

# Teacher Attitudes to Teaching Moving on from COVID-19

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## Abstract

This paper investigates the teaching situation and attitudes of teachers during the Covid-19 emergency measures. A survey was conducted which asked 19 questions to 74 university and college teachers from all over Japan. Teachers' attitudes to using online components in teaching have changed greatly since the start of the pandemic to the point that the majority will now use them in regular face-to-face classes.

## Introduction

We are now coming to the end of the second academic year of special measures due to the emergence of the new CoronaVirus, Covid-19. In spring 2020, educators were suddenly faced with the reality of classes going online, not being able to meet their students face-to-face, and challenges in building a connection with students. Many teachers found themselves struggling to adapt lesson plans and syllabi and learn to use technology they were not familiar with. It was something of a baptism of fire for many as they desperately tried to prepare themselves not only to use the different Learning Management Systems (LMSs) and applications themselves but to be able to teach these new skills to, and troubleshoot for, their students. Among teachers there were widely varying abilities and confidence levels: some would rise up and become known as the expert and 'the one to go to for help' while some would flounder and, in at least one case the author is aware of, be so overwhelmed that they would just give up and quit the profession. In the beginning the belief was that online classes would continue for just a few weeks and that classes would be back to normal quickly. Here in Japan, where the academic year starts in early April, initially classes were expected to go back online after the Golden Week national holiday at the beginning of May. In this situation students and teachers were looking at online classes lasting up to three weeks. It wasn't long, however, before that was extended and then extended again, until the entire first semester of university classes was online. In discussion

with other teachers it became apparent that initially teachers were happy to continue with online classes, not only for safety reasons, but also to see some return on the considerable effort that was put in to learn the new technology and to adapt and prepare lessons. Looking at literature written about online learning, the majority focuses on the student, with little emphasis on the teachers.

This paper investigates the teaching situation and attitudes of teachers in two and four year universities and colleges in Japan during the pandemic. The purpose of this study was to understand the views of teachers and how these have been changed by teaching online. This was done using a survey that was collected at the end of the second year of the special teaching measures. It also compares some of the differences between full-time and part-time educators.

## Survey

The survey was created using the survey app, Survey Monkey, which provides a link to the survey, collects and collates results, and creates charts and graphs to visualise the data. It was self-administered through a link to the application. The survey consisted of 19 multiple choice questions, with an aim to be no more than five minutes in length. Multiple choice questions were used to maximise completion and keep the survey short. Survey data showed the average time taken to complete the survey was 3 minutes and 24 seconds. To ensure a broad spectrum of teachers over a wide geographic area, college and university lecturers, professors and adjunct lecturers, at 2 year and 4 year institutions across Japan were surveyed and the survey was posted on several national sites. Effort was made to cover as many institutions as possible so that there was no weighting from people at the author's institution whose answers would skew the results to one LMS. Permission was obtained from the administrators of the online group Online Teaching Japan (OTJ) for the survey to be posted on their site. In addition, the survey was also posted on a Private Facebook group of women in Japan. The survey was conducted over a period of 20 days from January 10th-30th, 2022. A link to the survey was provided in the posts. A total of 74 responses were received. All respondents had a minimum of a bachelor's degree.

## Results and Discussion

Question 1 asked about the respondent's teaching situation. This has relevance to see the proportion of teachers in full-time employment as compared to part-time employment. Moreover, it allows us to see the general distribution of teachers in tertiary education in Japan. The conditions and resources available to full-time teachers, concerning office space, equipment, and access to funds, are much better than for those teaching as adjuncts. The results showed that the largest proportion of the respondents, 40.5%, or 30 teachers, were in part-time positions; 37.8%, 28 teachers, were in full-time, permanent positions; and 21.6%, 16 teachers, had full-time, limited term contracts, figure 1. In total, that means that the largest proportion of educators in Japan who responded to this survey, almost 60% (59.5%, or 44 teachers), are in a full-time position of some kind.

