THE ROLE AND CHALLENGES OF ARTIFICIAL INTELLIGENCE IN DIGITAL ILLUSTRATION WORK AT DB 2.4 STUDIO SURAKARTA

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> Abstract: Artificial Intelligence (AI) comes as a new form of technological development, which offers to help digital- based human work. In the field of digital illustration, the presence of AI is strongly suspected to have provided some significant changes in the creative work process. The presence of AI seems to be a new partner in collaboration. But on the other hand, the presence of AI also provides various challenges for illustrators in the existence of their work. This research examines: (1) how do illustrators at DB 2.4 Studio utilize AI in their creative work process?; (2) what are the challenges that arise from the presence of AI in digital illustration work? Using gualitative methods with case studies. The research aims to analyse how AI plays a role in the world of digital illustration for illustrators, as well as the challenges that arise due to the presence of AI for the digital illustrator profession. AI plays an important role in helping the illustrator's work process at DB 2.4 Studio, namely as a spark of ideas and helping communicate the brief between the client and illustrator more effectively and efficiently. In order not to be displaced by AI, illustrators must have a good social network, utilize various digital platforms, develop creativity and unique, good communication with clients, and solve problems.

Keywords: artificial intelligence, role of AI, digital illustration, challenges

Introduction

Currently, human life has been faced with an era called the digital era. This is marked by rapid progress through development and the results of transformation into digital-based technology. The transformation ultimately brings changes to all aspects of human life that are fast-paced, easy and efficient (Setiaji, 2023). By definition, digitization can be interpreted as the transformation of all types of information including text, sound, video, visuals, and other data from various sources into digital language (Machekhina, 2017). This view is reinforced by (Wuryantai, 2013) which states that digitization is a process in which all forms of information, whether numbers, words, images, sounds, data, or motion, are coded into bits (binary digits or commonly symbolized by the representation of 0 and 1) so as to enable manipulation and transformation of data (bit streaming). Digitalization occurs in all aspects of the field of information, communication, economy, health, industry, and education and in the field of art (Setiaji, 2023).

As technology develops, then humans begin to create smarter technology, which is often called "Artificial Intelligence". Artificial Intelligence (AI) is a concept that has been part of public discourse for decades, often depicted in science fiction movies or in discussions about the possibility of intelligent machines taking over the world and making humans mere slaves in a new AI-dominated order (Dwivedi et al., 2021).

Artificial Intelligence (AI) is a branch of computer science related to the simulation of intelligent behaviour on computers. Although this definition seems simple, experts in the field have not reached a consensus on what intelligence really means. However, some AI experts argue that something is considered 'acting intelligent' if: (1) its actions are appropriate to its situation and purpose; (2) have the ability to adapt to changes in the environment and goals; (3) can learn from experience; and (4) making informed decisions taking into account limitations in perception and computing (Wahl et al., 2018).

In Indonesia, AI is also often used in a creative economy work. According to the



2025 Creative Economy Development Plan (Ministry of Trade, 2008) that the creative economy is an industrial sector that arises from the use of creativity, skills, and talents of individuals to produce welfare and create jobs through the development and utilization of creativity and innovation. From this definition, it can be concluded that the creative industry utilizes creativity and innovation with the aim of channelling skills and talents, so that it can create job opportunities through this creativity (Rusdi & Sukendro, 2018).

One of the creative economy fields often uses AI in its work is illustration. In its development, illustration became an expression of visual language, so aesthetic considerations became important, especially in the process of developing creativity, imagination and exploration of techniques, including the use of techniques that is able to support the illustration image, to create certain effects. Done (in Ulfah & Budiwiwaramulja, 2019) said that illustration is the art of telling a story with pictures, the characters are alive, and the ideas are clear.

At this time, illustrator workers are starting to switch from manual (using paper, canvas, paint, or ink) to digital with computers and applications. The consideration is simple, namely because creating illustrations digitally can speed up work that is not limited by space and time, and can also be easily duplicated (Al-Az, 2024). Illustrators in their work eventually form a kind of network, both between illustrators in long-distance relationships and teamwork in the form of work studios. One of the studios in Surakarta, namely "DB 2.4 studio", is a form that depicts a team working in an illustration project. The DB 2.4 studio consists of 6 illustrators and has 2 work systems, namely individual project work and project as a team.

