The Use and Implementation of Google Classroom in a Japanese University

Robert Hulse

Abstract

The use of technology is forming an important role in education today. Content online can be accessed through fixed or mobile devices and this enhances student opportunities to learn. This study aims to access the use technology focusing on the use of Google Classroom in a Japanese University. Google classroom is a tool designed by Google to facilitate teacher student communication and create assignments. The aim of this study is to discuss and evaluate the products usability whilst discovering student's perceptions towards Google classroom. A survey was conducted of 70 female University students comprising of 21 questions to gauge their attitude and understanding of the application. The results showed the incorporation of this technology was generally well received by students. They believed the platform to be useful in assisting with submission of assignments and receiving class announcements. This study will give educators the opportunity for an insight into the use of Google Classroom and its limitations and benefits.

Introduction

The first hand-held calculators were introduced into classrooms in the 1970s (Waters, 2015), and since then the use of Information Communication Technology (ICT) has been a challenge for teachers to include in class though it also facilitated progress in schools and universities. Over the last forty years the use of computers, the Internet and, more recently, a whole host of portable devices for learning have become commonplace, completely transforming the way that teaching and learning take place. This was still viewed with considerable suspicion only twenty years ago − "any suggestion of adopting very innovative teaching techniques such as using ICT is... not desirable" (Cox, Preston, & Cox, 1999) − a tipping point has, arguably, now been reached. Today the majority of teachers and students expect to be using the connectivity, processing power, portability

and flexibility offered by a whole host of devices and learning platforms.

One such platform is Google Classroom (GC), a free web service developed by Google and launched in 2014 with the aim of making it easier for students and teachers to create, collect and grade assignments without the need for paper (Sucheth, 2018). While it has been received enthusiastically by many (Pappas, 2015), introducing this platform to students and teachers has not always been straightforward, computer illiteracy and cultural considerations being two of the obstacles that have been encountered along the way.

The aim of this piece of research, therefore, is to gauge the enthusiasm and student experience of GC among 70 students at a Japanese university who had enrolled on a course to improve their reading and writing of English while studying for their degree. It aims to discover what they liked and disliked about the platform and how any obstacles to its implementation might be overcome. First, a brief history of the use of ICT is presented, followed by a more detailed explanation of what GC is and how it is envisaged that it should be used. A brief summary of existing research into its use is then presented, followed by a description of the context in which this study is set. The methods used in this research are then explained, after which the results are presented in a series of tables and graphs. The work concludes with an analysis of the results obtained, the conclusions reached and a number of recommendations for future research and practice.

A Brief History of ICT in the Classroom

Technology of some kind has been enhancing learning for almost a hundred years. As early as 1932 in his book *Radio: The Assistant Teacher* (quoted in Cuban, 1986, p. 19) Darrow claimed for the radio something that it would be equally appropriate to say of the Internet a century later. He said that it could "bring the world to the classroom, …make universally available the services of the finest teachers, the inspiration of the greatest leaders and unfolding world events" (Cuban, 1986, p. 19) and described how a programme known as "The Little Red Schoolhouse" was broadcast weekly in 1924 to audiences all over the United States.

Educational television services in the UK were introduced in the late-1950s (Wikipedia, 2018) and reached peak popularity in the 1970s, when regular daytime broadcasts afforded teachers a wide range of resources, such as documentaries with which to illustrate their regular lessons, or

songs and stories for children to learn and discuss. These could be considered an early example of multimedia learning (Wikipedia, 2018).

The first computers that looked anything like the ones in use today were first seen in classrooms in 1977. However, the Apple II desktop computer which permitted students to learn Geography and solve Maths problems using computer games used floppy disks for viewing various types of content had no access to the Internet (OurICT, 2017). In 1981, in tandem with a television series on computer literacy, the BBC launched it Model A computer which boasted 16 kilobytes of memory and a processing speed of 2MHz (Centre for Computing History, 2015). This machine is viewed by some computer historians as having been a bridge between the early home computer and the omnipresent PC that emerged in the 1990s. Furthermore, it was adopted by over 60% of all primary schools and 85% of secondary schools and proved so popular that the accompanying TV series had to be delayed in order to allow for sufficient machines to be produced to meet demand (BBC News, 2018)

At around the same time IBM brought out the first personal computer but it was not until the mid-1990s that the Internet, which had only been used by academics, the military and NASA until then, was made available to the public in limited locations. Since then, and with the arrival of wireless technology and rapid improvements in connectivity since the early part of the 21st century, a whole host of portable learning devices have come to the fore as learning tools in the classroom.

In the last five years, interactive mobile apps for all kinds of tablets, phones and operating systems have become an important aspect of effective classroom learning. The wide availability of free and inexpensive apps also empower teachers to provide better learning opportunities for their pupils engage with people who learn in different ways. In today's classrooms, the dentists of tomorrow watch YouTube clips (Knösel, Jung, & Bleckmann, 2011) while Reception class children engage enthusiastically with an interactive whiteboard to develop basic literacy and numeracy skills – "[the] children in my reception class really enjoyed their sessions on the board and were very confident using it" (Kennewell & Morgan, 2003). Secondary school children submit their homework via online platforms such as Firefly, eSchools and Moodle (Cultus, 2016) and anyone with access to the Internet can engage with quality learning materials online via platforms such as www.futurelearn.com and share the experience with people on the other side of the world (Laurillard, Derrick, & Doel, 2016).

The scene is therefore set for "technology to create transformational learning tools" and use the "very latest devices and applications" (Bracey, 2005).

What is 'Google Classroom'?

Google describes its Classroom platform as –

"...a free web-based platform that integrates your G Suite for Education account with all your G Suite services, including Google Docs, Gmail, and Google Calendar. Classroom saves time and paper, and makes it easy to create classes, distribute assignments, communicate, and stay organized.

Teachers can quickly see who has or hasn't completed the work, and provide direct, real-time feedback and grades right in Classroom." (Google, 2018)

First, the platform allows teachers to communicate with their students by making announcements and assigning work. The platform then allows students to view with a single click the work which they have been allocated, to create a response in the browser-based word processor, Google Docs, and save their work using their cloud-based synchronisation and file storage service, Google Drive (Catapano, 2017). The document then becomes available in the student's own folder to whomever the student chooses to grant access. This allows, among other things, for the teacher to follow how the student is getting on with the assignment in real time and for him to offer feedback as the student completes the work. It does also allows other students to comment on the work of their classmates.

Another significant function of the platform is that it allows teachers to supervise, collect, grade, record and return students' work to them, a process which previously required a great deal of time and effort. Reminders can be issued via the platform as the deadline for an assignment approaches and the teacher can see at a glance who has submitted the work and who has failed to do so. The platform can also be used as a way for students and teachers to share resources and ideas with each other via online discussions, where links to resources that might be useful for the assignment in hand can also be posted.

Literature Review – Existing Research on 'Google Classroom'

There has been a lot been written about GC and how effective it is in allowing teachers and students to communicate and share classroom

documents and assignments; how it allows teachers to feed back to students on their work both when the work is in progress and once it is completed. One of the most popular things about the platform is that it is easy to use and, because it is delivered through the Chrome browser, it can be accessed from almost any mobile phone, computer or tablet that is connected to the Internet (Pappas, 2015). It also helps that, as soon as a teacher creates an assignment or announcement, students are able to access it immediately without the need for additional emails to alert students to the work.

