# THE DESIGN OF WEBSITE-BASED DIGITAL GALLERY IN SUPPORTING THE NATIONAL COMIC INDUSTRY

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### **Abstract**

Comics nowadays are a big business and become a source material for various sectors in the creative industry; not only are they used for entertainment needs, but they are also adjustable for the strategic values of using digital comics in learning which can be a solution during the Covid 19 pandemic. The purpose of this study is to develop a website-based digital gallery that can facilitate learning in seeking artwork references and visual experiences based on the design of institutional curriculum. This research was conducted by making a website-based digital gallery design which is a display of the artwork of the art and visual communication design students. The manufacture of the website-based digital gallery displaying student works is an effort to see supporting potential in the national comic industry. However, there is still lack of readiness of the students to professionally support the industry, so that it requires advanced learning to further optimize the potential of students. This media will be a self-evaluation of teachers and schools to increase students' capacity and performance.

Keywords: Comic industry, Design media learning, Website-based digital gallery.

### 1. Introduction

One of the currently developing fields of the visual arts industry and the creative industry is the comics. The comics today are big business and a source of material for various sectors in the creative industry, which require substantial investments to turn it into a successful cross-media [1]. Comics, after the influence of manga as Japanese pop culture, has become a globally mainstream creative industry, not only in Asia, but also in America and Europe [2-5]. Comics has become a commodity in the transnational era which is influenced by global comic trends (including manga) to create comics that promote local narratives yet with global market quality [6]. Comics differ from other industries because of the limited number and valence of indicators and measures of commercial and artistic success. Because as a result of a creative, expressive, artistic process, comics should not be different from other entertainment products. At the same time, comic books are commercial products for sale. In this regard, the innovative comics' level of quality of may represent another important dimension of success along with popularity and commercial profitability [7]. The comic segment in the context of the creative industry has achieved economic and cultural importance, so the process of recruiting professionals in this field is essential [8-10].

Digital comics are a change in the comics definition from media point of view and the context in which they are created, presented, and read [11, 12]. Visually, nothing has changed between the printed analog comics and the digital one, but media formats allow for various adjustments, such as pairing with animation or inserting sound effects [13]. These adjustments certainly require adaptation from the side of the comic artists, their team, and the readers. This will certainly open up opportunities for the human resource recruitment with the necessary capacities. The presence of digital comics is currently in line with media developments and fulfilment of entertainment needs in terms of movement restrictions during the Covid-19 Pandemic.

Comics today are not only fulfilling entertainment needs, but also are capable of doing other fun things with a visual series approach. Comics can be used to convey learning about science, character development, environmental care and even those related to medical treatment. Descriptive narrative comic content provides a more real and interesting picture than textbooks or lectures [14-17]. This has the potential to increase the reader's enthusiasm for certain things. The strategic value of using digital comics in learning can be a solution during the Covid 19 pandemic where learning is mostly done digitally [18-21]. Digital-based learning also needs to be supported by internet-based technology tools/devices in the form of applications, websites, and several technology models used in learning interaction and communication [22-24]. The blended learning method is widely regarded as an approach that combines the benefits provided by face-to-face and online learning components, but in practice there are obstacles and challenges faced by teachers and students related to mastering the technology [25-28].

To support the creative industry in the professions in the field of visual arts and visual communication design, especially the comic industry, it is necessary to recruit through the incubation of human resources from educational institutions. For this reason, it is necessary to form a media that is used to facilitate teaching and learning activities as well as media to display portfolios online. There have been many studies on the creation of online teaching and learning media, but there are

still few that facilitate in the field of visual arts and visual communication design, especially digital galleries. The purpose of this research is to develop a website-based digital gallery to facilitate learning in finding references to work and visual experiences based on the curriculum designed by the institution. This digital gallery will be useful for teachers and students in creating media to present the student work to the public and industries related to graduate competencies and introduce the creative industry to teachers and students, especially the comics industry to be more competitive at the global level and provide global benefits in the economic, social, and cultural fields.

## 2. Methods

Art gallery is a form of participation in creating shared value for visitors (customers), providers, other stakeholders, and how this process can be conceptualized in a website-based digital system service. Professionalism in developing a digital art gallery can create added value both economically, scientifically, socially and culturally [29]. The online gallery format is a medium that adopts the latest technology and has its own power in making changes in education [30]. The design of web-based digital exhibition media in the context of the national comic industry is carried out through stages, namely: The use case design, activities for administrator and user, and site map making.

