

REFLECTION OF TRANSFORMING DESIGN WORKSHOP DURING PANDEMIC USING ONLINE EDUCATION PLATFORM, SCHOOLGY, AT SECOND-YEAR STUDIO

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ABSTRACT

Design workshops are one of the phases in studio-based learning that helps architecture students to accomplish projects in the studio through interactive and intense interactions between lecturers and students. Therefore, this phase is carried out through the face-to-face method and done in the studio. Since March 2020, for the first time, courses at the Architecture Program of Universitas Syiah Kuala (USK) have been conducted by distance learning, including a second-year studio, Architectural Design III. Long before the pandemic COVID-19, several courses at the Architecture Program of Universitas Syiah Kuala (USK) had been carried out by blended learning through USK e-learning platform and Schoology. As a case study, the Architecture Program (PSA) of USK uses Schoology as an online education platform to facilitate design workshops. This paper aims to reflect on the results of using Schoology as an online education platform that is fully utilized in second-year studio course. Using descriptive analysis method, this paper explores the strategies to maneuver from face-to-face into distance learning method in order to achieve learning objectives. As the result, Schoology is able to attempt synchronous and asynchronous features when conducting design workshops but it is not fully utilized, especially interactions between students.

Keywords: Schoology, distance learning, architectural design studio, design workshop, second-year studio

INTRODUCTION

One of the efforts to break the spread of COVID-19 chain at Universitas Syiah Kuala (USK) was accomplished through a rector's circular. It stated that as of March 16, 2020 face-to-face lectures would be officially eliminated. Since that date, lectures have been transformed into distance learning including studio-based courses at Architecture Program.

The design process in the Architectural Design courses which consists of briefing, tutorial, workshop, mentoring, review, submission, and exhibitions has been carried out remotely. At that time, design studio was known for a long time as face-to-face learning activities of one individual with another and between lecturers and students [1]. These activities involve a long process, group discussions, face-to-face mentoring, drawing on large paper, and making models using materials and constructing-deconstructing physical system [2]. This

condition becomes a sudden challenge for facilitators and students. Distance learning is completely a new thing at the Architecture Program of USK. Therefore, the lecturers attempt to explore various ways of how to maneuver the learning method from face-to-face into distance learning in the Architectural Design course. Some of the methods reported are the use of social media platforms such as WhatsApp groups and email as a platform for delivering lecture material, discussions and assignments.

Since 2016, several lecturers have used Schoology as an online education platform. If previously Schoology was only used as a platform for online communication and submission, distance learning has changed the way Schoology used into a platform that fully supports the design process in the studio. These features include the cognitive challenges and opportunities for deep processing of meaning that Cummis [3] puts forward as the first criterion for technology supported instruction.

RESULTS AND DISCUSSION

Architectural Design III (AD III) 2020 is a second-year studio including active and creative process of workshop. This course is one of courses that fully utilized by online platform during distance learning. This course was chosen due to the use of an online platform, Schooly, synchronously at the workshop stage for the first time. Asynchronous distance learning supports lectures and students to learn at different times so that it is more flexible. Meanwhile, synchronous e-learning supports students to feel participating and avoid frustration through direct interaction [5].

In this study, the discussed activity is workshops. Workshop, which is usually held in a studio and begins with problems that must be resolved in a limited time, now has to be done synchronously online. Unlike the case with real time video platforms, synchronous learning through Schooly can reduce the load of data to be smaller in written form.

Based on the described background above, this paper aims to reflect the use of Schooly as a design learning platform at second-year studio at Architecture Program (PSA) of USK and related it to the reflection of distance learning education conducted and suggested by Atmodiwirjo [6]. This reflection aims specifically to describe the design workshop phase in the studio can be done through a Schooly platform during pandemic. Through the use of the Schooly platform, lecturers and students are required to be creative in the learning process. One of them is the process of assignments submission in which students are forced to convert their works into digital files and submit it before due time.

METHOD

This study was conducted using a descriptive analysis method in AD III 2020, a second-year studio course at PSA of USK. There were 32 students taking this course who were divided into eight mentoring groups. This study describes the project background at first. Then, it explains the process of workshop carried out through Schooly, an online education platform. Finally, the reflection is an analysis of the workshop results.

