DESIGN-WORK FROM HOME: ZOOM AS A VIDEO CONFERENCING PLATFORM IN ARCHITECTURE CONSULTANT FIRM

Ni Kadek Yuni Utami[1], Nabil Rahman Effendi[2]

[1] [2] Sekolah Tinggi Desain Bali
uniyutami@std-bali.ac.id

ABSTRACT

The Coronavirus disease (COVID-19) pandemic has increased work-from-home policy at most Indonesia companies to break the chain of virus spread among the workers. Video conferencing platforms, like Zoom become one of the main applications to support the coordination and teamwork in a company during this pandemic era. Zoom allows the worker to meet and discuss together productively, even used for absences, virtual meetings with clients, and reporting on daily work progress. This situation makes architecture consultant firms move from conventional drawing discussion to adapt in using Zoom as a discussion platform on design and drawings. This study aims to collect a questionnaire about Zoom from 10 workers at DDAP Architect in order to better understand its suitability for design discussion in architecture firms. The result of this study indicates that Zoom as a suitable platform for video conferencing in architecture firms because of its design dialogue feature, convenience, and user-friendliness.

Keywords: work-from-home, video conferencing, zoom, architecture firm

INTRODUCTION

European Centre for Disease Prevention and Control (2020), state on 31 December 2019, a cluster of pneumonia cases of unknown aetiology was reported in Wuhan, Hubei Province, China. On 9 January 2020, China CDC reported a novel coronavirus as the causative agent of this outbreak, which is phylogenetically in the SARS-CoV clade. The disease associated with the virus is referred to as novel coronavirus disease 2019 (COVID-19). As of 11 March 2020, 118.598 cases of COVID-19 were reported worldwide by more than 100 countries, including Indonesia. On 16 March 2020, Indonesia president Joko Widodo in a press statement, urged Indonesian to "work from home, study from home and worship from home" to break a chain of virus spread among the community. Based on The Jakarta Post news on 16 March 2020, for several employees, especially those sectors that require direct contact with customers, working from home can cause confusion among employers to catch up with the government's instruction, but some others have been quick enough to apply work-from-home policy.

Previously for an architecture firm in Indonesia, drawing discussion among the team was mostly done in a conventional way. The architects preferred to meet the client face to face to ensure they were able to understand the concept and get direct feedback from the client. It applies also in teamwork discussion during development on drawing. Furthermore, Walsh in Archdaily (2020) writes that work-from-home policy for architecture firms makes new ways of digitally exchanging architectural designs, ideas, and experiences, even though digital technology has adapted in architecture for over recent years. Now, architects are settling into their new remote working environment, where digital technology will be essential to continue to collaborate among peers and clients.

One of digital technology that is used for maintaining the sense of community and discussion during work-from-home policy is holding video conferences by using applications, like Zoom. Zoom is a video conferencing program that allows multiple participants, audio and video sharing, screen sharing, working on a whiteboard and recording. Lorenz in New York Times (2020) said, we live in Zoom now, Zoom has become one of the most popular free software applications worldwide. It is used for telecommuting, distance education, and social relations. However, it can be challenging for architecture firms to move their discussion from conventional way into online discussion, especially in design drawing discussion. Given the efficiency of Zoom video conferencing will affect the quality of design result and also the success of self-report productivity, maintaining a sense of communication and avoiding misinterpretation in design discussion.

RESEARCH METHODOLOGY

In order to know the efficiency of video conferencing program Zoom in architecture firm, an online questionnaire of 10 employers in DDAP Architect (one of architecture firms based in Bali) was performed. DDAP Architect started their work-from-home policy on 19 March 2020 following Government instruction and has been using Zoom as the main platform for morning briefing, design discussion and meeting with other parties and clients. The participants were asked 10 online open-ended questions about their experience of using Zoom in video conferencing during a pandemic. The responses analyzed using the efficiency theory and qualitative descriptions and descriptive statistics produced by Google Form application.

DATA DESCRIPTION

The online questionnaire distributed to 10 employers in DDAP Architect during 5-10 April 2020. All participants were male, and the majority aged between 20-34 years old. 9 employers had graduated with their architecture degree, one is the leader has master degree and work in DDAP between 2-4 years.

Advantages of Using Zoom

All of the employees (100%) identified zoom as a preferred application compared to telephone, Whatsapp or other video conferencing platform like Skype. The employees agree there are few points as a key advantage of using Zoom for architecture consultants: design dialogue features, convenience, and user-friendliness.