## 2.1. Use case design of administrator and user

The use case design of administrator and user is an overview of the system that can be managed by the administrator (Fig. 1(a)). The use case design for the user is part of the system that can be accessed by the user on the provided website system (Fig. 1(b)).

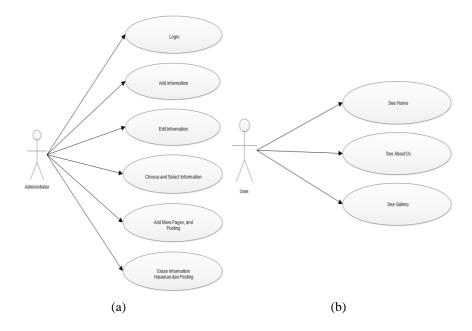


Fig. 1. (a) Use case administrator (b) Use case user.

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# 2.2. Activity design of administrator and user

The activity design of administrator and user is a web-based digital gallery system work series, which displays the sequence of activities carried out by the administrator and user. Activities in the system include the initial process, the decision-making process, and the good final result by the administrator (Fig. 2) and the user (Fig. 3).

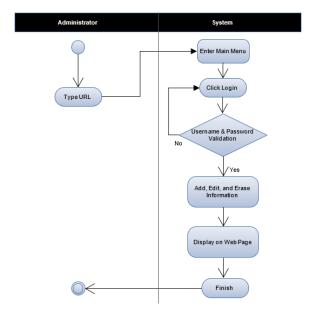


Fig. 2. Administrator activities.

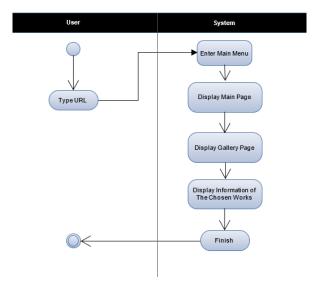


Fig. 3. User activities.

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## 2.3. Site map design

The design of the site map (Fig. 4) aims to make the website-based digital gallery system easily accessible to visitors by displaying menus and sub-menus. However, both the menu and the sub menu must have at least one hyperlink to the related page.

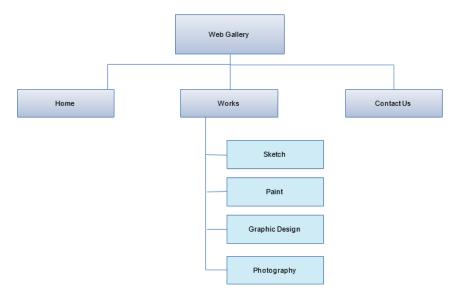


Fig. 4. Site map.

Figure 5 shows a site map of a website-based digital gallery system that displays: Home, which contains general information about the school; Works, which contains student works; About Us, which provides information about contact persons from the school; Content, which contains the display room system on the website; and Footer, which presents information about the creator and ownership of a website-based digital gallery system.

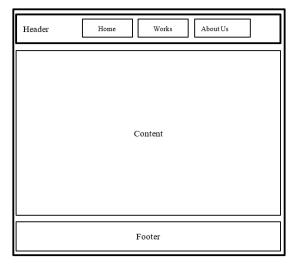


Fig. 5. Site map layout.

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## 3. Results and Discussion

The website-based digital gallery system application is a place for work that can accommodate student work, especially in visual form. The complete address of this digital gallery application website is https://galerismkn9solo.id/. The digital gallery displays different activities from the admin and user sides. Figure 6 shows the site map of the home page and Fig. 7 shows the Work page which contains a variety of student works. Meanwhile, Fig. 8 is the "About Us" page and Fig. 9 is the website view from the admin side. The visual appearance will be different from the Admin side because the Admin has the task to operate the system based on the coding that has been made.

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Fig. 6. Display of website admin.

The developed website-based digital gallery application is used by students as learning resources that prioritize aspects of using the latest technology. The use of information technology is proven to strengthen students' understanding in the learning process. The characteristics of students in the millennial era who are attached and close to the use and application of new media technology dominate the learning process carried out. Therefore, the use of new media technologies such as the internet, websites, video and digital animation is considered to help introduce cartoon and comic arts globally [31].