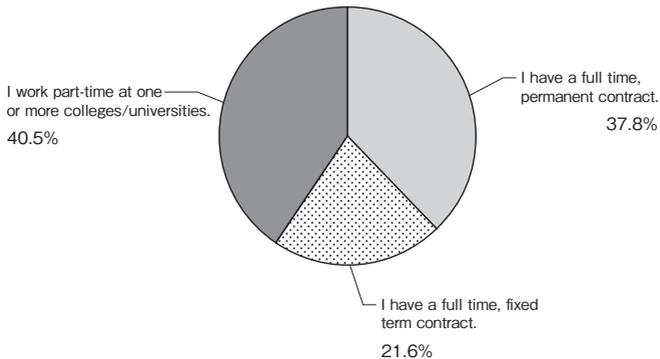


Fig. 1 Teaching situation

Question 2 asked teachers if they had been using any online resources prior to the start of the Coronavirus emergency teaching measures. This was to provide a baseline to see how much had changed once the measures started. All 74 respondents answered the question. By far the majority of teachers, 46% (34 teachers) had been using no online resources at all. As a result of this it can be assumed that they would have little to no schema of how to set up online work or activities, or incorporate it into a lesson. For these teachers the transition to 100% online teaching will have been quite challenging. However, 27% (20 teachers) of teachers were already using an

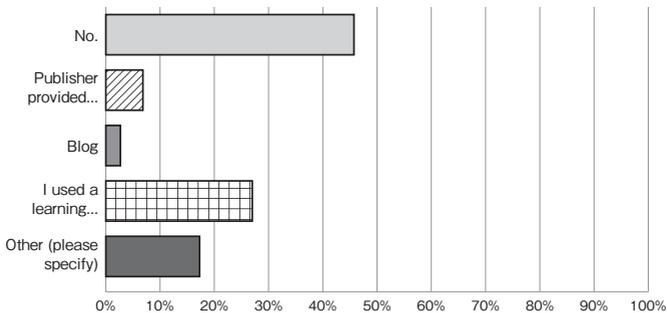


Fig 2. Percentage of online teaching/homework before 2020 academic year.

LMS prior to the Coronavirus special measures being implemented. This would have given them an advantage as we will see in the next question. Whether or not the LMS was the same one as they had been using, they would still be at an advantage from being familiar with the possibilities of such a system and generally having schema for this type of technology. In addition, 17% (13 teachers) were using other forms of online work such as online homework submission, Quizlet, online file sharing, and videos, 7% (5 teachers) were making use of publisher-provided text accompaniments, and 3% (2 teachers) were making use of blogs (Figure 2).

Question 3 asked teachers if they were given a free choice of the learning management system (LMS) they used when classes went online, or if they had to use one dedicated by the institution they work for. All respondents answered this question. Everyone is different, with different experience with technology and will find different systems easier, or more difficult to use. The responses showed that 28.4% (21 teachers) had free reign to choose the LMS they would use. This was probably most advantageous to those who had already had experience with LMSs. They would be able to make a more considered choice as to what LMS they would be comfortable using and would best fit their needs. The majority of teachers, 71.6% (53 teachers) were required to use an LMS dictated by their institution. From discussion with teachers who had to use the institution's prescribed system and had no previous experience with LMSs, they struggled to come to grips with the LMS in the short time before the start of the semester.

Question 4 asked teachers who had not been able to choose the LMS (answered 'no' to question 1) whether or not they were satisfied with the

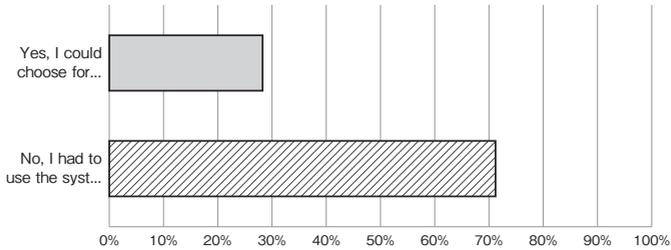


Fig 3. Percentage of teachers who could choose the LMS.

LMS they were required to use. Of the 53 teachers who answered 'no' in question 4, 52 responded and one skipped the question. Despite all respondents to this question not having been able to choose the LMS, an overwhelming 71.1% (37 teachers) of them were satisfied with the LMS they used (figure 4). This could be attributed to the institutions themselves having done the necessary research to choose a suitable system for their needs and situation. However, the amount of time available to schools to do this was limited as the transition to online was swift and sudden. The satisfaction may, in fact, be due to the simple fact that few people had any experience with LMS before this situation and therefore have nothing to compare the current system with.