GC's potential to create completely paper-free learning environments is also enormous (Pappas, 2015). This is seen a positive step towards that goal by Gyulay (Gyulay, 2016) and mean that students and teachers can avoid both the financial and environmental costs of printing, handing out and even losing work. As Pappas (2015) notes, "[there] might be a day when grading papers would be impossible to imagine; GC is certainly interested in getting there as soon as possible".

A further key benefit of the platform is that it gives teachers the ability to offer immediate feedback to their students as soon as they hand their assignments in, rather than having to wait for the next class to come around. The value of getting immediate feedback on one's work is noted by Nicol and Macfarlane-Dick (2006 p.206) who note that teachers must

> "ensure that feedback is provided in a timely manner (close to the act of learning production), that it focuses not just on strengths and weaknesses but also on offering corrective advice, that it directs students to higher order learning goals, and that it involves some praise alongside constructive criticism" (Nicol & Macfarlane-Dick, 2006)

Fresh comments and remarks have been known for many decades to have a bigger impact on learners minds than observations written days or even weeks down the line, when the opportunity to improve on the work and even the inclination to do so have long since passed (Hargreaves, McCallum, & Gipps, 1970).

Additionally Google is already well-established and its technological expertise proven, and there is plenty of evidence from reviews to show that it offers "a top rate education solution" (Finances Online, 2015).

Doubts, however, have also been raised about certain aspects of learning on digital platforms, generally. Some are concerned that the relatively small screens on which many students will choose to do their

work will make it difficult for them to handle substantial amounts of information and engage in learning at an advanced level (Lopez, Royo, Laborda, & Calvo, 2009). That is to say that, while mobile devices lend themselves well to learning 'by rote' – for example, developing one's vocabulary in a foreign language – they are less suited to putting across the complexities of study at undergraduate level and beyond and, to some people's minds, not conducive to writing extended assignments.

Concerns about how readily teachers and students, generally, will adopt learning platforms such as GC tend to fall into two categories. First there is the issue of not having the necessary expertise due to low levels of computer literacy. This is particularly true among the teaching staff but there are those within the student body who have not been exposed to some of the applications that they need to be familiar with in order to use digital learning platforms. Brown and Hocutt (Brown & Hocutt, 2015), for example, found that over 54% of the students they questioned as part of their work as recently as four years ago had no experience of using Google Drive.

Another obstacle is not having the necessary resources or the funds to acquire them. A fully digital classroom requires that every student have his or her own device and this entails a substantial financial outlay. Another very obvious resource that is needed for digital learning platforms to be successful is a strong, reliable connection to the Internet. As Park says "[all] of this stuff is dependent on the Internet" (2016) Such connections are becoming more affordable but there remains a "very real possibility that students and faculty will not be able to be online everywhere and at all times" (Vu, 2016, p.16), even beyond the short term.

As for more specific concerns about GC, users have commented that they find it frustrating to have to juggle several Google accounts and GC does not allow users to log in with using there University account unless an institution has purchased G-suite for learning. package. It also has many icons that only regular Google users will be familiar with. It is not easy for learners to share their work with their peers other than through the rather laborious process of 'owning' and then 'sharing' a document with multiple classmates; neither does the platform include a chat function. Pappas states that "[effective] education requires interaction and building relationships with learners, and online discussions are the best way to achieve this in a virtual environment" and that "[unfortunately], there is no way to have a live chat in Google Classroom; at least…not yet" (Pappas, 2015).

Using Google Classroom in a Japanese University

For the purposes of this study seventy students at an all-women's university in Fukuoka in Japan were asked about their experiences of using GC as part of their elective English reading and writing courses. At the beginning of the course, I explained how the GC platform worked by sending detailed instructions — in Japanese — about how to download GC and how to work with Google Docs and use cloud-based storage. There was no cost to the students, as the university pays for the subscription to G-Suite (the Goggle software), and all were able to sign up using their academic email addresses. To further support them in the use of GC, I provided the students with the necessary software before the first lesson and gave a demonstration as well as providing directions and links to the video-sharing website, YouTube where they could watch video clips which explained how they should go about submitting their work.

I mainly used GC for making class announcements and dealing with students' assignments. Assignments were posted on the site using a Google document, a personal copy of which was made available to all students. Deadlines were made clear and were backed up with emails as they got nearer. Students then worked on the assignments and, once they had completed them, they submitted them via GC. All the time one was able to keep track of the assignments and could immediately see whose work was late or missing. Then I was able to mark the work, enter comments on the students' individual documents and upload their scores to a Google sheet, which in turn recorded their grades in a single place.

Methodology

To find out students' opinions, a questionnaire was created and made available using www.surveymonkey.com to seventy students. The random sample included both students who were taking English as their degree and those who had elected to improve their reading and writing skills. Survey Monkey was chosen as an appropriate platform for the questionnaire for several reasons. First, it allowed for the data to be collected without the respondent having to be physically present. There were also, therefore, no restrictions on the time of day when they chose to engage with the questionnaire.

Results

The results of the questionnaire are presented below. What follows is a brief description of the key findings under nine numbered headings followed by more salient comments that students made to elaborate on their answers. These appear in English. The original Japanese comments are in the footnotesTable 1: The vast majority of the students (95.7%) completed their assignments on their smartphones. a. Everything was on the cell phone.[1]

Table 1:Which devices students used to complete Google classroom assignments
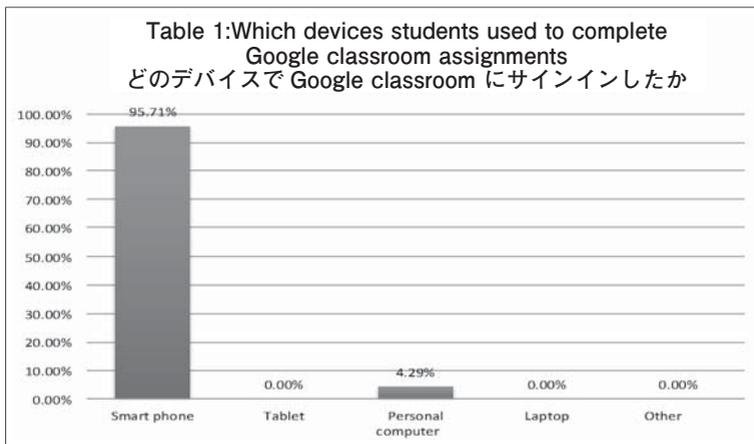どのデバイスで Google classroom にサインインしたか

Table 2: Most had little difficulty installing the relevant app on their smartphone and 'agreed' (50.0%) or 'strongly agreed' (4.3%) that they were confident users within two weeks.