The development of fine arts learning so far has only been carried out by teachers and students limited to their own imagination and packaged in conventional face-to-face learning. This application tries to offer a transformation from conventional learning into a digital learning model that is more collaborative and having real-world relationships and relevance in the professional field. Therefore, the development of digital learning in arts will continue to collaborate and have meaning that is relevant to students and their own professional fields [32].

Knowledge of fine arts must be presented in an interactive and communicative approach between teachers and students. The interaction between teachers and students in the learning process has interesting interactions and relationships, where

educators must be flexible and know how to communicate learning content to students so that the same understanding and perception occurs [33]. The understanding of art material is indeed very flexible and has different levels of interpretation and understanding from students who are influenced by students' visual experiences.

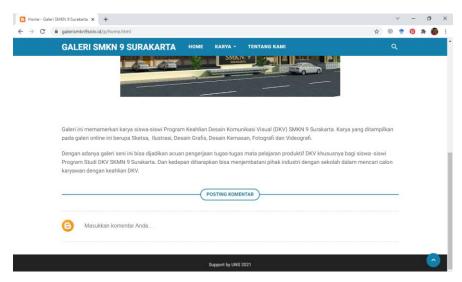


Fig. 7. Home page.

The field of fine arts, especially drawing lessons, is an experimental area because the results of drawing have structures beyond understanding the unique data to the outside world or being able to transfer that data completely. Some art teachers find it difficult to explain the drawing process in words because it is a complicated process [34].

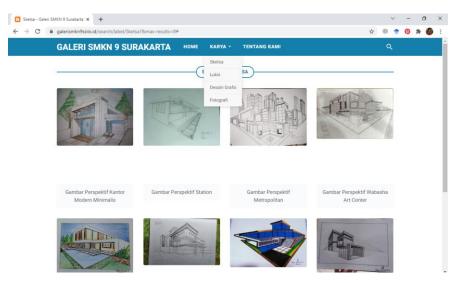


Fig. 8. Category page and examples of student work.

The millennials young generation who is identical with online activities are often carried away by the currents of changing popular culture that rapidly changes and uniquely appears in various places and times. Globalization which is transferred through technological sophistication brings convenience to human life in the modern era.

The digital transition is starting to change the way people read comics so that there are more comics on smartphones and tablets, and fewer paper-based comics. The digital transition also has the opportunity to change the way comics are produced, distributed and read in the future [35]. Many readers view comics and cartoons for entertainment, whereas they can also inform, as well as inspire [36].

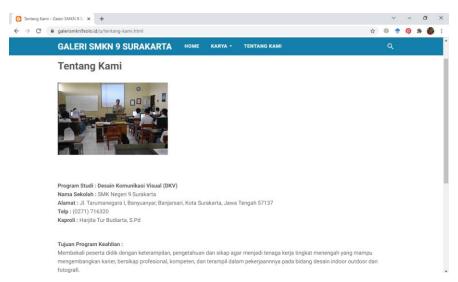


Fig. 9. "About Us" page.

The development of the national comic industry today is very rapid. This is because comics have become a commodity and a global trend [37]. The popularity of the comic industry was adopted into films in America and Europe and became a commodity that boosted national economies such as Japan and Korea [38, 39]. Massive production requires extraordinary discipline, so that it requires sufficient human resources, especially in jobs that require drawing skills, such as penciler, inker, and colouring artist professions. These professions are jobs that require teamwork where each part is done by more than one person.

Recruitment of prospective workers in the comic industry can be taken from people who study in the art institutions as well as people who study art on a self-taught basis. The creation of media such as digital galleries will certainly make it easier for the industry to select prospective workers through the displayed portfolio track record, which will be assessed from (1) aspects of creative ability such as technical and media mastery, (2) sense of art and imagination, (3) reference to the style adopted, and (4) discipline in work.

The presentation of student work displayed in a website-based digital gallery as an effort to meet the needs of the comic industry recently shows that students have not been ready to jump into the industry. This can be seen through technical and

media mastery which still requires a lot of training and learning. Likewise, the sense of art and imagination are still lacking. This can be overcome by increasing the visual experience and enriching visual references. The visual style adopted is a style that is currently a trend among students' ages, namely the manga or manhwa style [40, 41]. These styles are easily found by students and their generations through media, such as internet websites, applications, social media, merchandise, printed comics and many other media that display exposure to this style. While the discipline of work is shown in the technical work, the selection of media formats, as well as the willingness to understand the brief and material from the teacher. In addition, discipline is one of the important soft skills in industry professionalism.