Question 5 asked what LMS the teachers are using. All respondents answered this question. The most common LMS was Google Classroom, with over one third of teachers (37.8%) using it (figure 5). Being specifically designed for education and coming from a well known company, it is not particularly surprising that this is the case. The second most common system was Moodle, with one fifth (20.3%) of the teachers using it. Both of

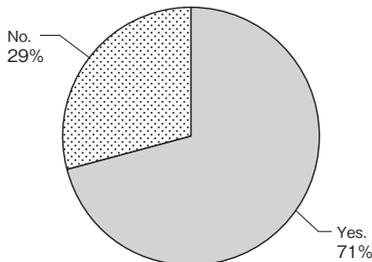


Fig 4. Percentage of teachers who were satisfied with the LMS.

these systems were designed specifically for educational purposes and have brand recognition which may account for the large number of users although there were some comments that Moodle was less intuitive and more cumbersome to use. Interestingly, the third most common LMS was Microsoft Teams (8.1%), and although Microsoft is a well known company that people trust and might expect reliability and good service from, this system was in fact designed for business use. Several other designed-for-education systems, Blackboard, Kahoot, and Edmodo, were used by a small percentage, 1.3% (1 respondent), of users. A testament to the number and variety of LMS available is the fact that almost 30% of respondents were using a different system. Within this 30%, 5 respondents (6.7 % of the overall total) were using their university’s proprietary system; WebClass, manaba, and Google Classroom combined with other technologies, were used by 3 respondents (4 % of the overall total) each; Zoom and Class Dojo were used by 2 respondents (2.7% of the overall total) each, and Webex, Campus Square, no LMS, and Moodle combined with other technologies, were used by 1 respondent (1.3 % of the overall total) each. In total fourteen different LMSs were listed in the responses. The most common three LMSs made up 66% of the LMS used, but the remaining 36 percent was made up of 11 different systems. A similar wide spread of systems is also seen in other parts of the world. Hermanto (Hermanto, 2020) who did research in Indonesia and Chandwani et al (Chandwani et al., 2021) who researched in India both showed a spread of 10 different systems, and for the former, one of those being ‘other’, which, like this current research could cover many more.

Questions 6, 7, 8, and 9 were concerned with how classes were

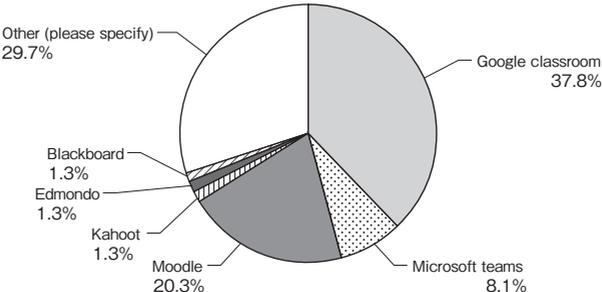


Fig 5. Which LMSs were used.

delivered each semester of the 2 years since the emergency measures started. In the first year (questions 6 and 7) 73 responses were recorded while 74 responses were recorded in the second year, (questions 8 and 9). This could be just that the respondent scrolled and missed the questions, but it may be because one of the respondents is new to university teaching, only being able to comment on the second year of the emergency measures.

Real time online classes remained relatively constant (56% in the first semester and 52% in the second semester) in the first year (figure 6). There was a large decrease between year one and year two and by the first semester in year two the number had fallen by just over half to 27% of classes being real time online, and dropping even further, to 16% in the