DB 2.4 Studio is located in Nusukan Village, Banjarsari District, Surakarta City and has various activities, including: Working on illustration projects, discussions, training, and graffiti. Related to the illustration making process, DB 2.4 is ultimately open to all possibilities of dynamic technological advancement, including using AI (Artificial Intelligence). Seeing this, this research is ultimately interested in exploring in depth related to (1) How illustrators in DB 2.4 Studio use AI in their creative work process, (2) Challenges that arise from the presence of AI in digital illustration work in DB 2.4.

Method

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The research method used in this article is a qualitative research method. Bogdan and Tylor briefly define that qualitative research is a method that produces descriptive data in the form of words, both in writing and orally (Ratna, 2016). Qualitative research is descriptive and tends to use an inductive approach so that in the process and meaning it highlights the subject's perspective more (Setiaji, 2023). The research strategy used is a single case study pinned. The single case study case model is suitable for the presentation of a single perspective reality and is focused on one characteristic goal, meaning that this research is carried out in one location, and then the case study is a single case study (Sutopo, 2002). Data collection techniques are carried out through interviews, direct observation, and analysis of documents or archives. The analysis used is descriptive analysis by looking for literature or reference sources from journals, articles, research results and books that are relevant to the research. This study explains how illustrators in DB 2.4 Studio use AI in their creative work process and the challenges that arise from the presence of AI in digital illustration work in DB 2.4.

Discussion and Results

This research tries to dig deeper into the application of AI in the work process at DB 2.4 Studio, Surakarta and the challenges that arise from the presence of AI in illustration work. This study uses a case study in DB 2.4 Studio by exploring the process of making illustrations carried out by each illustrator in DB 2.4 Studio which totals 5 people. From the process, the 5 people then found a conclusion related to how illustrators in DB 2.4 Studio can utilize AI technology in their work process. In this study, direct interviews were conducted regarding opinions regarding the challenges for illustrators due to the current emergence of AI.

1. DB 2.4 Studio

DB 2.4 Studio is a workplace as well as a community engaged in digital illustration services since 2019 in Surakarta, precisely on Jl. Merbabu 1, Nusukan, Banjarsari District, Surakarta. The name DB 2.4 Studio is taken from one of the rooms in the UNS Student Dormitory (Sebelas Maret University), namely Building D, section B, 4th floor, room number 2. The number in the room reads DB 2.4. The location of the UNS Student Dormitory is in Jebres Village, Jebres District, Surakarta.

Simply put, the studio was formed because its members have the same background, namely alumni of FKIP Fine Arts UNS students who coincidentally have the same anxiety, mission, and desire to develop art into the digital realm consistently.

Initially, the members of DB 2.4 consisted of 5 people, namely Faiq Al-Az, Farkhan Muhammad Amin, Aufa Faizul Malik, Galih Anggit Prasetyo, and Rudiyanto. Then after changing places, now the members are 6 people, namely



Faiq Al-Az, Farkhan Muhammad Amin, Galih Anggit Prasetyo, Rudiyanto, Tegar Bima Prayoga, and Satria Yuwan Indonesia.

Although BD 2.4 is an illustration studio, the activities carried out are not only working on illustration projects. Activities at the DB 2.4 studio include: Digital illustration services via web and social media, selling NFT works on Opensea, workshops, trainings, discussions, and graffiti/mural events.

To create digital illustrations, DB 2.4 Studio uses tools in the form of PCs/ Laptops and Ipads. The software used is Adobe Photoshop and Procreate. Meanwhile, the website or service platforms used in selling illustration services through Fiverr, Opensea, Instagram, X, and contests.

2. How Illustrators in DB 2.4 Studio Utilize AI in Their Creative Work Processes

The presence of AI is an important part of the process of creating illustrations in DB 1.4 Studio. Although it does not make AI instantly without doing the drawing process, the presence of AI becomes a partner in collaborating, becoming a solution, and making work more effective and efficient. In this case, it is important for an illustrator to accept every technological development that exists even through filtering in considering various aspects in it (Yuwan, 2024).

