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Responding to COVID-19: Japan's Government-Driven Evolution in Education

Sk. Ajahar
Research Scholar
Department of Japanese
Visva- Bharati
skajahar000@gmail.com

Abstract:

The Novel Coronavirus (COVID-19) forced global education institutions into transition to online teaching and learning; several learners have examined their encounters with this change. In February 2020, COVID-19 forced all Japanese schools and institutions in transition to online learning. COVID-19 transformed our society by fostering and expediting innovation and progress, particularly in the digital domain. The educational systems have garnered considerable interest in digital transformation. Japan's contemporary education system is based on an institutional framework from the industrial age. The Global and Innovative Gateway for All (GIGA) School and online education initiatives commenced post-2020. The Government launched GIGA to digitize education up to the secondary school level. Since March 2020, the National Institute of Information has been organizing weekly online webinars to effectively disseminate knowledge and advice on online learning in higher education. The Japan Society for Education Technology (JSET) also offers a comprehensive history of online education in Japan. The COVID-19 has compelled educators to investigate and implement distance learning methods on a much larger scale than before. Prior to COVID-19, distance education practices were rare, and most learning activities took place in the classroom. In 2019, the Ministry of Education, Culture, Sports, Science and Technology (文部科学省, Monbu-kagaku-shō) (MEXT), the Ministry of Internal Affairs and Communications, and the Ministry of Economy, Trade, and Industry collaborated to introduce the Global and Innovation Gateway for All (GIGA) school concepts. GIGA aims to establish an adequate infrastructure for using information and communications technology (ICT) in all schools to provide one device per student by 2023. The Governmental supplementary budget has enabled the majority of local administrations to establish high-speed communication networks and learning platforms for each student. This study will attempt to find the Governmental initiatives for Online Learning and the overall effects of COVID-19 on education in Japan.

[Keywords: The Novel Coronavirus, Digital transformation, Online learning, Educational Technology, ICT, Japan]

Introduction:

Students were initially mailed print-based course materials when remote learning was first established in the nineteenth century. Print and multimedia (such as CD-ROMS, cassettes, radios, and televisions) were combined in the second wave of distance learning. Internet-based distance learning is the third generation. Learners can even use educational software to conduct virtual

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experiments and simulations. Third-generation distance learning differs from the preceding two. First and second generations focused on creating and disseminating educational resources to students. The main one-way learning exercises did not allow for enough interaction. However, online learning facilitates communication between students and teachers. Web-based distance learning can be divided into recorded online courses and interactive sessions, both synchronous and asynchronous.

The global encouraged and accelerated innovation and advancement, especially in the digital sphere, but it is still unclear how COVID-19 impacts our society. Since the advent of digital technology, the education sector has attracted much interest. An institutionalized structure from the Industrial Age laid the groundwork for Japan's modern educational system. While innovation has existed ever since, education is one of the sectors where advancement occurs slowly, making it challenging to satisfy market standards and expectations. In Japan and worldwide, however, COVID-19 accelerated the digital transformation of education; today, educators, students, policy, and other stakeholders are actively working to implement and adapt to this change.

This study thoroughly examines the two primary themes of digital transformation in Japan's educational system. It also looks at how quickly digital transformation spreads throughout the academic sector. These concerns include the development of innovative educational technology and the expansion of distance learning. Previous research on the impact of digital transformation on education and expectations, and concerns regarding this change in educational services, is also examined in the study.

Education in Japan before COVID-19:

The growth of distance learning and the creation of educational technologies were two essential components of the digital transformation of the education sector during COVID-19. The academic pressures brought on by these advances have accelerated them. The COVID-19 pandemic has compelled educational institutions to investigate and implement online learning solutions on a never-before-seen scale. There were limited possibilities for distance learning prior to COVID-19, and the majority of learning activities were conducted in conventional classroom settings. Due to school closures in March 2020, the majority of schools in Japan temporarily ceased functioning. Because of how long this period lasted, these schools had to use distance learning methods, which quickly became the new standard (Kang, 2021).

In 2019, MEXT, the Ministry of Education, Culture, Sports, Science and Technology (文部科学省, Monbu-kagaku-shō), the Ministry of Economy, Trade, and Industry, and the Ministry of Internal Affairs and Communications served as observers for the launch of the Global and Innovation Gateway for All (GIGA) school concepts. GIGA plans to have enough ICT (information and communications technology) infrastructures in every school by 2023, with a target of one device per student. The majority of local Governments have used their substantial Government funds to establish learning platforms and high-speed communication networks for all students. The GIGA school concept was born out of the unstable ICT conditions in schools, where four to five students on average shared a single computer, and the notable differences in infrastructure development between different local Governments at the prefecture level (MEXT, 2020). The Organization for Economic Co-operation and Development (OECD) ranked Japan

