

Modest Android Application Development for the Entrepreneurship in Art and Culture Organization

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Abstract— Currently, several platforms to develop an Android Application are available freely at the internet. People who do not have any major in computer science are able to create the mobile application by themselves. The technical aspects on creating the application have been successfully minimized and the creators do not need to type any programming code to create the application. However, most of them need to understand the pattern to create the menu and its function to work. The simplicity in making the Android application could help the managers of art and culture performances to spread the information and knowledge of their business to the modern users. This paper explores the possibility and technical aspects in developing a simple Android application for the entrepreneurship in art and culture organization. The approach in developing the Android application should be able to help the organization that manages art and culture in spreading the information to the people simultaneously.

Keywords— *art and culture, limited budget, mobile application, simple application, technology entrepreneurship*

I. INTRODUCTION

Ngesti Pandawa is an art and cultural organization in Semarang, Central Java Province in Indonesia [1]. It presents Javanese dance dramas with themes taken from the Ramayana or Mahabharata epics called Wayang Orang. In many ways it is similar to the Khon performed at Sala Chalermkrung Theatre in Bangkok. Even though some students in this research reported that the quality of attraction is good, it is rarely seen by the young generation because they could not follow the story and also the message delivered in the performance. The Mahabharata epic in the performance is not familiar for the students.

Based on the preliminary survey of 30 freshmen university students, most of them enjoyed the performance but need more information to understand the story performed on the stage. However, since a different story is performed each week, it would require a lot of paper if the information is to be in the form of a brochure.

Understand the Story

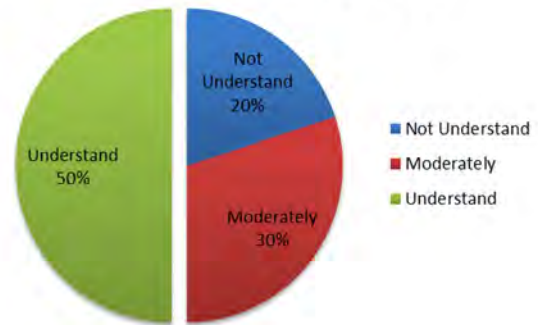


Fig. 1. The preliminary survey shows the understanding of the story

There are 63% of respondents who suggest the owner to add the mobile application to distribute information and disseminate knowledge. They suggested that the mobile application should provide information on the story and a video of performance to be studied by them before they watch the performance. This is based on the fact that the gadget is a familiar tool for the young generation.

Mobile Application Needs

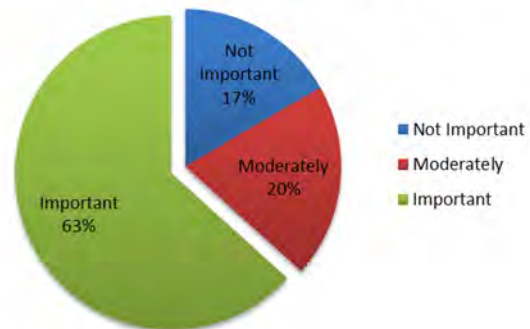


Fig. 2. The preliminary survey shows the understanding of the story

However, it is not easy for Ngesti Pandawa to create a mobile application due to its limited financial resources, lack of knowledge on information technology, and lack of people involved in the organization. Moreover, the maintenance of the application such as regularly updating the information will be

another difficulty they will face in the future. A simpler system should be provided for them in order to make the activity of information updating more sustainable. The up-to-date information and interesting contents will attract the students to enjoy the attraction and get the message of the performance.

Several websites have provided some tools to develop Android applications without any background of computer programming. They give several input forms to be filled step by step by the creator and let the web application generate the Android application [2]. Those websites are www.appyet.com, www.appsgeyser.com, www.appypie.com, and appinventor.mit.edu [3]. Most of them offer very simple features to arrange the application menu and pages, templates to be chosen for layout and application design, and the generator to create the Android application file. It will help the lay person in creating the mobile applications for their purpose, including Art and Culture organizations.

Some technical aspects should be prepared to make everyone in the organization to be able to deliver the information via a gadget. The easiest way is utilizing the website to deliver the content to the mobile application. The website should provide RSS feed to be caught by the mobile application. The presence of RSS can be adopted easily by other applications using their own interface, design, and using simple programming [4]. However, the organization does not have to make the program to provide RSS feed in the website because RSS feed is the common feature in the blogging platforms [5]. WordPress is the preferred blogging platform which is easy to be maintained via Open Live Writer [6]. Open Live Writer is free software that is provided by Microsoft and has similar interface with Microsoft Word. Anyone who is familiar with Microsoft Word can easily use Open Live Writer in writing the content and publish it to the internet. It is suitable for the people in the organization for delivering the information and knowledge on the internet.