More than half of employees (63,6%) agree that Zoom has a design dialogue features that support direct drawing discussion among the team, especially when compared with Whatsapp or email. Most of them mention the ability to see other participants screen with file and sharing screen tools, even can share other participant's sound. The employee mentions the ability to sketch directly in the other's shared screen. With design dialogue features, the participants identified the ability to understand revision-drawing explanations, and direct instructions from the principal and clients. Similar to research Using Zoom Video-conferencing for Qualitative Data (Archibald, 2019), the employees agree on the ability to see the leader or client's facial expression and gestures through clear video sharing. It is important to build interpersonal connections or add a personal touch to facilitate engagement, building trust and promoting relaxed and natural conversation.
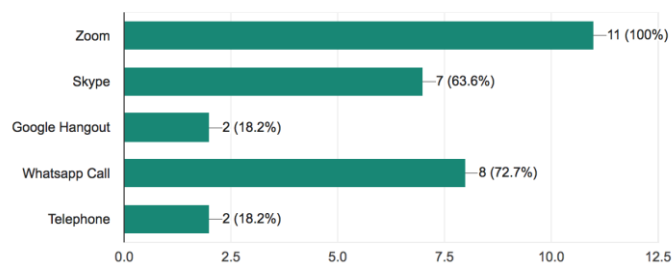
Figure 1. Zoom as a preferred application for video conferencing
Source: Google Form Survey (author, 2020)

All of the employees (100%) identified zoom One of the WHO's suggestions during the Covid19 pandemic (2019-2020) is to maintain social distancing, also called physical distancing. It means a set of non-pharmaceutical interventions or measures taken to prevent the spread of the virus by maintaining a physical distance between people and reducing the number of times people come into close contact with each other (Wikipedia, 2020). People can remain socially connected via technology. Based on this suggestion, most of the employees (85%) mention that by using Zoom as a video conferencing platform, they are able to practice social distancing yet convenience in terms of cost-effectiveness and time-effectiveness. Although some of the employees indicated they need time to adapt the technology. Meetings also can be conducted based on an agreement schedule with the employee and made as a daily report and absence. The other thing, Zoom has the Mute/Unmute sound, and Hide/Unhide Video feature that the employees can show or hide their video and sound. Zoom also has a feature to change the background and sometimes it makes a fun way to break a formal conference.

More than half of the employees (81.8%) mention ease of use or user-friendliness is one of the advantages of Zoom in comparison to other video conferencing platforms like Skype. Zoom has an easy connection, easy-understand tools, and simple privacy. Zoom has the ability to manage users and invite in one meeting by using a link, meeting code and password. Zoom also has a message screen that is able to send important revision drawing notes or chat among the user in one meeting.
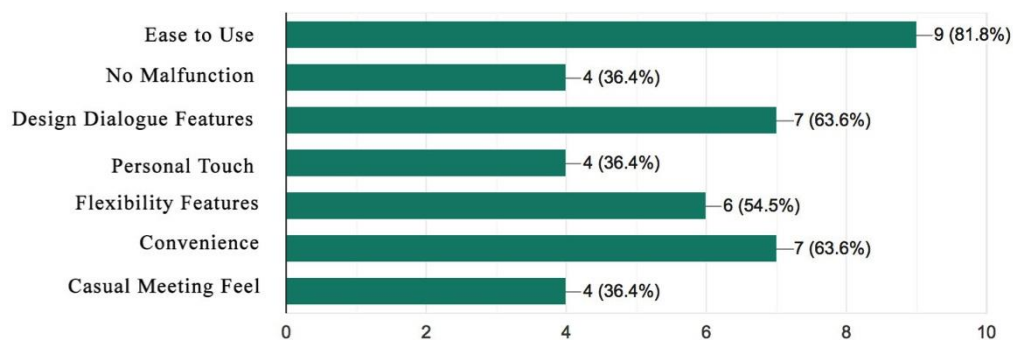

Figure 2. The advantages of using zoom
Source: Google Form Survey (author, 2020)

Figure 3. The benefit of using Zoom for Architecture Firm in Work-from-Home situation
Source: Google Form Survey (author, 2020)