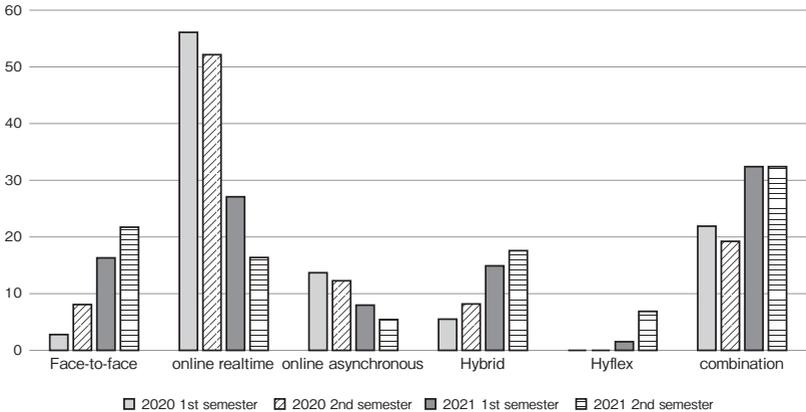


Fig. 6 Comparison of class styles each semester.

Question/format	Face-to-Face	Online real time	Online asynchronous	Hybrid	Hyflex	combination
Year 1: semester 1	2.7	56.2	13.7	5.5	0	21.9
Year 1: semester 2	8.2	52	12.3	8.2	0	19.2
Year 2: semester 1	16.2	27	8.1	14.9	1.3	32.4
Year 2: semester 2	21.6	16.2	5.4	17.9	6.8	32.4

Table 1

second semester, less than one-third of the original number.

Online asynchronous classes also followed a similar pattern with decreases every semester over the 2 years. However, the overall percentage of these classes was much lower, ranging from 14% at the start of the pandemic to 5% in the second semester for the second year.

Face-to-face classes have steadily increased over the four semesters. Despite the worry over infection, face-to-face classes were never completely eliminated with 2.7% of teachers' classes being face-to-face during the first semester of the pandemic. However, even at the end of two years, only 22% of the classes were being held face-to-face exclusively. The increase in face-to-face classes did not match the huge decrease in online real time classes. The loss in those classes was balanced out by a more equal increase in all other kinds of class formats. Over this time period face-to-face classes increased by 18.9% and was 8 times its original level, hybrid classes increased by 12.4% and was triple its original level, hyflex increased by 6.8% from zero at the start, and combination of classes increased by 10.5%, 1.5 times the original level. The 48.3% reduction in real time and asynchronous classes was made up for by the numbers above.

Question 10 asked teachers, what their preferred teaching situation would be when the Covid-19 special measures end. All respondents answered this question, with nobody skipping. The most commonly chosen response was face-to-face (70%), either face to face only (36.5%), or with the option of reverting to online in the event of an emergency (33.7%). The emergency would not have to be just in the event of another pandemic, but earthquakes and extreme weather conditions also. This 70% result is in line with that found by Razkane et al (Razkane et al., 2022) who found that 66.6% of teachers preferred face-to-face teaching. Other options with much smaller, but more equal, percentages were, making the choice of best class format depending on the class which was chosen by 12.2% of teachers, hybrid favoured by 9.5% of teachers, and online classes selected by 8%. It appears that the hyflex option is not appealing and was not chosen by anyone.

Comparing these results with those obtained for students in previous research (Fukuhara, 2021), when a similar question was asked, a different balance of results showed up. Just over half, 55.7%, of students wanted a hybrid situation, 23.4% wanted to continue with online classes and 20.9% wanted to be face-to-face. We see quite a difference in what students and teachers want moving forward (figure 8). As can be seen many more