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[1] 携帯上でできたのが良かった

Table 2: I quickly felt confident using Google Classroom
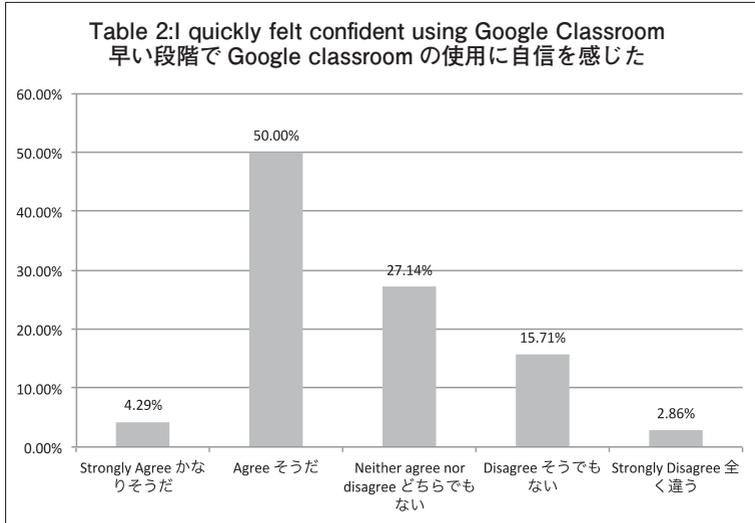早い段階で Google classroom の使用に自信を感じた

Table 3: Very few students (18.6%) had used Google Documents or Google Drive before starting on the course; neither had very many more (20.0%) used Google Classroom.

    a. I'm not good at using electronic devices so it was difficult.[2]

    b. I'm not good at using the internet or a computer and so on.[3]

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[2] 機械を使うのが苦手だから難しかった。

[3] 私はインターネットやコンピュータなどを使うのが得意ではありません。

Table 3:Had students used Google documents/
Google classroom/Google drive before taking this English course
このコースの開始以前に、Google documents/Google classroom/
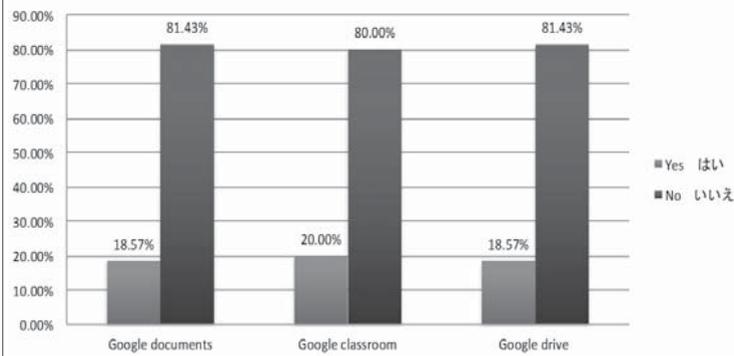Google drive を使用したことがある

Table 4: Most 'strongly agreed' (21.5%) or 'agreed' (45.7%) that GC was a useful platform for making announcements about class assignments. Very similar numbers (21.7%, 50.7%) felt the same way about accessing the materials and submitting their work.

    c. I could remember easily what homework was needed as could check Google classroom easily.[4]

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[4] 課題など忘れてしまったら、そこを見ると思い出せるから。

Table 4:Google classroom was useful for announcements about class assignments.
Google classroom は課題のアナウンスについて便利だった

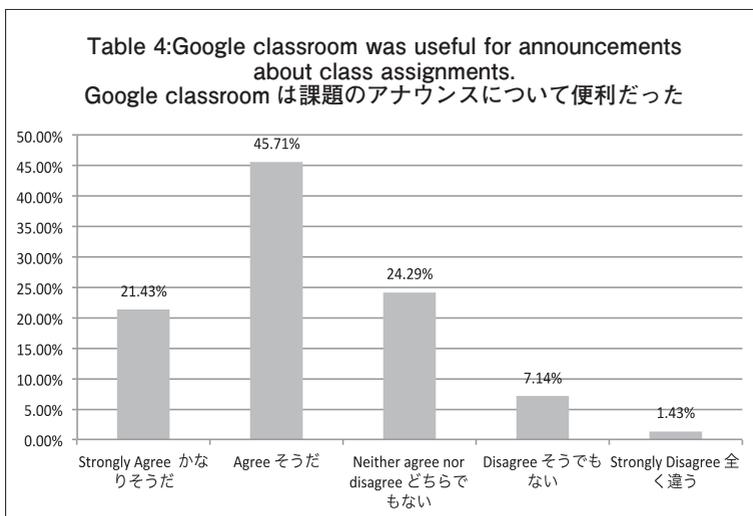| Response	Percentage
Strongly Agree かなりそうだ	21.43%
Agree そうだ	45.71%
Neither agree nor disagree どちらでもない	24.29%
Disagree そうでもない	7.14%
Strongly Disagree 全く違う	1.43%

Table 5: Nearly all (92.8%) were positive about the reminders that were issued via their smartphones, and almost 70% (68.6%) agreed to some extent that using GC had made completing assignments easier. The reminder sent by Google classroom by email was helpful.[5]

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[5]　通知が来るから

Table 5:Google Classroom enhanced my efficiency and made doing the homework easier
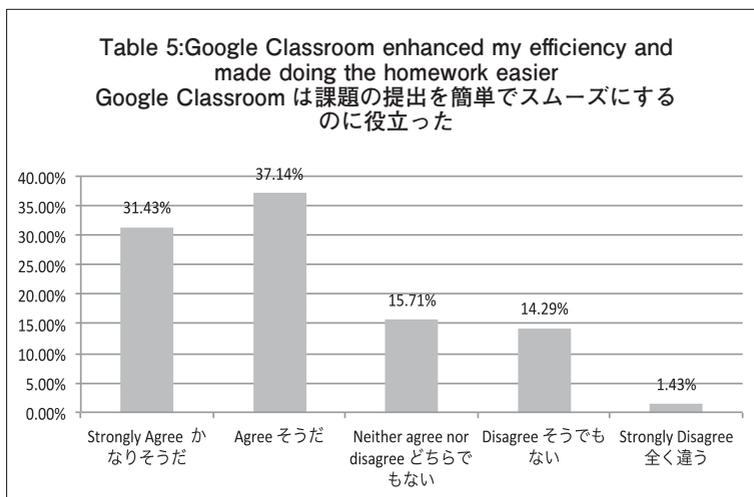Google Classroom は課題の提出を簡単でスムーズにするのに役立った

Table 6: Regarding using GC instead of pen and paper to complete assignments, 61.4% remained unpersuaded and indicated that they would not choose to use the platform if they had the choice, but they were still positive about its potential.

    d. I prefer to submit homework via phone as I don't have to submit homework using paper.[6]

    e. It was not on paper so I did not lose the sheet.[7]

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[6] 紙が必要ないから　時間があるときに課題をやって、すぐに出せるという点

[7] プリントじゃないので無くすことがなくて安心でした。

Table 6:I prefer to use Google classroom to do assignments rather than using pen and paper Google Classroom を使用して課題を行う方が ペンと紙を使うよりも望ましい

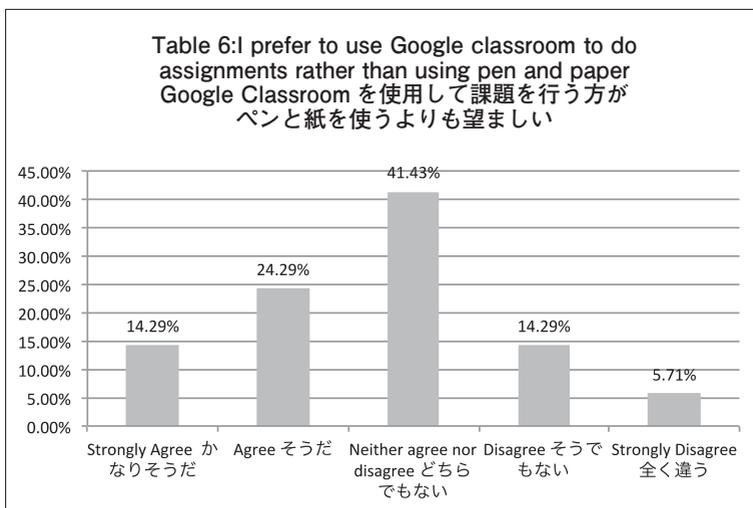| Strongly Agree かなりそうだ	Agree そうだ	Neither agree nor disagree どちらでもない	Disagree そうでもない	Strongly Disagree 全く違う
14.29%	24.29%	41.43%	14.29%	5.71%

Table 7: Most were ambivalent about having their grades sent to them via GC, with only 15.71% being strongly in favour and most (37.1%) choosing to 'neither agree nor disagree'.

