EXPLORATIONS OF DESIGN BY DIGITAL & REMOTE EDUCATION

Brian Alvin Hananto[1]

[1] *Universitas Pelita Harapan*
brian.hananto@uph.edu

ABSTRACT

Digital Education had been catalyzed by the COVID-19 pandemic in 2020. The sudden shift from the traditional classroom to the remote and digital classroom hasn't been easy. The radical change in how a class is conducted wasn't something that is prepared by many universities or education institutions. Despite the availability of technology, from article reviews, design education had been one of the disciplines that suffers from being fully remote and fully digital. However as the pandemic had forced schools and universities to be conducted remotely, there is no option but to adapt.To study the possible methods of teaching digitally and remotely, the author observed the digital classes of Studio Utama 2 in hopes to see the methods conducted in each group. Through the classroom action research approach, the author then collected responses from the 9 teachers and 41 students to see their opinion towards and evaluated them. In the end, most responses shown that design education through remote and online digital classes are possible though it may have challenges initially.

Keywords: *Design Education, Design Methodology, Remote Class, Visual Exploration, Visual Identity Design*

INTRODUCTION

Research Background

The 4.0 industrial revolution gave rise to the advancement of digital networking, information technology, and also supercomputers (Schwab, 2016, pp. 11–12). This enables everyone everywhere to stay connected and collaborate to further advance the society and industry (Tay, Lee, Hamid, & Ahmad, 2018, pp. 1382–1383) as long as they have the tools necessary, such as the computer and internet connection. This massive network disrupts physical distance and limitations (Hananto, 2020, p. 134), and challenges the existing 'old' barriers (Piliang, 2019, p. 3) even in the education sector (Padia, 2018).

Digital education or digital classroom is a term that describes a classroom that implemented digital and information technology for its class activity, which includes teaching and learning (Rossow, 2019). With the use of the internet, students can access more information easily and efficiently (Dogruer, Eyyam, & Menevis, 2011, p. 606). Digital classrooms for education is considered necessary for improving traditional methods of teaching and learning (Mashhadi & Kargozari, 2011, p. 1183). However as most educations are still conducted conventionally without using digital platforms, change may be tricky for some. The digital change or transformation may not happen immediately, but it is inevitable.

The shift of traditional classes to online and digital classes also had many counter-arguments, especially on teaching subjects such as art and design. Many find that the use of technology seemed intimidating, both for the students and the teachers (Alawad, 2013, p. 4). Further researches argued that to properly teach and transfer design thinking theory, skills, and assessments, the teaching needs to take place face-to-face (Wrigley, Mosely, & Tomitsch, 2018, p. 291). Most 'online' classes that boast success often feature human and social interactions itself, may it be from video conferences or live classes. Those instances supported the notion that learning is a social experience (Fawns, 2019, p. 141); especially teaching art, in which teaching and creating art had aspects of 'human' that can't be easily emulated by technology ("Art Classroom: how technology is changing it," 2019).

During the first quartal of 2020, the whole world had just started its initial encounter with the COVID-19 outbreak. Many schools and also universities are forced to shut down or shift their classes online (Linney, 2020). As to keep the classes running, various teachers are experimenting on various methods and platforms had been done in the response of the outbreak (Anderson, 2020). The experiments were interesting and novel in many ways, but some find that the sudden shift had highlighted the lack of infrastructure and methodology ("As Coronavirus forces online learning, a project with Syrian refugees in Turkey might already set an example," 2020). Problems are also caused by some misconceptions regarding digital education. To ensure the change properly, we need to understand both perspectives of the student and teachers to understand their needs (Bond, Marín, Dolch, Bedenlier, & Zawacki-Richter, 2018, p. 19). The shift from traditional to digital needs commitment and understanding from both the students and the teachers to learn inside and outside of the class, and beyond the conventional class itself ("We Need to Rethink Education for Digital Natives," 2018).