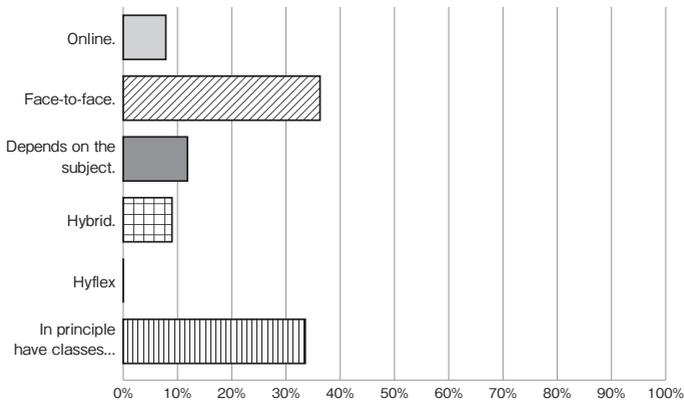


Fig. 7 Preferred teaching situation post-Covid-19

teachers, in fact three times as many, than students would prefer to have face-to-face classes. This is surprising as in that study many students bemoaned the fact that they could not meet other students and wanted to make friends. The difference is again almost three fold when looking at online classes, but in this case it is the students who prefer it. Perhaps these two situations can be explained with the same idea. Students are not so much thinking about what is best for their education so much as comfort, ease and logistics. From the previous research it can be seen that students enjoyed the extra time they had from not making the journey to and from the school. In addition, their living expenses could be reduced by living

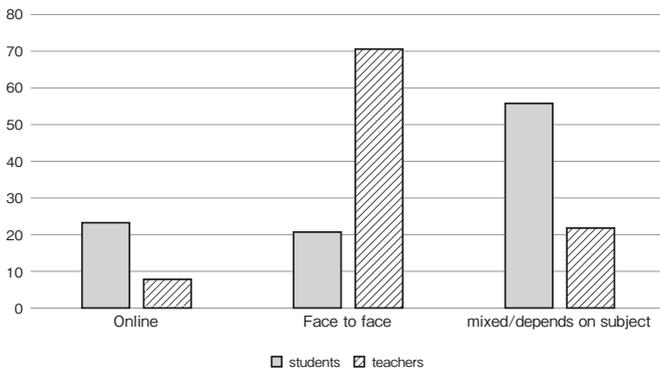


Figure 8. Comparison of teacher and students hopes for classes moving forward.

with family and finally a fear of Covid, either for themselves or a family member. Finally, in the case of hybrid classes, they were overwhelmingly preferred by students, with over double the number of students wanting this kind of class than teachers. In general, it seems that students had a more positive attitude towards online and hybrid classes which agrees with research by McKenzie (McKenzie, 2021). It seems, therefore, that it would be difficult to please all parties involved in education while such differences exist.

Question 11 asked those who chose hybrid classes as their preferred lesson format after the end of the Covid measures in question 10 what would be their ideal ratio of face-to-face to online classes. There were 11 responders who answered this question. The most commonly chosen ratio of face-to-face:online was 50:50, 45% of respondents chose this option; 27% chose 80:20; 18% chose 60:40; and 9% chose 20:80 (figure 9). Nobody chose 40:60. Almost everyone, 91% of respondents, agreed that even in a hybrid situation, at least 50% of classes should be face-to-face. This shows the importance that teachers place on such classes.

Question 12 asked whether, when Covid measures are over, teachers wanted to keep an online component in their classes. All respondents answered this question. A huge 86% (64 teachers) answered that they would be continuing to use technology in face-to-face classes, with only 14% saying no. This is a great increase on the number who were using an online /digital component in their classes before the Covid measures were enacted, when 54% were using it. That’s an increase of 32%.

Question 13 asked those who answered yes to question 12 what form

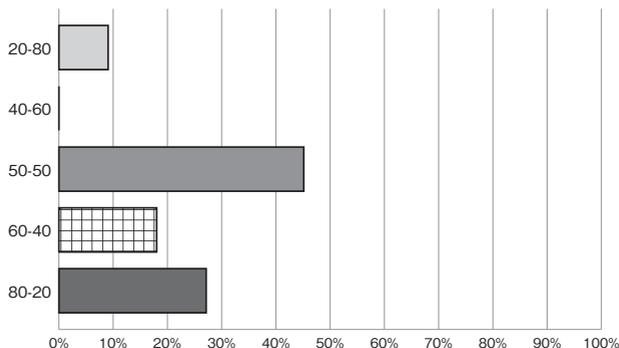


Figure 9. Preferred proportion of face-to-face:online

the online component would take. Respondents could choose all that apply. All 64 teachers who responded 'yes' in question 12, answered this question. Over half of the respondents, 56%, said they would use publisher materials, that is a 49% increase from the 6.8% before special measures, eight times the original number. An even greater number, 70% of teachers said they would use shared documents, compared with the 3.9% who were making use of them before the measures. That is over 17 times the original number. Even when classes go back to the teaching situation of pre-covid a high percentage, 72%, will continue to use a learning management system in their classes. That is an increase of 45% or 2.7 times the number from before the measures started. The online component that will continue to be used by the largest number of teachers is online homework, 87% said they would continue to use it which is a huge increase, 12.5 times, on the 7% who were using it previously. Finally, blog use increases almost 6 fold from 2.7% to 16%.