Table 7:I liked having my grades sent to me through Google classroom Google Classroom を通じて成績を受け取る方が好きだ

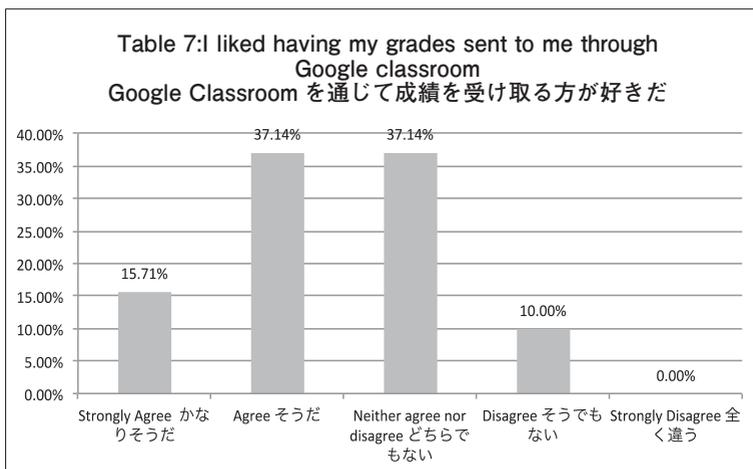| Strongly Agree かなりそうだ	Agree そうだ	Neither agree nor disagree どちらでもない	Disagree そうでもない	Strongly Disagree 全く違う
15.71%	37.14%	37.14%	10.00%	0.00%

Table 8: The comments, however, were more positively received with the

majority (74.3%) either 'strongly agreeing' or 'agreeing' that the 'comments written on my Google document assignment were useful'.

Table 8:The comments written on my Google document assignment were useful for my study
Google document の課題に記載してあるコメントは学習に役に立った

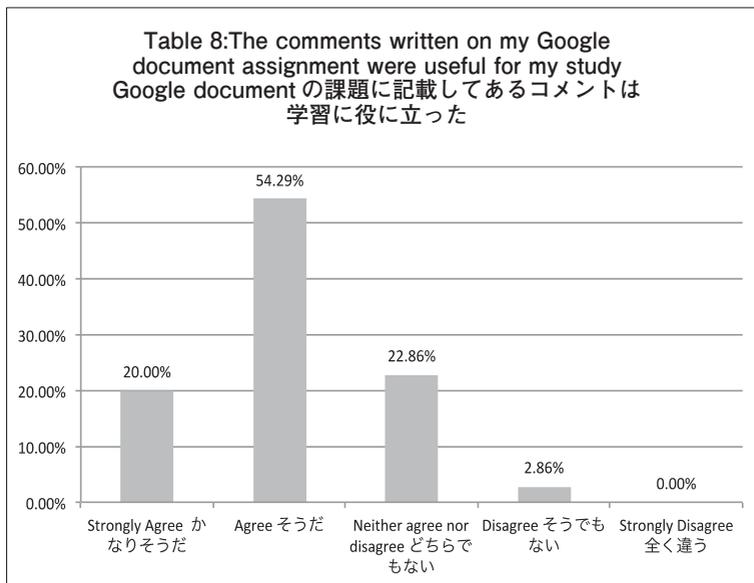| Response	Percentage
Strongly Agree かなりそうだ	20.00%
Agree そうだ	54.29%
Neither agree nor disagree どちらでもない	22.86%
Disagree そうでもない	2.86%
Strongly Disagree 全く違う	0.00%

Table 9: The most controversial aspect of using GC proved to be students' general unwillingness to post comments about another student's work. Only 15.7% were prepared to do this, as opposed to 57.1%, who were not, although there were some very different reasons for this as shown in the comments section below. Similar numbers expressed concern about receiving other students' comments on their work via GC.

f. If other students have advice, I want to hear it but I don't want them looking at my assignments.[8]

g. I don't want to give my opinion to others.[9]

h. Dong my homework takes up a lot of my time so don't want to do spend time looking at other students work.[10]
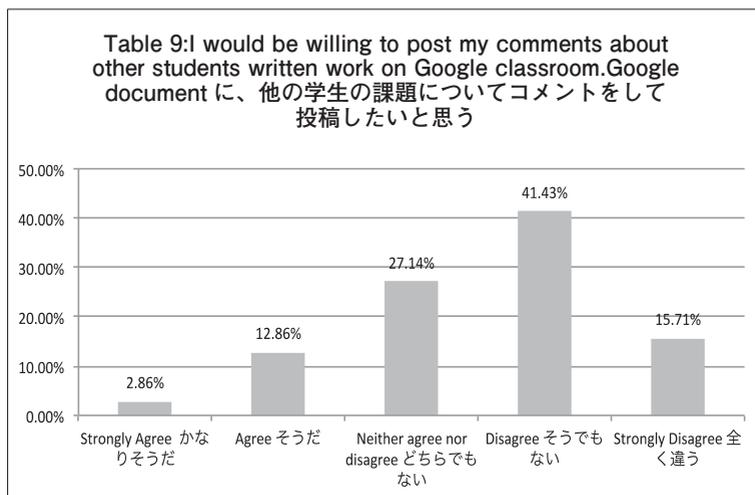
i. I would feel embarrassed if someone read my work.[11]

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[8] アドバイスなどがあればしてほしいが、無理にはしてほしいと思わない。

[9] 自分はしたくないから。

[10] 課題をするので手いっぱいだから、人にコメントしてあげる時間と読む時間がないと思う

[11] みられるのが恥ずかしい

j. I don't think any of my classmates would like to give feedback on other students' work.[12]

Table 9:I would be willing to post my comments about other students written work on Google classroom.Google document に、他の学生の課題についてコメントをして投稿したいと思う

Analysis

This research has uncovered a number of things about the use and implementation of GC in Higher Education. First, it has proved how popular smartphones are for the purposes of learning (1). This shows that, despite teachers' reservations about their use, such devices have become a way of life. Even as early as 2004, over 85 million mobile phone contracts had been signed in Japan (Shudong & Higgins, 2006) showing that two-thirds of the population owned such a device. The research therefore suggests that, in order to reap the benefits of promoting their use in the classroom, teachers will also have to tolerate some use that does not relate to the task in hand. According to According to Turkle, (2012, cited in Synott, 2013) while some students used their devices to look up information that was relevant to the lesson, as cameras to take pictures of the screen or as calculators, many used their devices during class time for purposes unrelated to learning. Tindell and Bohlander (Tindell & Bohlander, 2012)

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[12] みんなコメントしないと思うから

also found that the majority of students texted others during class time and some even used their devices for this purpose during examinations. This is a challenge to overcome as, in some learning environments, mobile phones are banned altogether, even taken from students before they enter the classroom (Hymas, 2018). Making the transition between one place where they are, effectively, banned to another where they are essential raises certain questions, something which is discussed by Okabe and others in the book *Personal, Portable, Pedestrian* (Okabe & Matsuda, 2005) and considered further in the closing section of this dissertation.