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second out of 49 countries in the 2018 assessment regarding the importance of professional ICT skills for educators. Teachers faced the challenge of using ICT to improve student learning while protecting the health of staff and students due to the aforementioned school closures. This, in turn, made implementing the GIGA school curriculum easier. By ensuring "1 device for one student with a high-speed network in schools," the GIGA school program promotes innovative and optimal learning for all children in Japanese Society. The National Institute of Informatics (NII) weekly online webinars served as the impetus for another content analysis. The strategies and innovative approaches employed by different people active in emergency remote teaching, mainly at the university level, are summarized in this content analysis. On March 26, 2020, NII inaugurated a weekly online meeting series called the "Cyber Symposium on Sharing the Status"—Japan's most extensive COVID-19 education webinar series. In April, just before the start of the academic year, the NII webinar got underway in Japan during the school shutdown. To determine what stakeholders, including scholars, researchers, practitioners, and policymakers, discussed and exchanged throughout the COVID-19 (Dennen et al., 2022).

Post-COVID Distance Education in Japan:

Medical professionals worldwide adopted online learning as the norm during the coronavirus disease (COVID-19), and many studies have studied the effects of this change. In February 2020, COVID-19 impacted Japan too, forcing university medical institutions to embrace online learning completely. A more flexible learning environment and time savings are only two of the many advantages of online learning, according to research on education during COVID. Nonetheless, it has significant disadvantages, such as a lack of practice, non-standardized teaching techniques, inter-problems, and even student insecurity. Recorded online courses and online interactive sessions are the two forms of internet-based distance learning (Yamamcapitalize, 2023).

The use of recorded online courses is the main extension of the Massive Open Online Courses (MOOCs). Most of the content offered by the MOOCs, an online learning environment, is free. The MOOCs, which are based on YouTube's Khan Academy, offer a variety of courses for colleges, schools, and early childhood education programs. Students are free to select the courses they want to study. There are many advantages of Massive Open Online Courses (MOOCs). The platform improves learning efficiency by enabling users to study from anywhere and at their own pace. The MOOCs allow students to adjust their learning speed. The curriculum of traditional educational services is designed to be completed in a classroom setting within a specified time frame, such as a semester. A semester in a Japanese university is made up of fifteen weeks of classes. Every week, for ninety minutes, students and teachers meet in a typical course. Students must devote 15 weeks to a course to receive the associated certificates or credits.

On the other hand, MOOCs give students greater flexibility; they can progress through the content at their own pace and attend classes whenever it is most convenient. As a result, a skilled student can complete a course in a few days through intense study. For that, the online platform of MOOCs is very beneficial for learners (Kang, 2021).

Additionally, interactive online learning has gained popularity in the field of education. The COVID-19 situation offers the educational system a fresh chance to adopt innovative EdTechs. Specific educational technology (EdTech) solutions, such as Learning Management Systems

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(LMS), will significantly impact the traditional education domain. Learning Management Systems (LMS) tools assist in organizing, recording, monitoring, reporting, and disseminating education, training, and development initiatives. Organizations widely use Learning Management Systems to provide online training courses for their employees. Currently, the LMS is used by two organizations. Through increased accessibility, COVID-19 is transforming the educational landscape. Even though Learning Management Systems (LMSs) used to be very expensive, the introduction of cloud-based LMSs has significantly reduced the initial and ongoing expenditures. Since 2017, Japan has been using the online learning platform Moodle. Later, they switched online classes to Moodle for the 2020 curriculum because of COVID-19. Zoom was utilized for in-person communication, or the lessons were recorded for later viewing. The course materials were all posted online using Moodle. Most of the seminars in 2022 and several practical courses in 2021 were in-person lectures (Yama, Even, 2,023).

The most innovative of the new technologies are believed to be teaching tools based on artificial intelligence. Artificial Intelligence (AI) tools monitor, assess, and recommend strategies to improve student comprehension. AI-assisted instructional tools Atama Plus and Qubena were developed by ATAMA and COMPASS, two of Japan's leading EdTech companies. With these materials, students can answer questions and solve problems on a tablet (Kang, 2021).

During COVID-19, all educational institutions have encouraged online learning. However, given the Ministry of Education's policy change to publish the names of universities with less than 50% in-person instruction starting with second-semester classes in 2020, the current study's conclusion that online education ensures appropriate learning outcomes in the same way as in-person instruction is likely to be highly significant. However, as Mainichi Shinbun (2020) noted, the degree of learning outcomes attained by the student population with lower academic aptitude declines more sharply than under face-to-face schooling. For Japanese institutions in the future, this poses a challenge. The challenge is utilizing online education's benefits while providing substantial support to students who may experience negative consequences. Similarly, the results showed that the types of online learning used to accomplish appropriate learning objectives determine the differences in engaging classroom experiences (Miyoshi et al., 2022)

Consequently, all Japanese institutions were forced to follow the order to stop classes beginning April 22, 2020, due to COVID-19. Even if this requirement is lifted, many schools are already switching from in-person lectures to online courses offered by Zoom and other platforms, referring to this change as a "new form of education." "Education" is defined as learning that is supported by a network (Accorson and Ikeda, 2002).