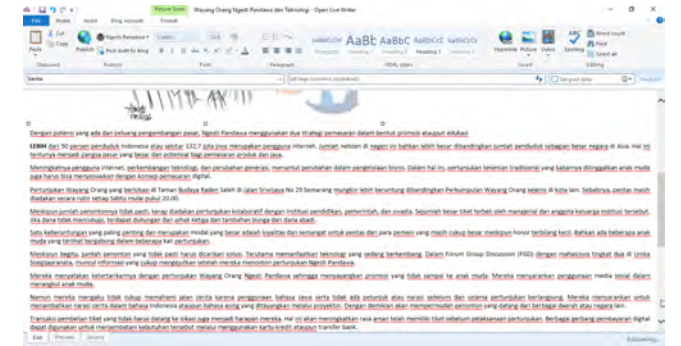


Fig. 3. Open Live Writer to manage the web contents

The web-based tool for creating the mobile application such as appyet.com could be directed to read the RSS feed from the website and show the information to the mobile application. The application developer must create a new module of each information category in the appyet.com and input the URL of RSS feed of each information category. The URL web format usually ended with /category/<selected category>/feed/ after the domain name. The example of RSS feed for news category is <http://www.name.com/category/news/feed/> and RSS feed for learn category is <http://www.name.com/category/learn/feed/>.

Each category can easily be created via WordPress at Category submenu in the Post menu.



Fig. 4. Appyet.com create Android Application

Appyet.com also provides an option to choose the layout of information. It will affect the appearance of the information shown in the gadget. The layout called Card Magazine is suitable to show the video contents or any news with images. It will emphasize the knowledge or the delivering message via mobile application to the reader. The interesting pictures or videos will attract young generation to see more information after clicking the picture or the headline.



Fig. 5. Card Magazine Layout in the application

The final step is packaging the arrangement of information into Android application file. Appyet.com provides a build menu to let the application developer create the application file in just a few minutes. The file can be published via online storage such as Google Drive and Dropbox, or through the official method for installing application in the Android phone such as Google Play and Amazon App Store. Even though publishing the application via Google Play requires paying 25 USD for the registration [7], it is the recommended way to publish the Android application.



Fig. 6. Turn on the permission to allow installation of application from sources other than Play Store

However, publishing the application via Google Drive and Dropbox will also work for the Android phone as long as the permission to install the unofficial application from sources other than Play Store is turned on by the users [8].

II. IMPLEMENTATION

Based on the planned technical aspects, the effort in preparing the website and Android application can be smaller and the costs incurred can be less. The cost of creating the website and Android application are unnecessary because the software is provided free of charge. The cost is only for annual web hosting. The organizations with small budgets will be more helped by these technical aspects.

The website of Ngesti Pandawa which is functioned as a news and information feeder for the mobile application is located at www.ngestipandawa.com. It is based on WordPress blogging platform that provides RSS feed for every news, schedule, and video.

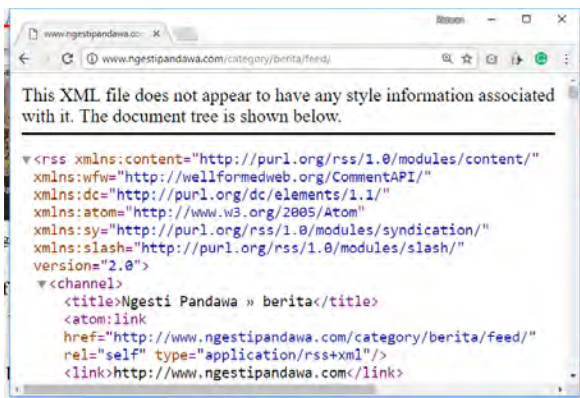


Fig. 7. The RSS feed of NgestiPandawa.com

Figure 7 shows the RSS feed at <http://www.ngestipandawa.com/category/berita/feed/> which is automatically generated by WordPress when the web administrator publishes any content for news category.

The selected URL of RSS feed will be used for the feed module on the Appyet.com. It will show news on the website of Ngesti Pandawa when the module is accessed. The layout and format of the news on the mobile application was set up by Appyet.

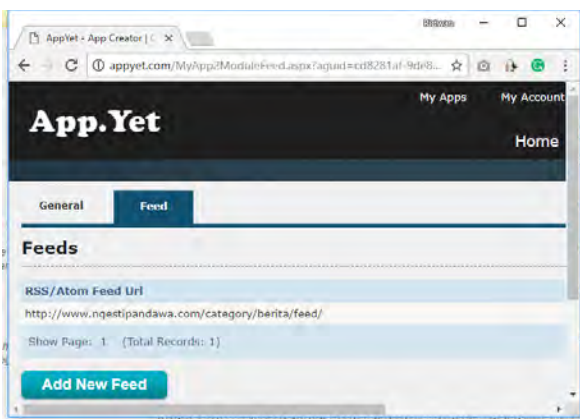


Fig. 8. Setting the RSS Feed URL on the feed module of Appyet.com

It will show the news based on the Card Magazine layout when the mobile application is built by Appyet.com.