## 4. Conclusion

This website-based digital gallery is a showcase of the works of students in the fields of Visual Arts and Communication Design. Not all students have the same interest in an industry, including comics. Through a website-based digital gallery, of course, the creative and other arts industries will also be easy to see and choose the necessary resources. Other industrial fields that have the opportunity to access the digital gallery include graphic design, film, animation, games, and many more industries. The creation of a website-based digital gallery that displays student work is an effort to see the potential that supports the national comic industry. However, through the gallery, it can also be seen the level of readiness of students' works to enter the industrial. It is still too early to support the industry professionally, thus requiring further learning to optimize students' potential. The media will be a self-evaluation of the teachers and schools to increase their capacity and performance to stay focus and up to date.

## References

- 1. Schroff, S. (2019). An alternative universe? Authors as copyright owners-the case of the Japanese Manga Industry. *Creative Industries Journal*, 12(1), 125-150.
- Woo, B. (2018). Is there a comic book industry? *Media Industries Journal*, 5(1), 27-46.
- 3. Klaehn, J. (2021). Talking manga: bringing Japanese pop culture to the North American mainstream. Retrieved September 10, 2021, from https://www.tandfonline.com/doi/abs/10.1080/21504857.2021.1926300.
- 4. Oóhagan, D.M. (2007). Manga, anime and video games: Globalizing Japanese cultural production. *Perspectives*, 14(4), 242-247.
- 5. Nijdam, E. (2020). Transnational girlhood and the politics of style in German Manga. *Journal of Graphic Novels and Comics*, 11(1), 31-51.
- 6. Junid, I.; and Yamato, E. (2019). Manga influences and local narratives: ambiguous identification in comics production. *Creative Industries Journal*, 12(1), 66-85.
- 7. Addis, M.; and Troilo, G. (2016). Humanizing a superhero: An empirical test in the comic books industry. *International Business Research*, 9(11), 189-200.
- 8. Batista, P.C.D.S.; Paiva, T.A.; Ramos, R.R.; Almeida, P.C.D.H.; and Oliveira, L.G.L. (2011). The contractual relations of the creative industries: the case of the comics sector in Ceará. *Cadernos EBAPE*. *BR*, 9, 377-393.

- 9. Kamil, A. (2015). Industri kreatif Indonesia: Pendekatan analisis kinerja industri. *Media Trend*, 10(2), 207-225.
- 10. Burhanudin, M.; Rindayati, W.; and Anggraeni, L. (2020). Analysis of Creative Industries Development in Indonesia. *International Journal of Sciences: Basic and Applied Research (IJSBAR)*, 49(1), 195-205.
- 11. Aggleton, J. (2018). Defining digital comics: a British Library perspective. Retrieved September 11, 2021, from https://www.tandfonline.com/doi/epub/10.1080/21504857.2018.1503189?needAccess=true.
- 12. Baudry, J. (2018). Paradoxes of Innovation in French Digital Comics. *The Comics Grid: Journal of Comics Scholarship*, 8(1), 1-24.
- 13. Wilde, L. (2015). Distinguishing mediality: The problem of identifying forms and features of digital comics. *Networking Knowledge: Journal of the MeCCSA Postgraduate Network*, 8(4), 1-14.
- 14. Koutnikova, M. (2017). The application of comics in science education. *Acta Educationis Generalis*, 7(3), 88-98.
- 15. Munawwaroh, E.L.; Priyono, B.; and Ningsih, M.R. (2018). The Influence of science comic based character education on understanding the concept and students' environmental caring attitude on global warming material. *Journal of Biology Education*, 7(2), 167-173.
- 16. Ashwal, G.; and Thomas, A. (2018). Are comic books appropriate health education formats to offer adult patients?. *AMA journal of ethics*, 20(2), 134-140.
- 17. Rina, N.; Suminar, J.; Damayani, N.; and Hafiar, H. (2020). Character education based on digital comic media. *International Journal of Interactive Mobile Technologies (iJIM)*, 14(3), 107-127.
- 18. Moser, K.M.; Wei, T.; and Brenner, D. (2021). Remote teaching during COVID-19: Implications from a national survey of language educators. *System*, 97, 1-41.
- Iglesias-Pradas, S.; Hernández-García, Á.; Chaparro-Peláez, J.; and Prieto, J. L. (2021). Emergency remote teaching and students' academic performance in higher education during the COVID-19 pandemic: A case study. *Computers in Human Behavior*, 119, 106713.
- 20. Selvaraj, A.; Radhin, V.; Nithin, K.A.; Benson, N.; and Mathew, A.J. (2021). Effect of pandemic based online education on teaching and learning system. *International Journal of Educational Development*, 85, 102444.
- 21. Raja, M.; and Priya, G.L. (2021). Sentiment and emotions extraction on teaching—learning from home (TLFH) and impact of online academic activities in India. Retrieved September 11, 2021, from https://www.sciencedirect.com/science/article/pii/S2214785320400628.
- 22. Mishra, L.; Gupta, T.; and Shree, A. (2020). Online teaching-learning in higher education during lockdown period of COVID-19 pandemic. *International Journal of Educational Research Open*, 1, 100012.
- Lorenza, L.; and Carter, D. (2021). Emergency online teaching during COVID-19: A case study of Australian tertiary students in teacher education and creative arts. *International Journal of Educational Research Open*, 2, 100057.
- 24. Nortvig, A.M.; Petersen, A.K.; Helsinghof, H.; and Brænder, B. (2020). Digital expansions of physical learning spaces in practice-based subjects-blended