This concern had been one of the major concerns that the author had during the first indication of change. One of the classes that are of the author's concern is a class called 'Studio Utama 2', in which students engage in an extensive and intensive learning atmosphere inside the class. The change from traditional class to digital class pressured the author as the coordinator of the class and also other several students that are tasked to guide several groups in their respective projects.

Research Questions

During the research, the COVID-19 pandemic had no clear evidence of stopping, and to ensure the following semester of a digital classroom may perform better than Studio Utama 2, the author had conducted a classroom action research which is prepared for two cycles of research. The first cycle was the Studio Utama 2 class, held in the even semester of the 2019/2020 academic year, while the second was for any classes in the next semester. The first cycle research aims to find initial ideas that may have worked and to find out the possibilities of developing new methods for digital and remote education in design.

As the pandemic had hit nearly in the middle of the semester, the class was in the middle of the exploring visual designs phase. Therefore, the research itself is focused on seeing how to design explorations are made using the digital and remote class. The research questions for the first cycle is:

1. How do the lecturers manage and conduct the digital classroom?
2. How does the student evaluate the overall experience?
3. How do the lecturers evaluate the overall experience?

METHODOLOGY

In hopes to learn more about how to improve digital and remote education for design classes in Universitas Pelita Harapan, the author conducted a classroom action research. Classroom action research benefits from producing results that can be applied towards improving teaching experiences that solve practical problems inside a class (Sukardi, 2015, pp. 2–3). A model of classroom action research by Kemmis & McTaggart became the foundation of the research that the author conducted (Figure 1).

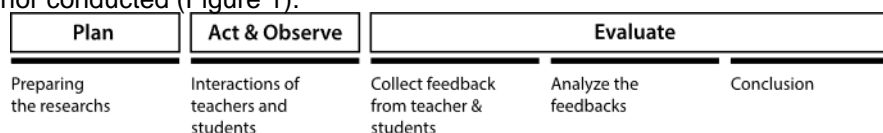| Plan	Act & Observe	Evaluate		
Preparing the researchs	Interactions of teachers and students	Collect feedback from teacher & students	Analyze the feedbacks	Conclusion

Figure 1. The First Cycle of Classroom Action Research by the Author
Source: Author, 2020

The initial step was to plan on what is to be researched, in this case, the author had decided to focus on exploring possibilities in conducting design explorations

through digital and remote classes in Studio Utama 2. The second step was to act and observe the whole process of Studio Utama 2, in which teachers and students engage in chat groups that are used as a small forum between each teacher and the group of students they are responsible of. The third step is to evaluate the overall process, which includes collecting data and feedback, analyzing the data, and also concluding the data.

For the data collecting, the author had observed interactions and later asked the teacher and students to fill in a questionnaire to respond to the whole class activity. Questionnaires are chosen as they are used to collect the self-report from people in written form and can be used efficiently (Martin & Hanington, 2012, p. 140), especially during the pandemic. The questionnaire itself differs between the students and lecturers, as each had specified questions for each. The total of respondents can be seen in Table 1, while the questions of the questionnaire can be seen in Table 2. The evaluation is then made based on the questionnaire data; evaluations are an essential part of classroom action research as it seen to study the effectiveness of a treatment or activity that is researched in class (Sukardi, 2015, p. 157).

Table 1. Total Respondents of the Two Questionnaires

Questionnaire	Respondents	Respondent Quantity	Total Respondents
(1) Teacher	Teachers	5	9
	Teaching Assistants	4	
(2) Student	Students	41	41

Source: Author, 2020

Table 2. Questions of the Two Questionnaires

No.	Question	Teacher	Student
1.	What are the methods of teaching and assisting in the design exploration in class? (each participant may answer more than one).	Y	Y
2.	What methods do you think is the most effective. Why?	Y	Y
3.	What are your general comments on the class during remote and online education?	N	Y
4.	What methods can be used next? Why?	Y	Y
5.	What are the positive things during remote and online education?	Y	Y
6.	What are the most helpful things for teaching remotely and online?	Y	Y
7.	What can be further improved for remote and online education in-studio classes?	Y	Y
8.	Do you think this remote and online education affects the students' productivity and results? Why So?	Y	N
9.	Do you agree with the statement "I like online & digital class better than traditional class"? Why?	N	Y