The AI used in DB 2.4 Studio is used for brainstorming in text, visual processes, and communication (AI-Az, 2024). Some of the AI applications that have been used in DB 2.4 Studio are divided into 2 bases, namely text and visuals. Text AI, DB 2.4 Studio uses Chat GPT and Gemini AI, while visual-based AI, DB 2.4 Studio uses Copilot, Leonardo, Dall-e, Midjourney, Adobe Firefly, Remini, and Adobe Photoshop's Generative Fill (Amin, 2024).

There are various ways and strategies carried out by illustrators or artists in utilizing AI in the process of working. Here's how illustrator does it in DB Studio 2.4.

A. Galih Anggit Prasetyo

Galih Anggit Prasetyo is an illustrator who chooses dark art, horror, or metal themes in his work. Detailed lines, solid colours, and creepy objects, such as skulls, corpses, or bloody scenes, characterize his work.

Galih Anggit Prasetyo utilizing the 'Fiverr' web service and social media in the form of Instagram in selling and offering digital illustration services. In his work, Galih Anggit Prasetyo uses Adobe Photoshop with a tablet pen tool with a PC/ laptop.

The following is the process of making illustrations carried out by Galih Anggit Prasetyo using Al.

1. Brief

The initial process starts from a brief (work concept) from the client, which contains important things that must be done by the illustrator. In this case, the web service used is Fiverr.

humaald Last seen: 2 months ago Local time: 22 Sept 2024, 14:59	
G	humaald 30 Jun 2024, 1:35
-	1-The design
	2-The logo with a different triangle inspired from the design
	3-"Revive" with a special font
	4-letters "S,M,L" with the same special font
	5-Revive by "Darkwear" with the same special font
	6-I wants to have a final t-shirt design for the advertise
	The 3 in the logo must stay the same you only change the triangle

Figure 1. Brief from the client on Fiverr web (Source: Galih Anggit Prasetyo, 2024)

2. Reference Search with AI

After receiving a brief, Galih Anggit Prasetyo then carried out a reference search process. At this stage, Galih Anggit Prasetyo uses the help of AI, namely using Copilot AI to get an overview of the shape that is in accordance with the representation of the desired idea and brief.



Figure 2. Al results from Galih Anggit Prasetyo using Copilot Al. Source: Galih Anggit Prasetyo, 2024

2 Al images were obtained in the process carried out by Galih Anggit Prasetyo. Furthermore, the images obtained are used as a reference to make objects to determine the shape, expression, anatomy, and dark light in sketching.

3. Sketching

This process is carried out by tracing/drawing on the reference. In this process, Galih Anggit Prasetyo did not redraw exactly the same as the reference, but made modifications according to his imagination and characteristics. This is done to maintain the distinctiveness, uniqueness, or identity in the work.

4. Detailing and Inking

After the rough sketch as an image of the object is completed, the next stage is the inking and detailing process by tidying up the details of the lines and black blocks to get the desired details. In this process, Galih Anggit Prasetyo also added a background to add a livelier atmosphere.



Figure 4. Detailing Line and Inking. Source: Galih Anggit Prasetyo, 2024

5. Colouring and Finishing

This process is the final stage in the making of illustrations carried out by Galih Anggit Prasetyo. At this stage, the colouring is determined according to the characteristics of the colour that is often chosen by Galih Anggit Prasetyo with solid and bright colours. The final stage then adds gradations, shadows, and text to the work.

Figure 5. Colouring and Finishing Process. Source: Galih Anggit Prasetyo, 2024



B. Rudiyanto

Rudiyanto is an illustrator whose work has vintage, retro, or 80s-90s illustration themes. The process of work carried out by Rudiyanto is actually not much different from that carried out by Galih Anggit Prasetyo. However, in this study, there is a different case in the process carried out by Rudiyanto, namely how AI is used to help the communication process between the client and the illustrator. The web service used by Rudiyanto is Fiverr, while in the process of making illustrations; Rudiyanto uses an Ipad with procreate software. The following is the process of making the illustration.

1. Brief

In the early stages, the client sent a brief to Rudiyanto in detail with clear points. Then to determine the desired visuals, both in terms of composition, perspective, and proportions, the client creates illustrations as a key reference using AI. The position of AI here is as a medium to provide more detailed clarity on how the visual achievement that the client wants if the photo reference is not able to represent the concept.