As can be seen from these results (figure 10), there has been a huge increase in the amount of technology and online resources used in classes and how teachers make use of it. Of course technology in the classroom is always evolving, but the sudden need to move to online lessons has sped up this process and facilitated a huge leap forward in this and it has changed attitudes forever. It has also forced teachers to become familiar with a variety of online tools, and as Gujuraja said, the more familiar teachers are with technology, the more likely they are to use it (Gururaja, 2021).

Question 14 asked teachers about their teaching environment for

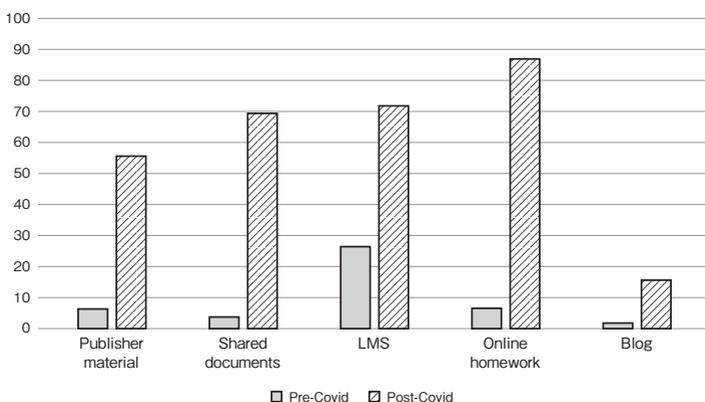


Figure 10. Technology use in the classroom

online classes. All respondents answered this question. The largest portion, 69%, of teachers taught their online classes from home. This was followed by 20% who taught from their personal school office. The remaining 11% of teachers taught from the school premises such as a part-time teachers' shared lounge, school computer room, etc. Teaching from home with no commute is very appealing, so why would 31% of teachers take the time and trouble to physically go to school? We cannot be sure, but it may be necessary to go to the school to have access to the necessary equipment and speed of internet connection to conduct classes smoothly. It is also possible that, due to other people in the house and the disruption and noise that might cause, the environment was not suitable for teaching.

Question 15, for full-time teachers and question 16, for part-time teachers, asked the same question which is what costs teachers had incurred for equipment to enable or facilitate online teaching. Not everyone has the appropriate technology at home to support online teaching, especially when the transition was sudden and swift. For some their computers may be outdated, internet connection may not be adequate, or a dedicated desk/teaching space may need to be created.

For full-time teachers 28% spent no personal money compared with only 19% of part-time teachers. In addition, 44% used their school provided budget whereas no part-time teachers have access to this kind of budget which is a huge advantage that part-time teachers do not have. In the ¥1-¥10,000 range 7% of full-time teachers and 12% of part-time teachers spent this much. There was only a small difference of 5% between the two groups. However, as the monetary value increased, the difference between the two groups becomes more pronounced. The most common amount of money spent by part-time teachers was the ¥10,001-¥50,000 range where 37% of them spent this much compared with the 14% of full-time teachers. Only 2% of full-time teachers spent between ¥50,001 and ¥100,000 compared with 19 for part-time teachers. That's 9.5 times higher than the number for full-time teachers who spent the same amount. Finally, 12% of part-time teachers, more than double the number of full-time teachers, spent more than ¥100,000 (figure 11). That's a huge outlay when you consider that this money was not part of a planned budget.