Re-evaluating teaching strategies is critical in COVID-19, as many colleges are implementing online learning as a cutting-edge teaching strategy. Keio University's "Report on the Survey of Taking Online Classes" (2020) notes that while online learning is perceived as a substitute for in-person instruction, discussing and explaining online learning in terms of the best ways to develop and advance in each subject is crucial. From elementary school to university, students have adopted the Japanese MEXT curriculum and used a variety of strategies to reduce COVID-19, according to the poll results (Miyoshi et al., 2022).

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Organizing and implementing curricula to ensure effective learning:

MEXT actively works to prevent interruptions in the classroom caused by COVID-19 from harming applicants for admission exams to high schools and universities. To guarantee that candidates unable to take qualifying or proficiency examinations or participate in special events are not disadvantaged during the selection process, MEXT has asked all universities to implement alternative procedures. These methods include one-on-one online interviews, evaluating the candidates' efforts to achieve results, and giving private tests. Additionally, the Nation has been invited by the Ministry of Education, Culture, Sports, Science, and Technology (MEXT).

MEXT has asked the National Association of Upper-Secondary School Principals to conduct a poll using a questionnaire about the entrance exam schedule, including the general entrance exam and the types of questions that will be asked. Furthermore, MEXT seeks to ensure students have enough examination opportunities. Informed by the poll results, MEXT held discussions with pertinent high school and university administrators in mid-June before developing and announcing the criteria for choosing university candidates.

Distance learning classes (As of July 1, 2020):

Type of Institutions	Traditional classroom	Blended or Hybrid Classes	Online Learning Classes
National University	1.2	64.0	34.9
Public University	7.8	70.6	21.6
Private University	17.6	59.7	22.7
College of Technology	33.3	40.4	26.3
Overall	16.2 (173 schools)	60.1 (642 schools)	23.8 (254 schools)

Source: (*Education in Japan Beyond the Crisis of COVID-19*, n.d.) https://www.researchgate.net/publication/266856047_The_Obscure_Profile_of_Distance_Learning_in_Japan

International student exchanges and scholarships:

Provide the necessary material and human resources to ensure access to education for children across the country. All institutions have started their spring semesters as of July 1, and over 90% of them offer courses in a variety of forms for distance learning. The creation of an IT infrastructure will be partially funded by USD 95.0 million (FY 2020) allocated by MEXT as part of the Government's supplemental budget. As a result, universities will be able to purchase the equipment and systems required to provide advanced education via digital channels, such as distance learning. Additionally, completing online courses can earn up to 60 credits towards graduation. As a result, MEXT has informed universities explicitly that there will be no exceptions to this credit limitation. Encourage the use of distance learning and start classes. Classes at all universities have started for the spring semester as of July 1, 2020. All universities that offer

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lessons, 83.8%, provide classes via distance learning (*MEXT FY 2020 Second Supplementary Budget*, 2020).

International students currently enrolled in Japan; Special measures for receiving monthly scholarship payments:

Japan has flexible scholarship programmes that allow beneficiaries to get their money even if it takes longer than expected. For instance, the scholarship period may shift to the autumn. The spread of COVID-19 makes it harder for some students to continue their education at universities and other institutions because of decreased income from part-time jobs and lower home earnings. MEXT established the emergency student financial support programme to provide grants and subsidies to students who have dropped out of school. It is anticipated that the programme will reach over 430,000 students globally. Additionally, some colleges waived tuition fees for students whose families have gone through major financial transitions, and MEXT also allocated USD 150 million in the supplemental budget to assist these students (*Education in Japan beyond the Crisis of COVID-19*, 2020).

Financial support for students adversely affected:

A financial aid program will be available to students struggling to continue their education because of significant reductions in household income and income from part-time work. Students who experienced severe financial difficulties due to their reduced income from part-time work will be eligible for interest-free scholarships through the program. MEXT encourages all institutions to help struggling students by adjusting the tuition and related fee payment schedules. Universities assist with tuition fees and associated fee waivers. As an emergency financial solution, MEXT gives universities the necessary funds to reduce the economic burden of tuition fee exemptions. The supplemental budget gives private institutions 92 million dollars and national universities 46 million dollars (*Education in Japan beyond the Crisis of COVID-19*, 2020)

Limitations in Digital Transformation in the Education Services:

Classes had been postponed since the COVID-19 outbreak raised serious educational service concerns. Students worry that they might experience setbacks in their academic careers. These worries are temporary, though. Schools may offer extracurricular courses. Nevertheless, the digital revolution of educational services has led to more basic issues and constraints. This section uses previous research findings to examine the problems and limitations associated with these tendencies. (1) Inadequate motivational management; (2) Negative effects of using IT devices in the classroom; (3) Inequalities in education brought on by the digital divide.