Figure 6. Brief and Reference AI from Client. Source: Rudiyanto, 2023

2. Sketching and Inking Process

At this stage, after getting a brief and reference from the client, Rudiyanto then made a sketch. Unlike Galih Anggit Prasetyo who carried out the process of making a rough sketch first to continue with the inking, the sketching and inking process carried out by Rudiyanto was carried out simultaneously.



Figure 7. Sketching and Inking Process by Rudiyanto. Source: Rudiyanto, 2023

3. Colouring and Finishing Process

After the inking process was completed, Rudiyanto then continued the colouring and finishing process. The colouring process is carried out by doing a colouring process that is adjusted to Rudiyanto's characteristics, namely using colours that tend to be dull typical of classic colours that are not bright. In the finishing stage, Rudiyanto added details such as highlights, textures, and text to add dramatic effects to his work.

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Figure 8. Colouring and Finishing Process by Rudiyanto. Source: Rudiyanto, 2023

C. Farkhan Muhammad Amin

Farkhan Muhammad Amin is an illustrator with an illustration style that combines cartoons with ukiyo-e (classic Japanese painting style). Farkhan uses several platforms to sell his illustrations, including Fiverr, Opensea, and X. In the process of making illustrations, Farkhan uses an Ipad with procreate software. The following is the process of making illustrations that Farkhan did on the Fiverr website.

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1. Brief and Reference

In this process, this study found cases that can be said to be experienced in the process carried out by Galih Anggit Prasetyo and Rudiyanto at the same time.

First, the client sends a Farkhan brief accompanied by a reference to the AI results from the client.

Figure 9. References from Client using Al. Source: Farkhan Muhammad Amin, 2024

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2. Reference Search with AI

At this stage, unlike Rudiyanto who slightly modified the reference from the client to an illustration, Farkhan actually processed the AI results with the client using Copilot AI in 3 stages. In the first stage, Farkhan determines the figure/ model using AI in 2 processes, and then Farkhan determines the background using AI.



Figure 10. The process of creating references by Farkhan with Copilot Al. Source: Farkhan Muhammad Amin, 2024



3. Line Making Process

The process of making the line carried out by Farkhan is not only tracing from the references obtained, but is still processed again according to the style that is Farkhan's signature. Turning it into an ukiyo-e cartoon style.



Figure 11. Line Process by Farkhan. Source: Farkhan Muhammad Amin, 2024

4. Colouring

At this stage, Farkhan does colouring using ukiyo-e colours, which tend to be dull/not bright.



Figure 12. Colouring Process by Farkhan. Source: Farkhan Muhammad Amin, 2024

5. Finishing

At this stage, Farkhan adds details such as shadows, highlights, textures, and text.



Figure 13. Finishing Process by Farkhan. Source: Farkhan Muhammad Amin, 2024

D. Satria Yuwan Indonesia

Satria Yuwan Indonesia is an illustrator who has a visual pop art style with psychedelic themes. Yuwan's works are often in the form of characters accompanied by solid and bright colours. Yuwan chose several digital platforms to sell his illustrations, including on Opensea in the form of NFTs, Instagram, and Fiverr web. In the process of making works, Yuwan uses 2 tools, sometimes PC/Laptop, sometimes Ipad. The software used is Adobe Photoshop and Procreate. The following is the process of creating an illustration from Yuwan from the Fiverr website.

1. Brief

The first stage is for the client to send a brief to Yuwan briefly. At this stage, unlike some illustrators who get visual references, Yuwan is free to make illustrations according to his imagination.

The concept of the illustration is "the world is your oyster" so i would like it to be awoman (looks like a modern Indian woman, I'll share my Instagram profile and you can take inspiration for face and outfit from there) she is sitting, lounging in an open oyster with pearls, she has a glass of wine with a garnish in the glass (usually ita an olive, i would like it to be the earth)

Figure 14. Brief from Client. Source: Satria Yuwan Indonesia, 2024

2. Reference Search

Because the client did not provide a reference, Yuwan then used AI in the process of brainstorming using Copilot AI to be used as a reference in the illustration making process.

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Prompt Using AI Copilot:

a woman sitting in oyster, pop art illustration style.