This research showed that students encounter few problems accessing the GC platform or using its functions. Most self-reported as confident users within the space of two weeks (2) and this was despite the fact that most had not used GC or its component parts before (3) (4) (5). This suggests that GC is, by and large, a user-friendly platform with which it is easy for students to become familiar in a short space of time.

More concerning however, especially for those who aspire to paper-free classrooms, is the finding that many would still choose to use a pen and paper for their work rather than work in an exclusively digital environment (6). Reluctance to "making the paperless leap" is well documented among teachers (Pettibone & Bartels, 2012, p. 179) and can be attributed to a number of factors. First, there is the unfamiliarity of it all. Pettibone and Bartels say, for example, that "[we] both liked the way we did things, using paper to distribute reading, assignments sheets, grading rubrics, quizzes and tests and other teaching necessities" and that "old habits die hard" (ibid. p.178).

Then there are concerns about what happens when technical problem halt a lesson or when teachers lack the skills to operate the tools they are provided with effectively. In a paper titled Computer Technology Integration and Student Learning: Barriers and Promise (Keengwe, Onchwari, & Wachira, 2008) showed that the appropriate integration of computer tools amounts to a major change in people's lives and that there were significant barriers to be overcome in the pursuit of computer technology integration (Keengwe, Onchwari, & Wachira, 2008). A further issue that was foreseen as early as 2000 by Becker was the emergence of a "digital divide between those…who are benefiting and those who are being left behind" (Becker, 2000, p. 48) quoted differences in access to home computers, showing that only 22% of children in families with an annual income of less than $20,000 had access while 91% of those whose families

earned over $75,000 did so. Latterly, this has become less an issue with the latest figures showing that, in the UK for example, the percentage of people who had never used the Internet had fallen to 8.4% (Office for National Statistics, 2018) and those for Japan revealing that the average 25-34 year-old male spends 21.8 hours on line every week (Statista, 2019)

One significant barrier to the effective implementation of a digital platform such as GC, however, is seen in students' reluctance to comment on others' work or have others comment on the work of which they had submitted (9, especially comments 9d, 9e). In fact, only 1 in every 7 students was comfortable with this practice (15.7%). While most were comfortable with the teacher making comments − Feldman clarifies this by explaining that, in Japan, there is "widespread deference to people in positions of authority and power" (Feldman, 1985, p. 23) - this was not the case when it came to their peers for reasons for which are also cultural.

By way of explaining this, it is significant to note that Heine et al p.71 observed that "on average, Japanese [people] exhibit less self-enhancement than North Americans " Heine, Takata, & Lehman, 2000, p.71) and that, in many Asian cultures, including Japan, humility or modesty prevents people from giving sharing their opinions openly, especially when it comes to criticising the work of others or implying that one's own work is better than someone else's (Heine, Takata, & Lehman, 2000). Humility is a quality that is promoted in Japanese culture, though it is unclear whether it is acceptable to believe that one is superior to someone just as long as nothing is actually said to that effect (ibid., p. 72). Matsumoto explains that deference in Japanese society is usually expressed by the speaker lowering their own status while raising that of the addressee (Matsumoto, 1988). This suggests that the kind of peer assessment that is made possible by GC when the students know whose work they are looking at would face issues in Japanese universities because of the influence of culture: students would be inclined to aggrandise the standard of their classmates' work while denigrating that of their own.

Conclusions

A number of conclusions can be drawn from this research, some of which are encouraging and others that present more of a challenge.

On a positive note, as a platform for communicating and for sharing information, GC was generally well received, even by those who were

using it for the first time. Despite the fact that there are several icons that are peculiar to Google, even the students who had no previous experience of GC, or indeed of digital learning environments at all, had little difficulty using the suite of tools. This shows that there are no significant problems so far as the practicalities of using the platform are concerned, so long as a fast and reliable internet connection can be secured. It is also evident from the results of the questionnaire and from the students' comments that they appreciated receiving their comments and grades and that the reminders that they received about impending deadlines helped them with their organisation.

However, there is still some disagreement about how the devices that make it possible to access platforms such as GC should be viewed in the classroom. It can be argued that they enhance learning and that no restrictions should be placed upon their use. It could be claimed that they are a distraction and that they are not up to the task of facilitating learning at the university level. There also remain problems providing access for all in certain learning environments. The drive towards a paperless classroom necessitates that every student has access to their own device and financial pressures can sometimes prevent this, as can ongoing problems with hardware and issues of connectivity.

The main obstacle to getting university students in Japan to use GC effectively, however, appears from this research to be a cultural one. It revolves around students' unwillingness to take full advantage of the potential that GC offers for collaboration and peer assessment. This is because of deeply entrenched beliefs about how inappropriate it is for Japanese students to criticise their peers and question their teachers. Interestingly, therefore, the main obstacle to the use and implementation of a digital platform such as GC is not a technological one, nor is it refusal to accept technological progress. Rather it is something that has been prevalent in Japanese society from long before the first pocket calculator ever appeared in the classroom, that is people's inclination towards self-abasement and their unwillingness to be objective about their own achievements and those of other people.

Evaluation and possibilities for further research

This work could be developed by redressing the balance between quantitative and qualitative analysis. As the amount of time allowed for the study was limited, questionnaires that consisted almost entirely of closed

questions proved to be the easiest way to gather substantial amounts of data from a reasonable number of people. Respondents were offered the opportunity to expand on their choices in a section that accepted free text at the end of the survey but much of what was written was a restatement of their chosen answer rather than an explanation of *why* they selected that particular option.

A small focus group that got together a selection of those who were uncomfortable with having their work scrutinised by their peers would also move the research forward as it might throw some light on why they were not prepared to do this and suggest some solutions to this problem. It would also be appropriate to conduct short interviews with a sample of those who were surveyed in order to give them the opportunity to talk freely about their experiences of using GC in a way that was not so heavily influenced by the researcher. This would generate some qualitative data which could be used to confirm or refute the findings of the questionnaire.

It is also significant that this research relates only to using GC for one very specific kind of learning, that is becoming more proficient in a foreign language. Mobile devices have already been proven to be effective for this purpose (Kukulska-Hume, 2009) but there is less literature available on whether the devices and the platforms that run on them are suited to other types of learning, especially across the Arts and Humanities.

As for taking this research in other directions, it would be interesting to discover whether male students would show the same degree of deference towards their peers were a similar piece of research to be carried out in a mixed university. It would also be worth finding out whether more students would offer and receive comments on their work from their classmates if those comments could be submitted anonymously in some way. The students could still reap the benefits of constructive criticism without the awkwardness of knowing the identity of the commentator. Running the survey after having worked with GC with a group of students in another cultural setting would also be informative, say for example in the United States or in Europe. This would confirm whether or not the problems that related to commenting on others' work were, in fact, a matter of Japanese culture and tradition.

The age of the paperless classroom is not far way and Google Classroom is a platform that will hasten its arrival. GC It is founded on a well-established digital platform of connectivity and reliability. Whether or not it succeeds in fulfilling its potential, however, depends on whether both

teachers and students can be persuaded to accept that everyone in the classroom has an equally valuable contribution to make to the progress of all and to make that contribution with confidence

References

BBC News. (2018, June 27). *BBC releases computer history archive*. Retrieved from BBC News: https://www.bbc.co.uk/news/technology-44628869

Becker, H. (2000). Who's Wired and Who's Not: Children's Acces to and Use of Computer Technology. *The Future of Children*, 44-75.