Disadvantages of Using Zoom

Conventional design discussion in architecture firms usually takes sometimes to achieve the clear instruction and goal of design. Most of all employees (63.6%) agree that 40 minutes limited time for one meeting for three or more total people in Zoom (basic plan version) made it need to host several meetings in the same topic discussion. Zoom offers an optional time limit version, but the host needs to pay a certain amount, and during this pandemic, architecture firms try to find the free application. Big number of the employees (63,6%%) expressed frustration when experiencing technical issues such as: bad signal in another employee's connection when the discussion needed a fast answer or explanation. Only a small number of employees (9,1%) mentioned that it is difficult to understand some of the drawing revision and more easier to have face-to-face discussion. Most of them also mention using Zoom as a new way to design discussion is practical learning and for some people need to take time.
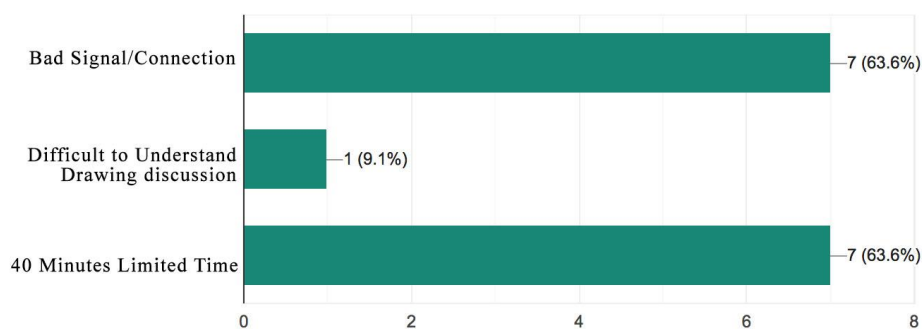

Figure 4. The disadvantages of using zoom
Source: Google Form Survey (author, 2020)

DISCUSSION

Based on Rop and Bett (2012), video conferencing is a method of communicating two or more locations in which sound, vision and data signals are conveyed electronically to enable simultaneous interactive communication. Video conferencing is more personal, and effective if compared with audio conferencing. Video conferencing identified supports architecture firms to develop a feasible

telework policy and during Covid19 pandemic, it takes into consideration the new normal for architecture firms. Some architecture firm's practices are impacted by move to work-from-home, such as: engagement with clients, design drawing discussion, site visit, etc. Based on data collection, we found that the efficiency of using Zoom as a video conferencing platform in architecture firms is outweighed by its challenges. Most of the employees did not report the loss of Internet connection and poor sound and video, and indicates Zoom may be better to use in architecture firms than other video conferencing platforms like Skype and Google Hangout. The employees are able to be more efficient with time using, and eliminate travel cost. In DDAP, the leader only held two times video conferencing in the beginning and the end of the day with Zoom. These meetings are used as daily reports and progress, discussion and also absence.

Design Dialogue Feature. Smith (2008) indicates that architects depend upon sketches throughout the process of design as a medium for dialogue. Sketches are physical manifestations of their thinking and are used in various ways from the inception of the project to final detailing and evaluation. Based on that, sketches and visuals are important during the design discussion. From data collection, all the employees indicate general satisfaction with Zoom of its suitability as a way to do checking and revising drawing, comment about design and direct discussion with ideas or data. Zoom makes the employees able share their ideas and presentations, allowing immediate communication during design discussion, especially sharing visual drawing and images with design dialogue features such as: sharing screen and sharing file. These features allow the leader to sketch directly to other's sharing screen and file and discuss it along the conference. It is similar to the conventional discussion way in architecture firms.

If we analyze the sharing screen and file tool at Zoom, the user has the flexibility to set the sharing screen to only one person or multiple persons able to share simultaneously. Sharing screen tool also has a shared computer sound tool, meaning the user has the ability to share video with sound. Another Zoom feature that supports design dialogue is record. The user can record the meeting and be able to play back to listen and see again the discussion, it is important to avoid misinterpretations during design discussion.
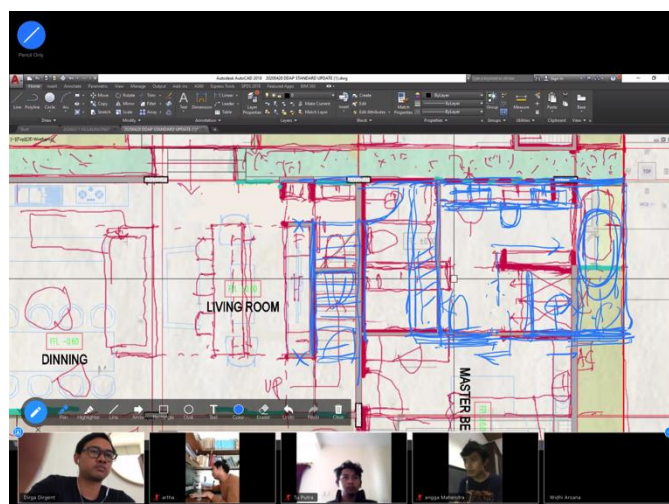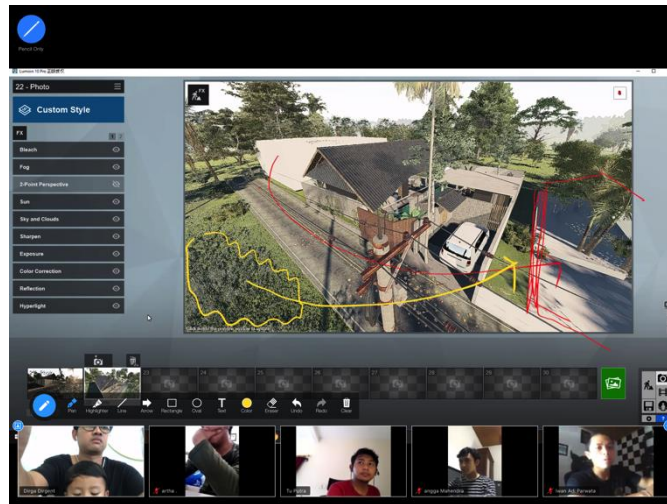
Figure 5. Direct sketch in other participant's shared screen
Source: DDAP Architect (2020)

