare the differences that emerged depending on the period in which the long-term school closure ended. For this analysis, the period in which the long-term school closure ended between April 29 and May 14 (i.e., the earliest period) was designated as Group 1, the period in which the school closure ended between May 15 and May 25 was designated as Group 2, and the period from May 26 onward was designated as Group 3. The difference between these three groups was then compared.

The baseline dates for the various groupings was May 14, which was when the initial "declaration of a state of emergency with the exception of some areas" was lifted, and May 25, when the "complete lifting of the state of emergency" was issued.

Schools’ decisions to end the school closure period are believed to have been based on the COVID-19 infection rate of the region in which their respective schools were located; however, depending on the individual school, it is possible that children from a wider area (e.g., beyond the prefectural border) also commuted to the school. As a result, a clear difference in the trends among prefectures could not be determined. A trend was, however,

confirmed in which metropolitan areas had a generally longer period of school closure, while rural areas ended their long-term school closures earlier.

First, this paper examined the analysis results related to the relationship between the degree of long-term school closure and the practice of online education. In Group 1, those who responded that their long-term school closure had ended by May 14, 10 schools (32.3%) provided online education. Conversely, 31 schools (69.9%) provided online education in Group 2 (long-term school closure ended by May 25), and 76 schools (60.3%) offered online education in Group 3 (school closure ended after May 26). (see table 1.)

A chi-square test was conducted in order to analyze the relationship between schools' long-term school closure and the implementation status of online education. This test indicated a significant difference ($p=0.002$). In particular, schools in Group 1, whose long-term school closure had ended by May 14, tended not to conduct online classes (adjusted residual: 3.3).

table 1. The period in which the long-term school closure ended and the schools' reactions under COVID-19

	Group 1.		Group 2.		Group 3.		p value
	~5/14		~5/25		5/26~		
	n	%	n	%	n	%	
Online Support							
provided	10	32.3	31	68.9	73	60.3	0.002
not provided	21	67.7	14	31.1	48	39.7	
School Management							
greatly changed	19	61.3	35	81.4	82	78.8	0.031
Changed	12	38.7	8	18.6	19	18.3	
Neither	0	0	0	0	3	2.9	
Not changed	0	0	0	0	0	0	
Not sure	0	0	0	0	0	0	
canceled school events							
Yes	7	63.6	28	80	88	86.3	0.065
No	4	36.4	7	20	14	13.7	
suspended experiential learning							
Yes	5	45.5	27	77.1	78	76.5	0.059
No	6	54.5	8	22.9	24	23.5	

χ^2 test

Image description: A cross-tabulation between 3 groups divided from the period in

which the long-term school closure ended and 4 variables; Online Support (provided / not provided), School Management (greatly changed / changed / neither / not changed / not sure), canceled school events (yes / no), suspended experiential learning (yes / no).

Regardless of the period of long-term school closure, schools in all three groups recognized a need for online support in order to improve their ICT and online environments. Schools in which the long-term school closure was more prolonged were more inclined to provide continuous online support. This particular finding suggests the possibility that such schools recognized new issues and accumulated more practical know-how than schools that were closed for a shorter period of time.

Next, an analysis was conducted in respect to the relationship between the duration of long-term school closure and changes in school management. In Group 1, the group that answered that their long-term school closure had ended by May 14, 19 schools (61.3%) answered that their school management was "greatly changed." Conversely, in Group 2, the group that answered that their long-term school closure had ended by May 25, 35 schools (81.4%) answered that their school management was "greatly changed," and in Group 3, the group that answered that answered that their long-term school closure ended after May 26, 82 schools (78.8%) answered that their school management was "greatly changed."

A chi-square test was then conducted on the relationship between the long-term school closure period and changes in schools' management. The test revealed a significant difference ($p=0.031$). Schools in which the long-term school closure had ended by May 14 were less likely to respond that their school management had "greatly changed" when compared to schools in which the school closures had been prolonged (adjusted residual: -

23).

These results indicate that schools with longer closures had to take on a greater burden, or had to make more significant changes in terms of various school management aspects (e.g., human resources, understanding, and general resources). Such findings could also be interpreted as “schools with longer closure periods were better able to restructure and add ingenuity to their school management.”

Next, an analysis of whether the state of school events and experiential learning were impacted by the degree of long-term school closure was conducted. In Group 1, the group that answered that their long-term school closure had ended by May 14, seven schools (63.6%) had canceled school events, and five schools (45.5%) had suspended experiential learning. Conversely, in Group 2, the group that answered that their long-term school closure had ended by May 25, 28 schools (80.0%) had canceled school events, and 27 schools (77.1%) had suspended experimental learning; while in Group 3, the group that answered that their long-term school closure had ended after May 26, 88 schools (86.3%) had canceled school events, and 78 schools (76.5%) had suspended experiential learning.

A chi-square test of these factors found no significant differences in either the long-term school closure ending period and school event cancellation ($p=0.065$) or the suspension of experiential learning ($p=0.059$). However, while the chi-square test found no significant differences, a tendency in which experiential learning, in particular, could not be sufficiently conducted due to long-term school closure was found. This finding indicated the possibility that restricted class hours also caused reduction/suspension of active learning.

Analysis 2: Implementation of online education

As noted previously, this study examined the implementation of online education in schools specializing in special needs education during the period of long-term school closure in 2020. The results of this study indicated that 57.9% of the participating schools offered online education, while 42.1% did not. Although the number of schools that responded to the survey varied according to prefecture depending on whether more than half of the responding schools provided online education or not. In addition, no difference in either the school management format (i.e., prefectural, national, municipal/ward, private, and other) or school type (i.e., intellectual disability, physical disability, deaf/hard of hearing, blind/visually impaired, and other) was seen.