From this comparison it can clearly be seen that the personal financial cost for teachers switching to online classes was much greater for part-time teachers than for full-time teachers. Considering that part-time teachers have less job security and their income is seasonal around the

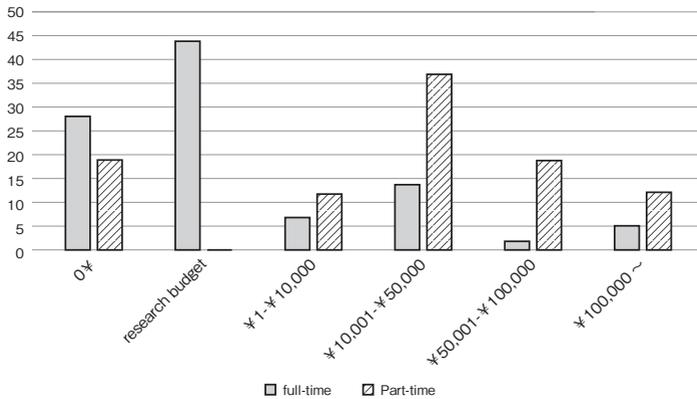


Figure 11. Comparison of financial outlay

school's classes, it must have been hard to bear this cost. However, without the necessary technology these teachers would not have been able to teach easily and may have lost some, or even all, of their income.

Question 17 looked at how teachers perceived their students' learning outcomes. All respondents answered this question. The greatest number, 46%, felt that their students' learning outcomes were worse than in traditional face-to-face classes, 39% felt their learning outcomes were equivalent and 15% felt they were better. There was almost an even split if we consider 'equivalent to' and 'better than' as one group, 54%, and a worse outcome at 46%. Only half of the respondents therefore believe that online classes are as effective as face-to-face classes.

Question 18 asked how easy it was to assign grades to students when doing online teaching. All 74 respondents answered this question. The majority of teachers found it equivalent to the traditional classroom setting. When this is combined with the 15% who found it easier, a total of 58% found grading to be at least no more difficult or complicated than normal. However, that still leaves a large portion, 42%, of teachers who found it more difficult to assign grades. This is no small number and perhaps along with the new styles of teaching, new strategies need to be developed for assessing students that are completely different from those used in the traditional classroom. While online teaching has provided a means to continue education through the pandemic there are still discrepancies in the quality of education between online and the traditional classroom

setting. In addition, at the present time, when face-to-face classes have tight restrictions on proximity, masking, and communication between students, the advantages of the traditional face-to-face setting are compromised.

Question 19 looked at the amount of time spent on lesson preparation and marking compared to face-to-face lessons in the classroom. All 74 respondents answered this question. An overwhelming majority, 85%, of teachers reported spending more time on out-of-classroom work than they did before online classes started. This means that almost everyone is having to work harder whilst also being isolated from colleagues and university support staff who would have been able to offer support and suggestions in the past. To help bridge this gap, online communities where teachers can share knowledge and ask questions have sprung up over the last two years and have been a great support for educators.

## Conclusion

In conclusion, it seems that even if we could go back to our old ways from before the pandemic, we won't. Now that teachers have been pushed into using online and digital components in their lessons and homework, most will continue with that in the future. This may change the role of the teacher from the traditional teacher to more of a facilitator as discussed by Hanson-Smith (Hanson-Smith et al., 2001). Publishers also had to step up during the pandemic to support teachers and will continue to provide and improve materials to accompany their texts. If they fail to provide this, they may well lose out to companies that do as many teachers said they would use publishers' materials moving forward. In addition, the financial burden for equipment that is unfairly placed on the shoulders of part-time teachers should be eased, perhaps with more computers available in teachers lounges, or laptops that could be loaned to teachers on a daily, (or even weekly or monthly) basis. It is also clear that if we are to continue with online learning or if schools decide to offer some online options, time needs to be invested to improve learner outcomes. This may also mean that the way we conduct classes online needs to be completely rethought. What worked face-to-face may not work for students online. We need to make sure that all forms of instruction give all students an equivalent level of education and skills when graduating. Education has moved on and we need to create new standards to match that.

## Appendix Survey Questions

1. What is your teaching situation?
  - a. I have a full time, permanent contract.
  - b. I have a full time, fixed term contract.
  - c. I work part-time at one or more colleges/universities.
  
2. Before the 2020 Coronavirus emergency measures for teaching, were you already using online work with your students?
  - a. No.
  - b. Yes. Publisher provided textbook accompaniment only.
  - c. Yes. Blog
  - d. Yes. I used a learning management system such as Moodle, Microsoft Teams, Google Classroom, etc.
  