Convenience. Ottham (2008) said clients of the architecture design industry select their consultant based on their qualification, experiences and capabilities. The architectural team becomes responsible for delivering the design to meet client's requirements. A successful and competent team is the one that succeeds in producing a design that meets client's expectation and quality, and teamwork is one of the keys of the competent team. During Covid19 Pandemic, the benefit of a video conferencing is allows collaboration between the teamwork to keep the sense of communication in producing design. Face to face communication allows the team to better understand about the concept or drawing revision. Based on data collection, there is agreement that Zoom has the flexibility of face-to-face communication to make better coordination in design teamwork, and also discussion with the client. It strengthens the statement that video conferencing is far more engaging than audio conferencing, because participants can see and be seen, and also virtual appearance makes personal touch in the meeting. Beside that, the hide/unhide video and mute/unmute sound tools make the team have convenience during the design discussion meeting.

User Friendliness. User friendly describes a software or hardware interface that is easy to use. It is not difficult to learn or understand (Techterm, 2020). There are few points that can engage users to use a program; clear messages about the product (simple), clean and well organized, intuitive, reliable. The goal of a user-friendly program is to provide a good user experience. Based on data collection, Zoom is an easy to use program, because of its simplicity. The employees are able to register in zoom with email, Google and Facebook options. The Zoom interface is not difficult to learn, straightforward and providing quick access to common features or commands. When you sign in into Zoom, you will see four big icon tools (new meeting, join, schedule and share screen), and half screen for reminder of the meeting schedule. Zoom has cleanliness and is well organized. The clear white background color with blue for the icon makes the user easy to locate different tools and options. These colors affect the employees in architecture firms, who always work in visual. Zoom has an intuitive point because it requires minimal explanation to understand its tools. Zoom is reliable because it doesn't contain a lot of bugs and malfunction. For architecture firms, using Zoom as a video conferencing platform doesn't make any frustration especially in discussion on drawing.

Based on data collection, the employee's preference of Zoom compared to other video conferencing platforms like Skype, Google Hangout. This finding suggests that Zoom is a video conferencing platform that has all the points; design dialogue feature, convenience and user friendliness. Zoom is intuitive and easy to use in the beginning, and it makes Zoom potentially appropriate for use with staff and clients in different contexts. Although some of the employees have experienced technical issues like connection, it can be fixed with a good Internet system and make sure the employee has it before using Zoom. By exploring how Zoom is effective in video conferencing for a design discussion, it may be useful for effectiveness in future design discussion after the pandemic.
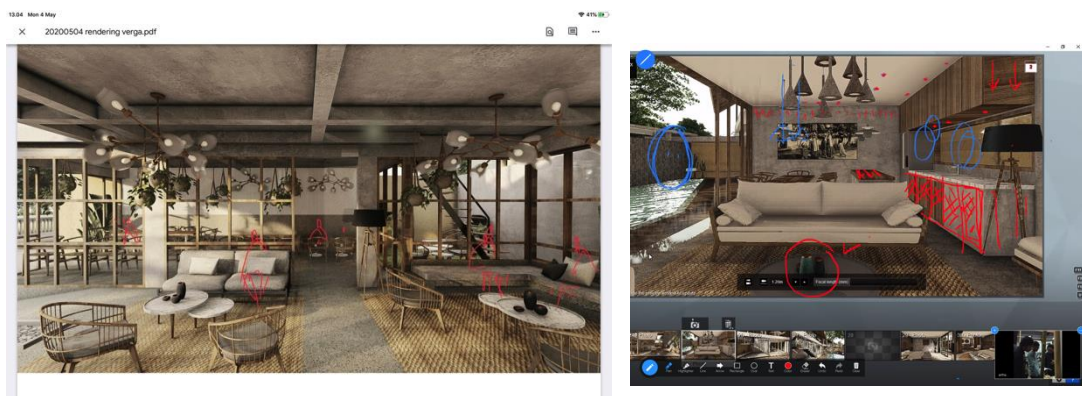