Source: Author, 2020

DATA DESCRIPTION & DISCUSSIONS

The Two Methods

The sudden shift of traditional classroom to digital classroom as a response of the COVID-19 pandemic wasn't necessarily easy. Several chat groups were made for each teacher and their corresponding students in the class so that they can interact and discuss in their group. Each teacher is given the freedom to explore their method based on their preferences and also agreement with students within their group, therefore there aren't any mandatory method to be conducted. This decision was made with consideration of the differences of each teacher and student's schedule during the pandemic.

The two main approaches are asynchronous and synchronous learning. The asynchronous approach requires the students to pin up their design, email their progress, and also chat with their teachers. These three methods of discussion do not require dedicated scheduling an appointment, and both teachers and students alike may respond with their paces. The synchronous approach requires a more scheduled appointment with students and teachers both prepare dedicated time to conduct a group video call. This method enables teachers to engage students directly, in real-time and also faster than the asynchronous method.
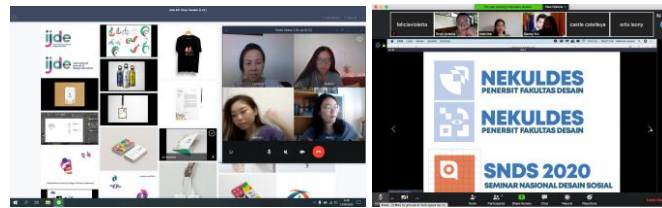
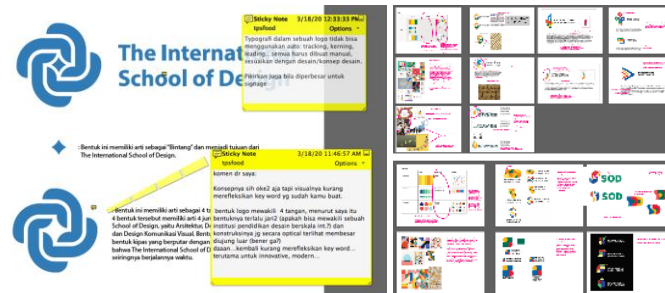Figure 2. Usage of Group Video Call for Design Discussions
Source: Author, 2020

Figure 3. Usage of Notes for Commenting on Design Progress.
Source: Author, 2020

Feedbacks & Responses

Results from each questionnaire can be seen in Table 3. Due to limitations, the author will only include notable comments from each question. Some responses that do not answer the question are also omitted.

Table 3. Results of the Questionnaire

No.	Result	Qty. from Teachers	Qty. from Students
1.	Group Chats	6	29
	Group Video Call	6	28
	Email	1	0
	Digital Pin-Up	1	16
	Digital Classroom Platforms	1	2
2.	Traditional Class, as students are more serious and less miscommunication and lecturers can see the students completely and grab their attention more.	3	3
	Group Video Call, as students can all be seen at once, it can be done frequently, the students can also share their screen while lecturers directly commenting on their screen.	5	25
	Documented Written Form Progress or Journal to record and keep track of each design explorations.	1	2
	Group Chat, since it is written and can be re-read, and more flexible in terms of schedule.	0	13
	Private Chat	0	1
3.	Negative Notes (Complicated, Not Optimal)	N/A	23
	Positive Notes (Good & Effective)		11
	Not different		5
	More Relax		2
4.	Group Video Call, as it is the closest to a traditional class.	4	21
	Documented Written Form Progress or Journals, so especially so that the lecturers may have a more benchmark to discuss the design project	3	3
	Combinations of Video Calls, Chat, Emails and/or Documented Written Form Progress or Journals	1	5
	Chats, as students have more time to think of their responses	1	1
	Pin Up	-	4
5.	Flexibility, More time	4	13
	Higher frequency meetings or discussions compared to traditional weekly meetings.	3	7