First, in this section of the data analysis, this study examined whether or not the practice of online education had changed school management. Among schools offering online education, 86 schools (83.5%) reported that their operations had "greatly changed," while 50 schools (66.7%) that had not offered online education said that their school operations were also "greatly changed." (see table 2.)

The results of the chi-square test on the relationship between schools' online education implementation status and changes in school management showed a significant difference ($p < 0.001$); schools that had implemented online education were more likely to respond that their school operations had "greatly changed" when compared with schools that had not implement online education (adjusted residual: 4.8).

table 2. Implementation of Online Education and the schools' reactions under COVID-19

	Schools provided Online Education		Schools not provided Online Education		p value
	n	%	n	%	
School Management					<0.001
Greatly changed	86	83.5	50	66.7	
Changed	15	14.6	24	32	
Neither	2	1.9	1	1.3	
Not changed	0	0	0	0	
Not sure	0	0	0	0	
canceled school events					0.447
Yes	75	85.2	48	80	
No	13	14.8	12	20	
suspended experiential learning					<0.001
Yes	71	80.7	39	65	
no	17	19.3	21	35	

χ^2 test

Image description: A cross-tabulation between 2 groups which is divided from whether provided Online Education, and three variables; School Management (greatly changed / changed / neither / not changed / not sure), canceled school events (yes / no), suspended experiential learning (yes / no).

Based on respondents' written answers, there is evidence that circumstances within the individual schools (e.g., personnel, equipment, skills, etc.) had greatly contributed to differences in the implementation/non-implementation of online education. It is possible, therefore, that children's learning environments were influenced by whether or not there were sufficient human resources, understanding, and support provided by their respective prefectural governments.

Then, an analysis was conducted to establish if school events and experiential learning were easier to manage in relation to whether or not online education was practiced. In the online education group, 75 schools (85.2%) said that "school events were canceled" and 71 schools (80.7%) said that "experiential learning was suspended." Conversely, among the non-

online education group, 48 schools (80.0%) said that "school events were canceled" and 39 schools (65.0%) said that "experiential learning was suspended".

With regard to the chi-square test results, no significant difference was found between the implementation status of online education and the cancellation of school events ($p=0.447$). However, there was a significant difference in the suspension of experiential learning ($p<0.001$). Schools that offered online education were more likely to respond that they had suspended experiential learning (adjusted residual 3.8), when compared with those that had not.

Large-scale school events were also generally suspended to avoid "close contact." In some cases, schools that did not offer online education seemed to be able to offer experiential learning by limiting the number of participants or reducing the range of areas visited required for such educational activities. However, some of the schools that offered online education were found to have substituted and/or implemented school events and experiential learning via online platforms.

Discussion

Current state of Japan's special needs schools

The number of special needs schools in Japan has gradually increased over the past 10 years (Special Needs Education Division, Elementary and Secondary Education Bureau, 2008), with the number of students enrolled in such schools also increasing. In 2016, a nationwide shortage of classrooms in public special needs schools was reported; the shortage of classrooms was particularly serious in densely populated areas. In addition, the number of

special needs schools established in each prefecture is currently limited, which means that many children who are in need of special needs education are often required to travel to schools that are located far from their homes using school buses and/or other modes of transportation.

The location and quotas of children in special needs schools are believed to have significantly impacted schools' responses to the COVID-19 pandemic. Even in regions where the number of infection cases is small, social distancing still needs to be maintained as a measure against further COVID-19 infection. Many schools are now required to offer classes without direct contact and instruct their students to avoid such contact, which has further exacerbated the issue of the noted shortage of classrooms. Furthermore, even in areas with a small number of infections, these lower numbers do not directly imply that children's education remained of the same quality as before the pandemic.

There is also, generally, only one school for the visually impaired and blind per prefecture, which means that there are quite a number of children with visual disabilities who must commute across a wide area or live in school dormitories, away from their parents' homes. It has been noted that the prejudice toward COVID-19 patients may be a reason why these children's commutes became more difficult during and after the long-term school closures studied in this research.

Relations with the Board of Education

School management was also found to be greatly affected by the policies created by the various boards of education and the efforts of local municipality governments. In Japan, prefectural governments are obligated to establish special needs schools (Shimizu, 2012). These governments maintain a stance of looking after children's growth by cooperating with

local social welfare organizations in addition to, and in association with, the schools.

Conversely, it has been noted that a particular issue in the Japanese education system relates to how the discretionary power of each individual school is not easily recognized. For this reason, there are many cases where it is difficult for teachers at schools to make decisions. Therefore, it is possible that school's individual situation differed greatly depending on the policies and management systems implemented by the prefectural boards of education. During the COVID-19 period under investigation, the issue that teachers from local schools were not able to respond in the way they wished was highlighted. This current study also found that internet security policies tended to be strictly set, depending on the school, which prevented the implementation of the necessary online class support. As a result, teachers working from home could often not interact effectively with their students when using their home equipment.

Conclusion & Future Work

The outcome of our research showed schools with long-term closure tended to make significant changes in their management. Furthermore, online support implementation would have a notable impact on classrooms. And the ability to implementation of online support depended on school types and the locations of schools. It means children's learning environment was influenced by each school's reaction and whether resources. We will focus on figuring out how disparities between schools will be brought by analyzing open-answers in future work.

We analyzed "learning crisis" in this paper, but we could not discuss enough who is

in "learning crisis?" This study recognized there were many teachers' tries has done to overcome COVID-19. We will also focus on good practice in classrooms and keep descriptions of the varieties of tries, so that we consider "learning crisis" in more detail in future work.

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