3. When classes went online, were you free to choose the Learning Management System (LMS) you would use, or were you required to use a system dictated by the institution?
  - a. Yes, I could choose for myself.
  - b. No, I had to use the system my school chose.
  
4. If your answer to question 2 was 'No', are you satisfied with the system you were told to use?
  - a. Yes.
  - b. No.
  
5. What LMS do you use?
  - a. Google classroom
  - b. Microsoft teams
  - c. Moodle
  - d. Kahoot
  - e. Edmondo

- f. Canvas
- g. Blackboard
- h. Other (please state)

6. How were your classes delivered in the first semester of 2020?

- a. Face-to-face
- b. Online, realtime
- c. Online asynchronous
- d. Hybrid (some classes online and some face-to-face)
- e. Hyflex (simultaneously online and face-to-face)

7. How were your classes delivered in the second semester of 2020?

- a. Face-to-face
- b. Online, realtime
- c. Online asynchronous
- d. Hybrid (some classes online and some face-to-face)
- e. Hyflex (simultaneously online and face-to-face)

8. How were your classes delivered in the first semester of 2021?

- a. Face-to-face
- b. Online, realtime
- c. Online asynchronous
- d. Hybrid (some classes online and some face-to-face)
- e. Hyflex (simultaneously online and face-to-face)

9. How were your classes delivered in the second semester of 2021?

- a. Face-to-face
- b. Online, realtime
- c. Online asynchronous
- d. Hybrid (some classes online and some face-to-face)
- e. Hyflex (simultaneously online and face-to-face)

10. When Covid is over, would you prefer to conduct your classes online or face-to-face?

- a. Online.
  - b. Face-to-face.
  - c. Depends on the subject.
  - d. Hybrid.
  - e. In principle have classes face-to-face, but keep online ready for emergencies such as bad weather and earthquakes.
11. If you chose hybrid in question 9, what would be your ideal ratio, face-to-face-online?
- a. 20-80
  - b. 40-60
  - c. 50-50
  - d. 60-40
  - e. 80-20
12. When Covid is over, do you want to continue to keep an online/digital component in face-to-face classes?
- a. Yes (please answer question 13)
  - b. No (please skip question 13 and go directly to question 14)
13. If you answered yes to question 12, What form would the online component take?
- a. Making use of publisher materials.
  - b. Shared documents.
  - c. LMS.
  - d. Online homework submission.
  - e. Class blog.
14. Where do you conduct your online classes?
- a. Home.
  - b. Personal school office.
  - c. School premises (part-time teachers room/school computer room, etc.).
15. FULL-TIME TEACHERS ONLY. What has the change to online

classes cost you personally in regards to equipment (computer, monitor, microphone, earphones, desk chair, etc.)?

- a. ¥0
- b. ¥0, but I used the research budget provided by my institution.
- c. ¥1-¥10,000
- d. ¥10,001-¥50,000
- e. ¥50,001-¥100,000
- f. ¥100,001~

16. PART-TIME TEACHERS ONLY. What has the change to online classes cost you personally in regards to equipment (computer, monitor, microphone, earphones, desk chair, etc.)?

- a. ¥0
- b. ¥0, but I used the research budget provided by my institution.
- c. ¥1-¥10,000
- d. ¥10,001-¥50,000
- e. ¥50,001-¥100,000
- f. ¥100,001~

17. How do you feel about the learning outcomes for your students?

- a. They were equivalent to those of a traditional, face-to-face class.
- b. They were better than those of a traditional, face-to-face class.
- c. They were worse than those of a traditional, face-to-face class.

18. How easy was it to assign grades to your students?

- a. I found it easier to assign grades than in a traditional classroom situation.
- b. I found it equivalent to a traditional classroom situation.
- c. I found it more difficult than in a traditional classroom situation.

19. How much time did you spend on lesson preparation and marking compared to previous years' face-to-face lessons?

- a. I spent less time in preparation and marking.

- b. I spent an equivalent amount of time in preparation and marking.
- c. I spent more time in preparation and marking

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