USK itself has provided an online education platform called USK e-learning which can be accessed for free (free of charge) long before distance learning. The comparison of interface and effectiveness which is quite different makes USK e-learning less desirable for use in the design process in the studio than Schooly. Schooly is an online education platform that includes online learning, classroom management and social networks that aim to improve the quality of learning through communication and collaboration. Schooly not only provides account options for faculty and students but also for parents [4]. Schooly could facilitate the design process in an architectural design studio that requires mutual collaboration between faculty and students. Not only can be accessed via the website, Schooly also via the mobile app on Android and iOS. This supports a wider reach and access when using Schooly as an online learning platform.

The unavailability of USK e-learning platform as a mobile app which is relatively easy and fast due to the notifications received directly by students is the main reason. Schooly also offers features and experiences like Facebook [7] that have a more user-friendly interface. Based on more keen interest in the use of Schooly in studio-based courses, this paper will discuss the role of Schooly in one of the studio learning process, design workshops.



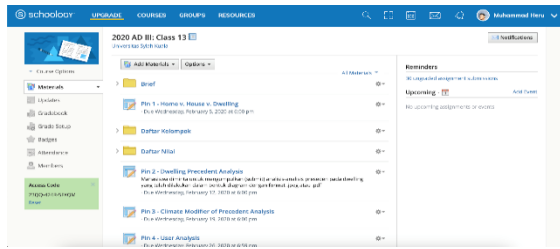


Figure 1. Elearning Website Interface of USK (above) and Course Interface of Schoology (below)

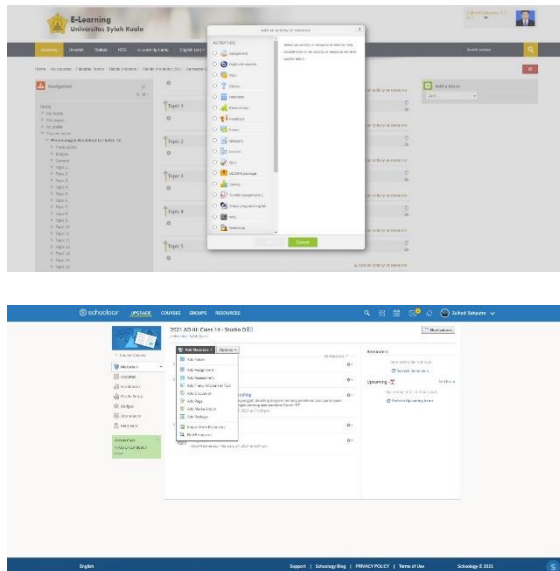


Figure 2. Elearning features of USK (above) and Features of Schoology (below)

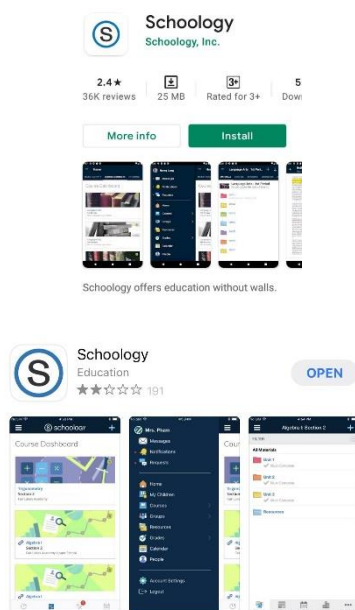


Figure 3. Schoology App on Android (above) and iOS (below)

Project Background of Architectural Design III 2020

The project theme was dwelling that applies bioclimatic design principles. The bioclimatic design approach to dwelling is carried out in the core social group space which also considers the user's life cycle and the context of the physical and socio-cultural environment. It is expected that students choose real project users or clients consisting of a core social group with unique characteristics and certain professions. Users or clients may not be real in accordance with supervisor's guidance. The profession chosen is a profession that requires a special work space in a dwelling. Students are given a freedom to choose the location of the bioclimatic dwelling design site according to the supervisor's guidance and the client's needs. The design site is located in the city of Banda Aceh or Aceh Besar district with a maximum area of 150 square meters.