Bracey, B. (2005). Introduction: Uniting People Techology and Powerful Ideas for Learning. In B. Bracey, & T. Culver, *Harnessing the Potential of ICT for Education: A multistakeholder approach* (pp. 1-6). New York: United Nations ICT Task Force.

Brown, M., & Hocutt, D. (2015). Learning to Use, Useful for Learning: A Usability Study of Google Apps for Education. *Journal of Usability Studies*, 160-181.

Catapano, J. (2017, February 11). *Technology in the Classroom: A Look at Google Classroom*. Retrieved from www.teachhub.com: http://www.teachhub.com/technology-classroom-look-google-classroom

Centre for Computing History. (2015, August 13). *Acorn BBC Micro Model A*. Retrieved from Centre for Computing History: http://www.computinghistory.org.uk/det/3041/Acorn-BBC-Micro-Model-A/

Cox, M., Preston, C., & Cox, C. (1999, September 2-5). *What Factors Support or Prevent Teachers from Using ICT in their Classrooms?* Retrieved from www.leeds.ac.uk: http://www.leeds.ac.uk/educol/documents/00001304.htm

Cuban, L. (1986). *Teachers and Machines: The Classroom Use of Technology Since 1920*. New York: Teachers College Press.

Cultus. (2016, May 7). *Top 5 platforms to set students' homework online*. Retrieved from www.onlinecultus.com: https://www.onlinecultus.com/top-5-platforms-to-set-students-homework-online/

Feldman, E. (1985). Medical Ethics the Japanese Way. *The Hastings Center Report*, 21-24.

Finances Online. (2015, October 15). *Google Classroom Review*. Retrieved from Finances Online: Reviews for Business: https://reviews.financesonline.com/p/google-classroom/

Gedye, L. (2016, May 27). Paperless classroom hasn't taken off yet. *Mail and Guardian*, pp. 34-35.

Gyulay, P. (2016). Paper privilege and the imperative of a less-paper classroom. *ELT Journal*, 100-102.

Hargreaves, E., McCallum, B., & Gipps, C. (1970). Teacher feedback strategies in primary classrooms – new evidence. In S. Askew, *Feedback for Learning* (p. 192). London: Routledge.

Heggart, K., & Yoo, J. (2018). Getting the Most from Google Classroom: A Pedagogical Framework for Tertiary Educators. *Australian Journal of Teacher Education*,

140-153.

Heine, S., Takata, T., & Lehman, D. (2000). Beyond Self-Presentation: Evidence for Self-Criticism among the Japanese. *Personality and Social Psychology Bulletin*, 71-78.

Hymas, C. (2018, June 24). *Secondary Schools are introducing strict new bans on mobile phones*. Retrieved from www.telegraph.co.uk: https://www.telegraph.co.uk/news / 2018 / 06 / 24 / secondary-schools-introducing-strict-new-bans-mobile-phones/

Ide , S. (1991). *How and why do women speak more politely in Japanese?* In S. Ide & N. H
McGloin (eds.), *Aspects of Japanese women's language*, 63-79. Tokyo: Kurosio.

Ide, S. (1990). How and why do women speak more politely in Japanese. *Aspects of Japanese women's language*, 63-79.

Keengwe, J., Onchwari, G., & Wachira, P. (2008). Computer Technology Integration and Student Learning: Barriers and Promise. *Journal of Science Education and Technology*, 560-565.

Kennewell, S., & Morgan, A. (2003). *Student teachers' experiences and attitudes towards using interactive whiteboards in the teaching and learning of young children.* Canberra: Australian Computer Society, Inc. Retrieved from https://www.researchgate.net/publication/228808535_Student_teachers'_experiences_and_attitudes _ towards _ using _ interactive _ whiteboards _ in _ the _ teaching _ and _ learning_of_young_children

Knösel, M., Jung, K., & Bleckmann, A. (2011, December). YouTube, Dentistry, and Dental Education. *Journal of Dental Education*, 1558-1568.

Kukulska-Hulme, A., & Sharples, M. (2009). *Mobile and contextual learning.* ALT-J Association for Learning Technology Journal, 17(3), 159-160.

Laurillard, D., Derrick, J., & Doel, M. (2016). *Building digital skills in the FE Sector.* London: Government Office for Science.

Lopez, J., Royo, T., Laborda, J., & Calvo, F. (2009, January 2). Methods of adapting digital content for the learning process via. *Procedia Social and Behavioural Sciences*, pp. 2673-2677.

Matsumoto, Y. (1988). Reexamination of the universality of face: Politeness phenomena in Japanese. *Journal of Pragmatics*, 403-426.

Nicol, D., & Macfarlane-Dick, D. (2006). Formative assessment and selfregulated learning: a model and seven principles of good feedback practice. *Studies in Higher Education*, 199-218.

Office for National Statistics. (2018, May 31). *Internet users, UK: 2018.* Retrieved from Office for National Statistics: https://www.ons.gov.uk/businessindustryandtrade/itandinternetindustry/bulletins/internetusers/2018

Okabe, I., & Matsuda, M. (2005). *Personal, portable, pedestrian: Mobile phones in Japanese life.* Cambridge, MA: MIT Press.

OurICT. (2017, June 7). *The Ultimate History of Technology in Education.* Retrieved from www.ourict.co.uk: http://www.ourict.co.uk/technology-education-history/

Pappas, C. (2015, August 20). *Google Classroom Review: Pros And Cons Of Using Google Classroom In eLearning.* Retrieved from www.elearningindustry.com: https://elearningindustry.com/google-classroom-review-pros-and-cons-of-using-google-classroom-in-elearning

Pettibone, J., & Bartels, K. (2012). The Paperless Classroom. In K. Bartels, & K. Parker, *Teaching Sustainability / Teaching Sustainably* (pp. 178-183). Sterling, Virginia: Stylus Publishing LLC.

Shudong, W., & Higgins, M. (2006). Limitations of Mobile Phone Learning. *The JALT CALL Journal*, 3-14.

Statista. (2019, January 10). *Average online hours of internet users in Japan as of May 2015, by gender and age group*. Retrieved from Statista: The Statistics Portal: https://www.statista.com/statistics/326610/japan-monthly-online-hours-per-user-by-age-and-gender/

Sucheth. (2018, July 18). *Google Classroom: Everything you need to know*. Retrieved from www.hiverhq.com: https://hiverhq.com/blog/google-classroom-basics/

Synott, K. (2013). Smartphones in the Classroom: University Faculty Members' Experiences. *Journal of Higher Education Management*, 119-130.

Tindell, D., & Bohlander, R. (2012). The use and abuse of cell phones and text messaging in the classroom: a survey of college students. *College Teaching*, 1-9.

Ventayen, R., Estira, K., De Guzman, M., Cabaluna, C., & Espinosa, N. (2018). Usability Evaluation of Google Classroom: Basis for Adaptation of GSuite E-Learning Platform. *Asia Pacific Journal of Education, Arts and Sciences*, 47-51.

Vu, J. (2016, April). Congregating in the Church of Google: Why Teachers are Integrating Google Apps into Their Classrooms to Promote Student Collaboration. Toronto, Ontario, Canada: Unpublished. Retrieved January 15, 2010, from https://tspace.library.utoronto.ca/bitstream/1807/74892/1/Vu_John_201606_MT_MTRP.pdf

Waters, A. (2015, March 12). *A Brief History of Calculators in the Classroom*. Retrieved from www.hackeducation.com: http://hackeducation.com/2015/03/12/calculators

Wikipedia. (2018, December 23). *ITV Schools*. Retrieved from Wikipedia: https://en.wikipedia.org/wiki/ITV_School

Appendix A: The Use and Implementation of Google Classroom in a Japanese University questionnaire.