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On Correspondence of Universities and Colleges during the COVID-19:

Institutions types	Distance Education started	Distance Education under discussion	No of Distance Education
National University	71 (82.6%)	15 (17.4)%	0
Other public university	58 (55.2%)	43 (41.0%)	0
Private university	536 (65.2%)	254 (30.9%)	12 (1.5)%
Technical college	43 (75.4%)	14 (24.6%)	0
Total	708 (66.2%)	326 (30.5%)	12 (1.1%)

[Source: https://www.mext.go.jp/content/202000513-mxt_kouhou01-000004520_3.pdf]

Concluding Remarks:

The COVID-19 situation has led to a discussion about modified approaches and methods and a re-examination of the definitions of teaching and learning. While the country was in a state of emergency, specific policies and norms were put into place, and the usage of ICT in schools and academic institutions was accelerated. GIGA and numerous other initiatives recognized its leadership and responsibilities in incorporating technology into education. As a result, although preparations for individual optimization have advanced, learning chances and approaches have expanded and become more flexible. The GIGA school program's goal of individually optimized learning requires establishing a sufficiently equipped educational system to handle future emergencies. Collaboration between academic institutions, professional associations like GIGA, and society at large is necessary for this. The idea of education has been reconsidered in a big way, and as students adopt new teaching methods, online learning has shown considerable advantages. To maximize in-person learning in Japan, the conversation about improving learning among students, instructors, influencers, and society should continue to emphasize the benefits of ICT.

References:

- Akabayashi, H., Taguchi, S., & Zvedelikova, M. (2023). Access to and demand for online school education during the COVID-19 pandemic in Japan. *International COVID-19 of Educational Development*, *96*, 102687. https://doi.org/10.1016/j.ijedCOVID-192.102687

- Dennen, V., Dickson-Deane, C., Ge, X., Ifenthaler, D., Murthy, S., & Richardson, J. C. (Eds.). (2022). Global Perspectives on Educational Innovations for Emergency Situations. Springer Nature. https://doi.org/10.1007/978-3-030-99634-5

- Isha, S., & Wibawarta, B. (2023). The impact of the COVID-19 pandemic on elementary school education in Japan. *International Journal of Educational Research Open*, *4*, 100239. https://doi.org/10.1016/j.ijedro.2023.100239

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Taiyō
An International, Peer-Reviewed, Refereed, Open Access e-Journal

- Information Communication Technology in Education: Bringing Innovation in Classroom. (n.d.). Retrieved October 23, 2024, from https://www.researchgate.net/publication/372921336_Information_Communication_Technology_in_Education_Bringing_Innovation_in_Classroom

- Kang, B. (2021). *How the COVID-19 Pandemic Is Reshaping the Education Service* (pp. 15–36). https://doi.org/10.1007/978-981-33-4126-5_2

- Miyoshi, N., Pan, Q., & Hu, Y. (2022). The Effect of Class Experiences via Online Education on Japanese University Students' Learning Outcomes amid the COVID-19 Pandemic. *Higher Education Forum*, *19*, 71–86

- The Open Education Consortium | The Global Network for Open Education. (n.d.). Retrieved October 21, 2024, from https://www.oeconsortium.org/members/view/413/

- Viktoria, V., & Mammadova, A. (2020). Comparative Analysis on the Impact of Distance Learning Between Russian and Japanese University Students During the Pandemic of COVID-19. *Education Quarterly Reviews*, *3*. https://doi.org/10.31014/aior.1993.03.04.151

- Yamamoto, K., Akiyoshi, K., Kondo, H., Akioka, ultimatelya, Y., Yufu, K., Takahashi, N., & Nakagawa, M. (2023). Innovations in online classes introduced during the COVID-19 pandemic and their educational outcomes in Japan. *BMC Medical Education*, *23*(1), 894. https://doi.org/10.1186/s12909-023-04874-1

Government Reports:

- Education in Japan beyond the crisis of COVID-19. (2020)

- MEXT FY 2020 Second Supplementary Budget. (2020)

- 202000513-mxt_kouhou01-000004520_3 mext report.pdf. (n.d.). Retrieved November 5, 2024, from https://www.mext.go.jp/content/202000513-mxt_kouhou01-000004520_3.pdf