The second-year studio is one of the design courses that since 2016 has been assisted by online platforms such as Schoology. In 2016, Schoology was used only to deliver announcements, share course materials, and submit assignments. However, starting from the 7th week of the even semester 2019/2020, Schoology is also used to conduct workshops and mentoring synchronously.

The second-year studio is completed over a 16 weeks period divided into eleven activities. These activities are briefing, precedent of dwelling analysis workshop, precedent of climate modifier analysis workshop, user and site analysis, preview I and II, programming, drawing, modeling, poster workshop, submission, and exhibition. Activities related to Schoology will be explained in the next section.

Although this project is not associated with a pandemic issue, its implementation is carried out through health protocols from the seventh week. Starting on March 18, 2020, during the workshop, students did it at their respective homes in the city of Banda Aceh before they finally worked from their hometowns. The challenge arose again when students had to move their personal studios to homes outside

the city. One of these challenges comes from adapting domestic life since the COVID-19 pandemic, humans have to stay longer at home [8].

Design Workshops at Architecture Program of USK

After attending material presentation by the coordinating lecturer, students conduct workshops or work on weekly assignments. Weekly assignments must be submitted before the studio hour finishes. Then, supervisors give feedback via Google Drive or other set media.

In this study, one of the design workshops that will be discussed and conducted through the online education platform is a modeling workshop. This design workshop aims to increase students' creativity in understanding the quality of space through three-dimensional model. Compared to building space through two-dimensional sketches, this workshop activity is more effective for students to understand the space.

Like the design workshop conducted before distance learning, the online design workshop is guided by the coordinating lecturer. The mechanism for this design workshop is that students are asked to make up to five spatial models according to the concepts that have been carried out. These models are done as answer to questions given and completed in time starting from 15 minutes to 45 minutes. The purpose of working on the model with a limited time is to force students to work under pressure. The students will be trained to come up with creative ideas to solve design problems.

In the previous second-year studio, this workshop succeeded in producing three-dimensional models that are used to make the final model. Besides trained to think fast, the students also act efficiently including using materials and interacting with students. Through the same mechanism, written construction, but with a domestic and individual atmosphere, students conduct remote modeling workshops. This will be reflected into online workshop design strategies.

Schoology as a Design Workshops Platform

In the second-year studio course, two design workshops were carried out synchronously through Schoology, an online education platform. The design workshops are a programming workshop and a pre-drawing workshop. Students are asked to compose a program within a predetermined time and make a pre-model before tracing it into technical drawing. The programming workshop was held on March 18, 2020, while the pre-drawing workshop was held on April 1, 2020. The two workshops have similarities in the work phase and uploaded immediately. However, in terms of work results, the results of the programming workshop cannot be observed by other students while the pre-drawing workshop is managed to be seen.

The workshop starts with an announcement with an uploaded workshop sheet by the coordinating lecturer for students to prepare tools and materials as well as an explained method for the organized design workshop. This announcement is posted on Schoology timeline and students might comment or like the post asynchronously.

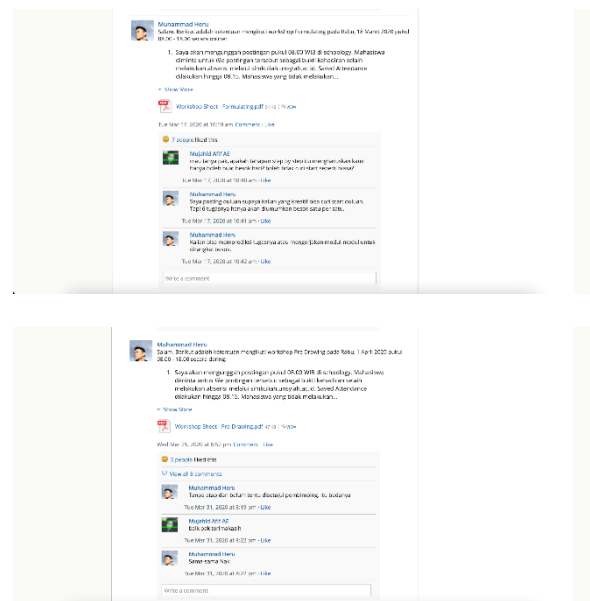


Figure 4. Workshop Announcement on Schoology Timeline for Programming Workshop (above) and Pre-Drawing Workshop (below)

The programming workshop is the first workshop in which tutorials are conducted synchronously through written text on Schoology timeline. This method is a trial-and-error method to avoid excessive internet data usage when using Zoom Meeting platform. The coordinating lecturer explains briefly through uploading the .jpeg file slides sequentially and students might ask questions and discuss in the comment's column.