Figure 15. Al Prompt and Result by Yuwan. Source: Satria Yuwan Indonesia, 2024

3. Line Making

At this stage, Yuwan really only took a small part of the AI reference part for the tracing process. Most of his work is the result of his imagination in interpreting the brief into the desired object.



Figure 16. Line Making Process by Yuwan. Source: Satria Yuwan Indonesia, 2024

4. Colouring Process

In the colouring process, Yuwan chooses bright colours that are characteristic of his work. At this stage, Yuwan revised several parts of the image, namely hair and body according to the client's wishes. After that, Yuwan added shadow details and highlights to make the image more dynamic.



Figure 17. Colouring Process by Yuwan. Source: Satria Yuwan Indonesia, 2024

E. Faiq Al-Az

Faiq is an illustrator who has the characteristic of 'rough' strokes in his illustrations. The colours in Faiq's work tend to be dull, not bright, and the dark-light game is an important aspect of his work. Many of his works are inspired by grunge, punk, and similar styles, so spontaneous strokes are very noticeable in his work. In the process of making Faiq's work using a PC/Computer with Adobe Photoshop software. The web service used is Fiverr. The following is the process of making illustrations of Faiq Al-Az.

1. Brief and Reference

This is the initial stage, where the client sends the desired brief and reference to be used as a reference for Faiq in working on illustrations.

Hi my friend, I have a new series for you. Want to do 3 posters highlighting the environmental issues of WIND TURBINES. It truly is a terrible issue here in Australia.



Figure 18. Brief and Reference from client. Source: Faiq Al-Az, 2024

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2. Modifying References

This stage is a process where Faiq modifies the references from the client to adjust the proportions and perspectives to match the desired composition. At this stage, Faiq uses the AI feature of Adobe Photoshop, namely Generative Fill to add the cropped object to the canvas plane.



Figure 19. Reference Modification Process using Generative Fill by Faiq. Source: Faiq Al-Az, 2024

Once the proportions of the process using Generative Fill are complete, the next step is to convert the hill object reference to a barren land that also uses Generative Fill.



Figure 20. Changing objects using Generative Fill by Faiq. Source: Faiq Al-Az, 2024

In the next stage, Faiq added some photos of the object in the reference. The object is adjusted to the concept that the client wants.



Figure 21. The Process of Adding References. Source: Faiq Al-Az, 2024

After adding the photo to the reference, Faiq then carried out the Generative Fill process again by adding a koala animal object to the reference.



Figure 22. Adding Objects with Generative Fill by Faiq. Source: Faiq Al-Az, 2024

3. Line Making

After making modifications from the client reference and it is considered sufficient, the next step is to create a line by tracing the reference. In this process, Faiq chooses brushes according to his characteristics, namely brushes that are similar to pen.



Figure 23. Line Making Process by Faiq. Source: Faiq Al-Az, 2024



4. Colouring and Finishing

At the colouring stage, Faiq usually uses a colour palette that has been prepared in advance, so that the colours in his work have strong characteristics. After that, creating gradation colours and adding shadows and textures carry out the detailing stage.

Figure 24. Colouring and Finishing by Faiq. Source: Faiq Al-Az, 2024



Through the results of the study, it was found that Illustrators in he DB 2.4 studio do not utilize AI by producing AI illustration products instantly to be sold. Illustrators only use the AI results as a reference to then process them into works according to their style. AI is also used to help the discussion process between the client and the illustrator when the brief presented has not yet resulted in an agreement on the visual to be achieved. Regarding text- based AI, illustrators in DB 2.4 Studio also use it to create concept maps or brainstorm ideas when they need new ideas in their work (AI-Az, 2024).

3. Challenges Arising from the Presence of AI in Digital Illustration Work in DB Studio 2.4

In addition to playing a role in assisting illustrators' work in DB 2.4 Studio, AI also presents various challenges that then require illustrators to continue to be creative. Interviewing 5 illustrator members in DB Studio 2.4 then carried out data mining, and the following data was obtained.