Figure 7. Visual Discussion in Zoom Video Conference
Source: DDAP Architect (2020)

CONCLUSION

Similar with Archibald (2019),
The employee in architecture firm commonly described Zoom as a good video conferencing platform with its design dialogue feature, convenience, user friendliness, intuitive, interactivity, etc. Zoom as a video conferencing platform with its personal touch between the user (the team, the leader and also the clients), makes design discussion can be as casual as the conventional way. The Covid19 pandemic has given video conferencing platform Zoom a huge user base, but it's also highlighted multiple security and privacy issues. Zoom has increased their security and privacy issue to make all meeting passwords required starting 9 May 2020. This study strengthens the suggestion to use Zoom as a suitable video conferencing platform for architecture firms.

REFERENCES

Archibald, Mandy, Ambagtsheer, Casey, and Michael Lawless. 2019. *Using Zoom Videoconferencing for Qualitative Data Collection: Perceptions and Experiences of Researchers and Participants.* International Journal of Qualitative Methods Vol 18: 1–8. Sage

ECDC. 2020. *Novel Coronavirus Disease 2019 (COVID-19) Pandemic: Increased Transmission in the EU/EEA and the UK – sixth update.* European Centre for Disease Prevention and Control. https://www.ecdc.europa.eu/sites/default/files/documents/RRA-sixth-update-Outbreak-of-novel-coronavirus-disease-2019-COVID-19.pdf (retrieved 20 April 2020)

Forbes Insight. 2017. *Why Your Company Needs to Embrace Video Conferencing Now.* Forbes Media ILC.https://www.forbes.com/sites/insights-zoom/2017/10/30/5-reasons-why-your-company-needs-to-embrace-video-conferencing-now/#1e8a170447c4 (retrieved on 2 May 2020)

Hensley, Laura. 2020. *Social Distancing is Out, Physical Distancing is In-Here's How To Do It.* Global News. Corus Entertainment Inc. https://en.wikipedia.org/wiki/Social_distancing#cite_note-WHO_20200320-1 (retrieved on 20 March 2020)

Lorenz, Taylor; Griffith, Erin; Isaac, Mike . 2020. *We Live in Zoom Now*. The New York Times. ISSN 0362-4331. (Retrieved on March 23, 2020)

Noname. 2014. *User-Friendly.* Techterms. https://techterms.com/definition/user-friendly (retrieved 2 May 2020)

Noname. 2020. *Engaging Your Learner With Video in the Classroom : Zoom Best Practices and Tips.* Center for Innovation in Teaching and Research. http://www.wiu.edu/CITR/resources/tip_sheets/zoom/using_zoom.pdf (retrieved on 20 April 2020)

Rop, K.V. & Bett, Nelson. 2012. *Video Conferencing and Its Application in Distance Learning.* Annual Interdisciplinary Conference, The Catholic University of Eastern Africa, Nairobi Kenya., Volume: 1 (Retrieved on 7 May 2020)

Smith, Kendra. 2008*. Architect's Sketches : Dialogue and Design.* Architectural Press. USA. https://www.academia.edu/30113957/Architects_Sketches_Dialogue_and_Design (retrieved on 2 May 2020)

Walsh, Nial. 2020. *Tips for Architects Working at Home During Covid19.* Archdaily. https://www.archdaily.com/936082/tips-for-architects-working-at-home-during-covid-19 (retrieved 20 April 2020)

World Health Organization. 2020. *Coronavirus Disease (Covid-19) Advice for Public.* https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public (accessed on 1 May 2020)

YDP.2020. *Covid19 : Patchy Response to President Call to Work From Home.* The Jakarta Post. https://www.thejakartapost.com/news/2020/03/16/covid-19-patchy-response-to-presidents-call-to-work-from-home.html (retrieved on 1 April 2020)