The pre-drawing workshop does not go through a tutorial process because students have prepared the material according to the workshop sheet uploaded one week earlier. Students only follow directions or commands via text on Schoology timeline synchronously.

Furthermore, students carry out workshop phases according to the direction of the coordinating lecturer through the Schoology timeline. Students might discuss or ask questions via the comment's column. Students are actively responding to questions or directions from the coordinating lecturer immediately because each stage has defined time. Workshop on studio-based learning is a process that is expected to get a fast response so that learning through the synchronous method is better. Students are also more committed and motivated [5].

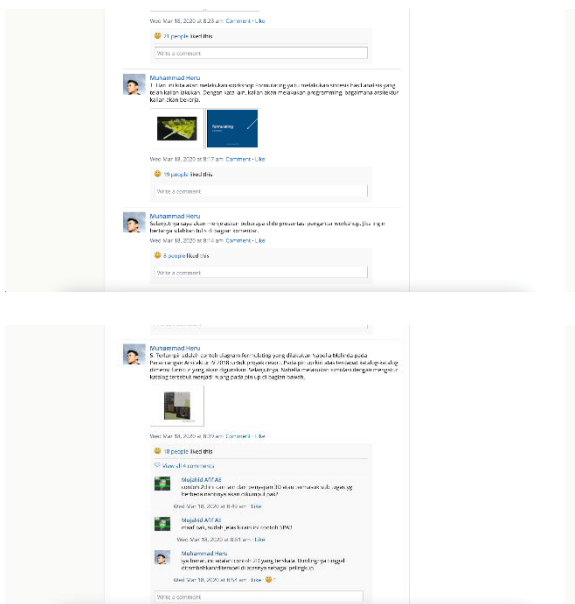


Figure 5. Tutorial and Discussion before Doing Programming Workshop.

The responses are uploading softcopy files on the submission menu for the programming workshop while uploading on timeline and submission menu for the pre-drawing workshop. Feedback is carried out periodically after students submit their workshop report. This feedback is a form of appreciation which is expected to minimize plagiarism between student assignments. The form of workshop assignments that have a time limit also prevents students from copying other students' work. This is a form of adjustment to the test form suggested by Atmodiwirjo [6].

The workshop ended by submitting the workshop reports through the submission menu on Schoology. These reports are in the form of photos and video output from the workshop.

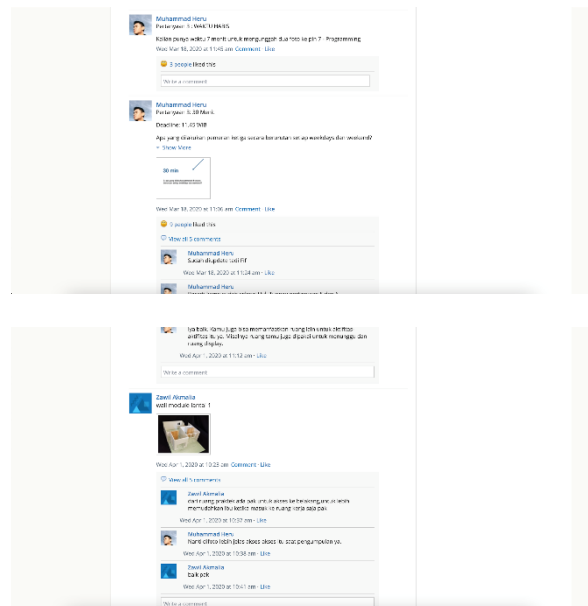


Figure 6. Command Phases in Programming Workshop (above) and Pre-Drawing Workshop (below).