The use and implementation of Google classroom in a Japanese University

This is a questionnaire on Google Classroom. The results will be used for my own personal research and to help others in the future. I would be grateful if you could answer the questions and give comments about your experience studying English with the use of smart phone this year.

これは英語の授業におけるGoogle Classroomのアンケートです。このアンケート結果は私の研究に使用されます。今年度の英語の授業において、あなたのスマートフォン利用について答えていただきたいと思います。ご協力、よろしくお願いします。アンケートへのご協力に感謝いたします。ロバート

1. I agree to take part in the class questionnaire and the use of the findings to be published. *Your name or any private details will be kept confidential.
私は授業でアンケートに回答すること、またその結果を学術研究に使用されることに同意します。（あなたの名前や個人情報は特定されません）

○ Yes　はい

2. I did my Google classroom assignments on m
Google classroomのサインインに使用した機器は以下のどれですか？（複数選択可）

○ Smart phone　スマートフォン

○ Tablet　タブレット

○ Personal computer　パソコン

○ Other　その他

3. The instructions sent to me in Japanese prior to the course that
showed me how to install Google classroom/Google drive/
Documents were helpful for me:
説明書はコース開始前に、Google classroom/Google drive/ Documentsのインストール方法を日本語で示しましたか？

○ Strongly Agree かなりそうだ   ○ Disagree そうでもない

○ Agree そうだ   ○ Strongly Disagree 全く違う

○ Neither agree nor disagree どちらでもない

4. I felt confident using Google classroom after the first two weeks
(Or I quickly felt confident using Google Classroom)

初めの２週間でGoogle classroomの使用に自信を持った。（またはもっと早い段階でGoogle classroomの使用に自信を感じた。）

○ Strongly Agree かなりそうだ   ○ Disagree そうでもない

○ Agree そうだ   ○ Strongly Disagree 全く違う

○ Neither agree nor disagree どちらでもない

If you Disagree or Strongly Disagree please tell me why you think so:
"かなりそうだ"または"全く違う"を選んだ場合、その理由は何ですか？

[   ]

5. Before this course, I had used Google documents
このコースの開始以前に、Google documentsを使用したことがある。

○ Yes はい

○ No いいえ

6. Before this course, I had used Google Classroom
このコースの開始以前に、Google Classroom を使用したことがある。

○ Yes はい

○ No いいえ

7. Before this course, I had used Google drive
このコースの開始以前に、Google drive を使用したことがある。

○ Yes はい

○ No いいえ

8. Google classroom was useful for announcements about class assignments
Google classroomは課題のアナウンスについて便利だった。

○ Strongly Agree かなりそうだ   ○ Disagree そうでもない

○ Agree そうだ   ○ Strongly Disagree 全く違う

○ Neither agree nor disagree どちらでもない

If you Strongly agree or agree please tell me why you think so:
"かなりそうだ"または"そうだ"を選んだ場合、なぜそう思ったのですか？

[   ]

9. Google Classroom was easy to access the materials and submit my work.
Google Classroomは教材へのアクセスや課題の提出が簡単だった

○ Strongly Agree かなりそうだ
○ Agree そうだ
○ Neither agree nor disagree どちらでもない

○ Disagree そうでもない
○ Strongly Disagree 全く違う

10. The reminders sent to my cell phone/computer helped me to submit my work on time:
期限内に課題を提出できるように、携帯電話やパソコンにリマインダーの通知が届いた。

○ Strongly Agree かなりそうだ
○ Agree そうだ
○ Neither agree nor disagree どちらでもない

○ Disagree そうでもない
○ Strongly Disagree 全く違う

11. Google Classroom enhanced my efficiency and made doing the homework easier:
Google Classroomは課題の提出を簡単でスムーズにするのに役立った。

○ Strongly Agree かなりそうだ
○ Agree そうだ
○ Neither agree nor disagree どちらでもない

○ Disagree そうでもない
○ Strongly Disagree 全く違う

How do believe it helped?
どのように役に立ちましたか？

12. Google classroom was useful for Class updates and news about the course, for example schedule changes and general announcements
Google Classroomはクラスについてのアップデートやお知らせ（スケジュールの変更や基本的なお知らせ）について有効だった。

○ Strongly Agree かなりそうだ
○ Agree そうだ
○ Neither agree nor disagree どちらでもない

○ Disagree そうでもない
○ Strongly Disagree 全く違う

13. I prefer to use Google classroom to do assignments rather than using pen and paper
Google Classroomを使用して課題を行う方がペンと紙を使うよりも望ましい。

◯ Strongly Agree かなりそうだ　　　　　　　　　◯ Disagree そうでもない

◯ Agree そうだ　　　　　　　　　　　　　　　　　◯ Strongly Disagree 全く違う

◯ Neither agree nor disagree どちらでもない

If you answered Srongly Agree Agree why?　"かなりそうだ"または"そうだ"を選んだ場合、なぜそう思ったのですか？

[   ]

14. I liked having my grades sent to me through Google classroom:
Google Classroomを通じて成績を受け取る方が好きだ。

◯ Strongly Agree かなりそうだ　　　　　　　　　◯ Disagree そうでもない

◯ Agree そうだ　　　　　　　　　　　　　　　　　◯ Strongly Disagree 全く違う

◯ Neither agree nor disagree どちらでもない

15. The comments written on my Google document assignment were useful for my study
Google documentの課題に記載してあるコメントは学習に役に立った。

◯ Strongly Agree かなりそうだ　　　　　　　　　◯ Disagree そうでもない

◯ Agree そうだ　　　　　　　　　　　　　　　　　◯ Strongly Disagree 全く違う

◯ Neither agree nor disagree どちらでもない

16. I would be willing to post my comments about other students
written work on Google classroom.
Google documentに、他の学生の課題についてコメントをして投稿したいと思う。

◯ Strongly Agree かなりそうだ　　　　　　　　　◯ Disagree そうでもない

◯ Agree そうだ　　　　　　　　　　　　　　　　　◯ Strongly Disagree 全く違う

◯ Neither agree nor disagree どちらでもない

◯ Why or why not?
　　なぜそう思うのですか？

[   ]

17. I would be willing for other students to comment on my work on Google classroom.
他の学生が自分の課題についてGoogle document上でコメントしてほしい。

○ Strongly Agree かなりそうだ   ○ Disagree そうでもない

○ Agree そうだ   ○ Strongly Disagree 全く違う

○ Neither agree nor disagree どちらでもない

Why or why not? なぜそう思うのですか？

[   ]

18. I would like to use Google Classroom again in the future。
Google Classroomを今後も使いたいと思う。

○ Strongly Agree かなりそうだ   ○ Disagree そうでもない

○ Agree そうだ   ○ Strongly Disagree 全く違う

○ Neither agree nor disagree どちらでもない

19. I was satisfied with Google classroom
Google classroomに満足している。

○ Strongly Agree かなりそうだ   ○ Disagree そうでもない

○ Agree そうだ   ○ Strongly Disagree 全く違う

○ Neither agree nor disagree どちらでもない

○ Why or why not? なぜそう思うのですか？

[   ]

20. Was there anything you did not like about Google classroom?
Google classroomについて、嫌いなことはありましたか？

○ Yes there was some thing i did not like はい、いくつか嫌いなことがありました。

○ No there was not anything i disliked いいえ、嫌いなことはありませんでした。

○ If you answered yes what?
はい、と答えた場合、それは何ですか？

[   ]

21. Final question! Any comments about Google classroom?
最後の質問です。Google classroomになにかコメントはありますか？

[   ]

Appendix B: Comments from the survey

<u>Student comments from the survey</u>

Question 4. I felt confident using Google classroom after the first two weeks (Or I quickly felt confident using Google Classroom)初めの2週間でGoogle classroomの使用に自信を持った。 (またはもっと早い段階でGoogle classroomの使用に自信を感じた。)

課題の提出方法が少し複雑だったから

It was complicated how to submit homework

機械を使うのが苦手だから難しかった。

I'm not good at using electronic devices so it was difficult.