Through the interview, there are 5 points that are challenges for an illustrator, including:

- a. As an illustrator, it is important to develop social networks both with fellow illustrators, and the public in general. This is for the sake of establishing a strong emotional bond so that it can attract potential clients to come. Through this bond, clients will appreciate the personality of the illustrator more than using robots in the form of AI.
- b. The need to develop existence by utilizing various platforms in the

publication of works. This aims at the works made can be widely known by the public. Through popular works, it is not impossible to bring the existence of the illustrator as well.

- c. The importance of continuing to develop creativity in processing objects. Processing here can make the resulting image have uniqueness, distinctiveness, and identity in his work.
- d. Establish good communication with clients. This is important to do so that the client orders continuously.
- e. Solution in working on illustration projects. This will make the client have full confidence in the work given to the illustrator. Because basically, clients certainly want every project to run smoothly without obstacles.

Conclusion

- The development of AI in this era of digitalization can ultimately become a useful collaboration partner in helping illustration work in DB 2.4 Studio. The role of AI is not used to create illustration works instantly with all the work using robots, but the AI that has been produced is still being reprocessed according to the results desired by the illustrator. For DB 2.4 Studio members, AI is used in several functions, namely functioning as an idea starter in maturing concepts in written form, helping to brainstorm ideas visually, and helping to communicate with clients virtually so that the work to be created has the same purpose and purpose between the two parties (client-illustrator).
- 2. In addition to playing a role in helping human work, it turns out that the creation of AI also affects the public's view of various types of jobs that have the potential to be taken over by AI. This concern was then responded to by the illustrator's personal view of DB 2.4 Studio as a new way and strategy in his work. There are several points that are important for illustrators to do so that AI does not displace their work. According to DB 2.4 Studio, these important points include: Developing a good social network will have the potential to establish emotional closeness, develop existence by utilizing various digital platforms, develop creativity both skills and ideas to offer uniqueness and characteristics in their work, establish good communication with clients to attract clients to order services back, solutions to all illustrative problems faced in a particular project. These are the various reasons that allow that the illustration services offered will continue to be in demand by clients without being replaced by AI.



References

- Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., Duan, Y., Dwivedi, R., Edwards, J., Eirug, A., Galanos, V., Ilavarasan, P. V., Janssen, M., Jones, P., Kar, A. K., Kizgin, H., Kronemann, B., Lal, B., Lucini, B., ... Williams, M. D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. International Journal of Information Management, 57, 101994. https://doi. org/10.1016/j.ijinfomgt.2019.08.002
- Machekhina, O. N. (2017). Digitalization of education as a trend of its modernization and reforming. Espacios, 38(40).
- Ratna, Nyoman Kuntha. (2016). Metodologi Penelitian Kajian Budaya dan Ilmu-Ilmu Sosial Humaniora pada Umumnya. Yogyakarta: Pustaka Pelajar
- Rusdi, F., & Sukendro, G. G. (2018). "Analisis Industri Kreatif dalam Memanfaatkan Identitas Kota Melalui Media Baru." Jurnal Komunikasi, 10(1), 95.
- https://doi.org/10.24912/jk.v10i1.1221
- Setiaji, R. S. (2023). "Berkarya Seni Visual Di Era Digital." Visual Heritage: Jurnal Kreasi Seni Dan Budaya, 5(2), 272–280. https://doi.org/10.30998/vh.v5i2.8241
- Ulfah, T., & Budiwiwaramulja, D. (2019). ANALISIS KARYA GAMBAR ILUSTRASI TEKNIK ARSIR SISWA KELAS VIII DI SMP SWASTA TUNAS KARYA BATANG
- KUIS. Gorga: Jurnal Seni Rupa, 8(1), 279. https://doi.org/10.24114/gr.v8i1.13642 Wahl, B., Cossy-Gantner, A., Germann, S., & Schwalbe, N. R. (2018). Artificial intelligence
- (AI) and global health: how can AI contribute to health in resource-poor settings? BMJ Global Health, 3(4), e000798. https://doi.org/10.1136/bmjgh-2018-000798
- Wuryantai, A. E. W. (2013). Digitalisasi Masyarakat: Menilik Kekuatan dan Kelemahan Dinamika Era Informasi Digital dan Masyarakat Informasi. Jurnal ILMU KOMUNIKASI, 1(2), 131–142. https://doi.org/10.24002/jik.v1i2.163