	Teachers can track their students more	2	-
	Cheap (no printing and no going to campus)	-	15
	None	-	2
6.	Flexibility/Accessibility & Better Time	1	9
	Students became more diligent	3	-
	The teachers/teacher's responsibility of each teacher to each student	2	6
	Documented Written Form Progress or Journals	1	1
	The methods or platforms (Combinations of Video Calls, Chat, Digital Classroom Platforms and/or Emails)	2	14
	Practicality in the design process	-	9
	Internet Connection	-	1
	None	-	1
7.	The understanding of adept	1	1
	The need to share and pin-up student progress	2	4
	Better communication between each person (teacher to student, student to student, or teacher to teacher)	1	13
	Increased meeting frequency	1	1
	Punctuality on dedicated meetings, some students became more relaxed and sometimes they are late on Group Call appointments	2	1
	Written reports or essays to make sure students read the instruction and/or class materials	1	-
	Variety in terms of conducting the class.	1	-
	The assignments should be simplified	-	4
	More study materials	-	2
	None	-	12
8.	Same, since the students are still relaxed and did not utilize the digital and remote education method well, the result is the same as if it is a traditional class.	1	N/A
	Different (in a more positive note), as students had a more frequent meeting, they can have a better progress.	4	
	Different (in a more negative note), the interaction in traditional classes cannot be replaced with the video call or chats. The students also become more laidback and less punctual.	4	
9.	Yes	N/A	10
	No	N/A	31

Source: Author, 2020

It can be seen that both synchronous and asynchronous approaches are performed almost evenly. Though most students and lecturers see that synchronous is 'better' than asynchronous, as it may be because the synchronous approach mimics the traditional class (as seen on responses from the fourth question). But at still the end, more students (23 out of 41) remarked that remote and online education is more challenging compared to traditional classes. It should be noted that the students are in a regular program degree, not an online degree, so the shift may seem like it isn't what they had signed up for.

When asked about the benefits of online and remote education, most of the students noted that one of its advantages is it is cheaper, as students don't need to produce their design for real, or go to the campus where they would spend more money on meals, gas, or even parking. Other than that, most lecturers and students noted about the flexibility and frequency of engagement is one of the advantages of digital classes. Most students commented that to increase the conduct of digital and remote classes, it is still necessary to have better communication between each person, as miscommunications are more prone to happen.

In the end, the teachers majorly noted that the remote and digital class produces different results than a traditional class, however half of the teachers noted that the remote class had better results than a traditional class, while the other half remarked contrary. However, the students had a more different majority opinion. Most students (75%) disagree with the statement of "I like online & digital class better than traditional class".

CONCLUSION

From the discussions before, the author concluded that though methods of the digital and remote education may seem different from traditional education, both of them still requires an understanding of both parties related (the teacher and students). Both synchronous and asynchronous approaches need to be conducted hand by hand as both had their pro and cons. The synchronous approach made the learning experience seem similar to traditional classes in which teachers can see the students' design progress (though not printed or directly), but demands a more scheduled meeting. Asynchronous approach over more flexibility and versatility, but it demands the student and teachers to both read and write properly to present their ideas and opinions.

The 'negative' responses towards remote and online classes may come from the fact that the design class in Universitas Pelita Harapan is conducted traditional and synchronous. Therefore the rejection or even inability to adapt may happen but may decrease as both students and teachers had adapted. For the next cycle of research, the author hoped that as time had passed, the refusal of digital and remote education may subside. In the next cycle, the author will also design a more simplified and unified direction for the team of lecturers and provide platforms that accommodate both synchronous and asynchronous approaches.

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