友達がGoogle classroomの使い方を教えてくれた。

My friend showed me how to use Google classroom.

インターネットとパソコンを使うのが苦手だから。

I'm not good at using an internet and a computer so on.

Question 8. Google classroom was useful for announcements about class assignmentsGoogle classroom は課題のアナウンスについて便利だった

提出期限を忘れないから。

I did not forget the deadline of work as the app reminded

課題を思い出すことができたから。

It reminded me about the homework

日本語表記もあったから。

The instructions that were given were in Japanese

宿題を思い出せるから。

Because I can remember my homework

見やすいから

I could understand Google classroom as it was simple

わかりやすい

I could understand it easily

課題など忘れてしまったら、そこを見ると思い出せるから。

I could remember easily what homework was needed as could check Google classroom easily.

このアプリケーションがお知らせを送ってくれる。

The app send me a alert.

いつでも宿題ができる。

I could do homework wherever.

手軽に課題確認が出来たから

I could check homework information easily

通知が来るから

The reminder sent by Google classroom by email was helpful

担当教員が課題について何度もアナウンスを送ってくる。

My teacher sent me announcements about class assignment many times.

メールが届くのはありがたかった。

It was good for me to get the reminder email

通知が来るから

The reminder mail about my homework was useful

課題の存在を知らせてくれるから

Google classroom helped my remember I had homework

どこでも課題を出来る。

I can do my homework everywhere.

紙で提出する手間が省けるから。

I could cut of the way of submitting by paper.

Google Classroomは使いやすい。課題をすぐに確認できる。

Google Classroom is useful. I can check my work quickly.

何回も通知がくるから

Reminder mail was useful

提出期限がわかる

I knew clearly the dead line.

連絡などをいつでも確認できるから

I could check the information about the course easily

Question 11.

Google Classroom enhanced my efficiency and made doing the homework easier.
Google Classroom は課題の提出を簡単でスムーズにするのに役立った。

スマホでもできるところが便利だった。

Google classroom is convenient as submit everything via a smart phone.

携帯で提出するのが簡単だったから

It was easy to submit homework by smart phone.

紙が必要ないから 時間があるときに課題をやってすぐに出せるという点

I prefer to submit homework via phone as I don't have to submit homework using paper

とても簡単に使える。

I can use it very easily.

プリントじゃないので無くすことがなくて安心でした。

It was not paper print so I did not lose the sheet.

課題をどこででも出来る。

I can do homework anywhere

どこでも課題が出来た

I could do homework anyway

簡単な操作で提出できて便利だった。

I could easily submit my homework

自分が何をすべきか簡単にわかる。

I can understand easily what should I do.

期限を知らせてくれるから

The reminder of the deadline was so helpful

宿題の提出期限がすぐ分かるので、早めに宿題をするやうになった

I knew the deadline easily so would try to finish my work earlier.

課題の提出がスマートフォンだけで行える。

I just use smartphone for submitting my assignment.

アプリ内で行えるので便利だった。

I could do everything asked using the application.

どこでも提出できて便利

I can submit from any place.

課題のページに移動するから役立った

The app takes you to the homework page so I could understand easily.

いつでも課題ができるから。

Because I can do my homework anytime.

もしパソコンが使えなくても、スマートフォンだけで課題をすることができる。

If I can't access a PC, I can send my homework by my smartphone.

簡単に提出できる

easy submit

簡単に提出できる

It is easy to submit

どこでも利用できる

I could use Google classroom In any place.

携帯上でできたのが良かった

Everything was on the cell phone

どこにいても提出できる

I could submit from anyplace

Question 13. I prefer to use Google classroom to do assignments rather than using pen and paperGoogle Classroom を使用して課題を行う方がペンと紙を使うよりも望ましい。

I can submit even if I am anywhere.

どこでもできるから

I could do anywhere

どこでも課題が出来た

I could submit from anywhere

パソコンを使用していれば、すぐに課題ができる。

When I use PC, I can do my homework quicker

文章を正しく修正するのが簡単だ。

It is easy for me to correct a sentence.

登校中に課題ができる。

I can do my homework on my way to school.

自分の空き時間にすぐ出来るから

I could do it during my free time.

スペルも身につくから

The spell check helped me.

提出がとても楽だった。

Submitting homework was easy.

楽だから

It was easy to submit work

紙で提出となると、失くすかもしれないから。

If I have homework using paper I might lose it.

Question 17.

I would be willing for other students to comment on my work on Google classroom.他の学生が自分の課題について Google document 上でコメントしてほしい。

アドバイスなどがあればしてほしいが、無理にはしてほしいと思わない。

If other students have advice I want to hear,but I would never

他の生徒に自分の課題を見られたくない。

Because I don't want other students to see my assignments.

他人の意見も知りたいから

I want to know other peoples opinion.

自分はしたくないから。

I don't want to give my opinion to others

課題をするので手いっぱいだから、人にコメントしてあげる時間と読む時間がないと思う

Doing my homework takes up a lot of my time, so I don't want to do spend time looking at other students work.

他の生徒に自分の課題を見られたくない。

I do not want other students to see my work.

そう考えたことがない。

I never thought about that

みられるのが恥ずかしい

I would feel embarrassed if someone read my work

みんなコメントしないと思うから

I think none of my classmates would like to give feedback on other students work.

みんながどういう考えを持っているかわかるから

Yes I want to hear other students comments on my work

クラスメートのコメントを知りたい。

I'd like to listen my class mate's comments.

自分のレポートに対して、同年代が呼んでどう感じるのかが知りたいから

I want to know what my peers think about my report.

自分の課題を他の人に見せたくない。

I don't want to show other people my homework

Final question! Any comments about Google classroom?最後の質問です。
Google classroom になにかコメントはありますか？

特にありません。No

便利な機能だなと思いました。

I thought it was very convenient system

とても簡単に使用できたので、これからも使用したい。

I can use it very easily, so I want to from now on.

たまに上手く機能しないことがありましたが、期日やHWなどが表示されて
いて分かりやすかったです。ありがとうこざいました。

Sometimes it doesn't work but it is so simple and easy to use

とても使いやすいアプリだった。欠点はなかった。

This app is very useful for me. I did not find any bad points.

アプリを入れるのは少しめんどくさいが、使いやすいと思います！！ケータ
イ1つで色々できるのは良かったです。現代的です。

Putting application onto my the smart phone was troublesome at first but after

that how to use is easy,

とても使いやすい。

It's very useful.

大丈てです。

It's fun

超便利。

最初慣れるまで使い方が微妙だったけど、慣れたら提出も楽でとても使いやすかった。

At first it took me a while to understand, but once I did it was easy to use