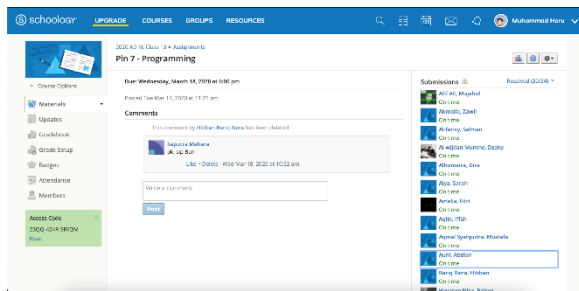


Figure 8. Workshop Participant's Portrait

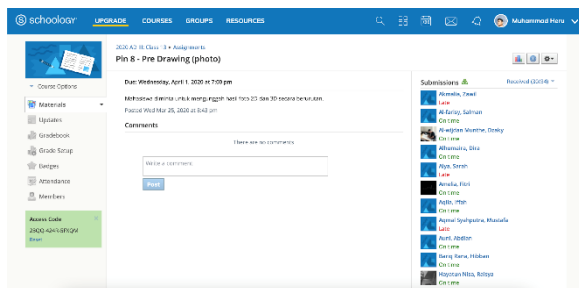


Figure 7. Submission Programming Workshop on Schoology (above) and Submission Pre-Drawing Workshop on Schoology (below)

Both workshops start at 08.00 am and end at approximately 01.00 pm. Students work 5 hours non-stop following the direction of the coordinating lecturer. Relatively, the quality of the design workshop results obtained from the two online workshops are as complete as the face-to-face modeling workshops. The percentage of the completed model is also same as the models done in the design workshop before the pandemic, namely 70-80% due to time limits. In addition to the outcome difference, since there is no interaction between students while working, the online workshop students produced more diverse and different models. Overall, even though the design workshops done online, the learning objectives could be accomplished.

In the last session, students were allowed to give impressions and criticisms of this process and submit their selfies with workshop work as a celebration.

Distance learning might present interactive competences and immediacy behaviors if the roles of lecturer and students are very different from the usual learning systems in the classroom or studio [9]. The learning objectives of the workshop through Schoology were achieved. This supports Atmodiwirjo's [6] statement that distance learning material should increase the critical thinking of students. This is facilitated by Schoology which provides community opportunities for students to share questions, problems, and opinions but intensive interactions have not been established. Some of the features of Schoology, such as group discussions, have not been used to form interactions between students. Interactions as responses and questions on the Schoology timeline occur between lecturers with students and students with students. Online communication is a critical factor to be explored thereby increasing the effectiveness of instruction (Easton, 2003 in [9]). Nevertheless, in the programming workshop, the interactions that occur between students and students are not recorded on Schoology.

The most important thing ensured when conducting distance learning is the substance of the studio material that adapts to the chosen platform [6]. In other words, Schoology must be able to accommodate learning that has been done face-to-face into online learning. In fact, Schoology has facilitated workshop activities but the substance of the workshops has not adapted to the domestic environment of students. Students still have to attend the workshop phases synchronously for the same duration as at the studio whereas Atmodiwirjo suggested not directly transforming material that is usually delivered in the studio into online format.

In general, there are three main stages in change learning mode to be distance learning: first, determine which technology platform used; second, make adaptations in the delivery of the curriculum; third, consider the social and emotional aspects of learning online [10]. From these three stages, what has been missed is to consider the social and learning aspects of students. Coordinating lecturers still use the same workshop duration in the studio when doing it through Schoolology. Therefore, it is not surprising that the results of a survey conducted on 127 students, 77.2% suggested a blended studio system, a combination of offline and online. One of the reasons is the difficulty with the same workload as at the studio, while socially the domestic life makes this condition less optimal.

In addition, since the pandemic and the use of LMS has increased, Schoolology has limited new enrollments for lecturers starting on August 19, 2020 so supervisors cannot participate and provide feedback to students. In this case, only the coordinating lecturer who already has an account before the pandemic can interact intensively with students. Therefore, additional platforms are needed for supervisors to see student progress, such as Google Drive. On the other hand, supervisor's feedback becomes an asynchronous learning method.

CONCLUSION

As a final reflection, design workshops might be carried out synchronously through written instruction on online education platform such as Schoolology in three ways. First, adapting the method of online design workshop like the design workshop in the studio, where students are given a brief and examples. Second, lecturers monitor student's work through regular submissions by setting determined time although overall online design workshop time is shorter than at studio workshops. Last, lecturers ensure, build, and permit interactions between students obtaining feedback

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