- learning in Art and Craft and Design in teacher education. *Computers and Education*, 159, 104020.
- 25. Vadivel, B.; Mathuranjali, M.; and Khalil, N.R. (2021). Online teaching: Insufficient application of technology. Retrieved September 11, 2021, from https://www.sciencedirect.com/science/article/pii/S2214785321005459.
- 26. Lapitan Jr, L.D.; Tiangco, C.E.; Sumalinog, D.A.G.; Sabarillo, N.S.; and Diaz, J.M. (2021). An effective blended online teaching and learning strategy during the COVID-19 pandemic. *Education for Chemical Engineers*, 35, 116-131.
- 27. Rasheed, R.A.; Kamsin, A.; and Abdullah, N.A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers and Education*, 144, 103701.
- 28. Aderibigbe, S.A. (2021). Can online discussions facilitate deep learning for students in General Education? *Heliyon*, 7(3), e06414.
- 29. Williams, M.; Biggemann, S.; and Tóth, Z. (2020). Value creation in art galleries: A service logic analysis. *Australasian marketing journal*, 28(1), 47-56.
- 30. Brown, K. (2021). Screen culture, online auctions, and art market spectacle. Retrieved September 11, 2021, from https://www.tandfonline.com/doi/abs/10.1080/1472586X.2021.1915176.
- 31. Kamal, J.I.; Haw, K.C.; and Bakhir, N.M. (2018). Sustaining Malay comic design: Transformation from paper to digital. *Bandung Creative Movement* (*BCM*) *Journal*, 4(1), 295-298.
- 32. Grenfell, J. (2013). Immersive interfaces for art education teaching and learning in virtual and real-world learning environments. *Procedia-Social and Behavioral Sciences*, 93, 1198-1211.
- 33. Orhun, F.B. (2009). Training and teaching style in accessing a desired classroom discipline at visual art courses. *Procedia-Social and Behavioral Sciences*, 1(1), 692-696.
- 34. Turkmenoglu, D. (2012). Visual perception and drawing relationship in art education. *Procedia-Social and Behavioral Sciences*, 51, 849-852.
- 35. Augereau, O.; Iwata, M.; and Kise, K. (2018). A survey of comics research in computer science. *Journal of imaging*, 4(7), 87.
- 36. Worcester, K. (2017). Comics, comics studies, and political science. *International Political Science Review*, 38(5), 690-700.
- 37. Sutanto, S.M.; and Wardaya, M. (2020). The paradigm shift of comic as storytelling media. *Journal of Visual Communication Design*, 5(1), 61-75.
- 38. Lee, H.K. (2020). Making creative industries policy in the real world: differing configurations of the culture-market-state nexus in the UK and South Korea. *International Journal of Cultural Policy*, 26(4), 544-560.
- 39. Hong, S.K. (Ed.). (2021). *Transnational Convergence of East Asian Pop Culture*. London: Routledge.
- 40. Shum, G.M. (2017). *The Evolution of the Comic Panel in Japanese Manga*. Oregon: University of Oregon.
- 41. Dong-Yeon, K.O.H. (2012). (Un) making the "Korean" Astro Boy Atom: National Manhwa, Korean Pop Art, and Cultural Hybridity. *Korea Journal*, 52(1), 171-205.