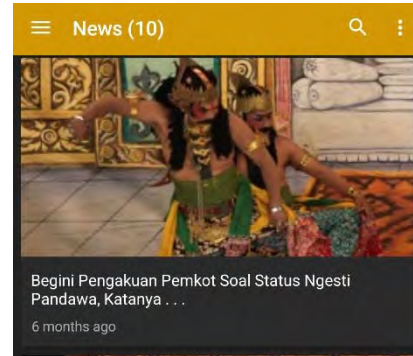


Fig. 9. The appearance of news in the mobile application

Every module which is added on Appyet.com will automatically create the menu as shown in Figure 10.

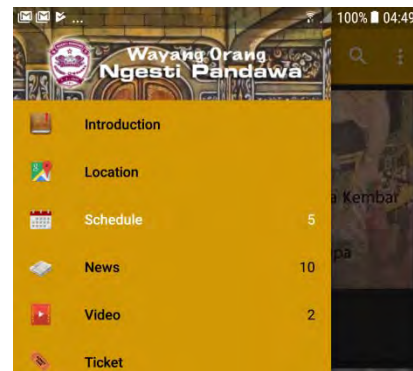


Fig. 10. The menu is generated by Appyet.com based on the module

The APK file generated by Appyet.com could be uploaded at Google Play to ease the Android users in downloading the application of Ngesti Pandawa.

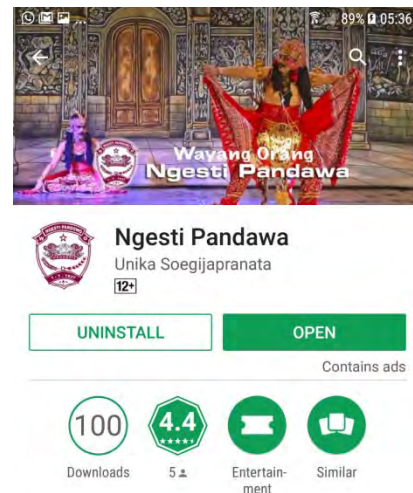


Fig. 11. Ngesti Pandawa mobile application at Google Play

In order to ensure the updating of information and knowledge on the mobile application, the website administrator has to write any information and knowledge regularly for the

www.ngestipandawa.com by using Open Live Writer to avoid the technical difficulties on the internet connection or website authentication. Information that is updated regularly will have an impact on user loyalty in following information via mobile applications.

III. TECHNOLOGY ENTREPRENEURSHIP MODEL

It is hoped that loyal audiences can monitor performance plans and schedules for the next three months. If considered attractive, they are interested they can place orders directly through the application. Collaboration with Tiket.com is one way to facilitate ticket purchase transactions using gadgets. The payment mechanism that has been developed and provided by the owner of the payment platform will create convenience for prospective audiences in choosing payment channels that are most convenient for and closest to them [9]. This also makes it unnecessary for the management of Ngesti Pandawa to manage a technology that they do not master.

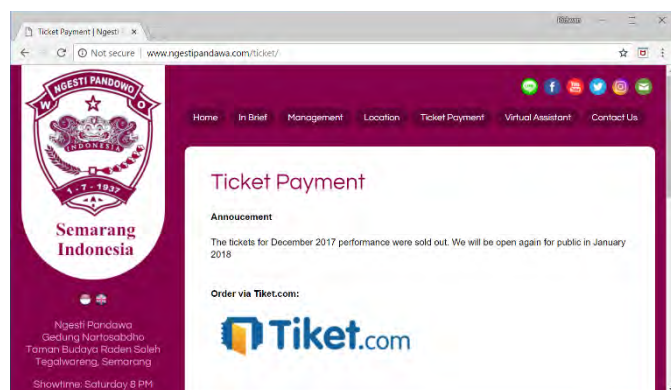


Fig. 12. Ticket Payment on Ngesti Pandawa website

In addition, Tiket.com users who number five million people are potential market for the Ngesti Pandawa shows. If they have not known Ngesti Pandawa before, the search for entertainment and performance locations related to art and culture in Semarang will result in the name Ngesti Pandawa as an alternative choice. So that transactions can come from all types of communication media produced by Ngesti Pandawa and Tiket.com. This possibility is even greater with the addition of the Kiostix.com platform that supports the sale of Ngesti Pandawa tickets online. Facilities allowing for payment installments for large purchases by credit card users or discount offers at certain times are the advantages in collaboration with online ticketing sites.

Furthermore, the establishment of loyal audiences and efforts to reach new audiences can be strengthened through the use of educational sites such as Wikipedia, Google Maps, and TripAdvisor. Unlike business sites, information on Wikipedia, Google Maps, and TripAdvisor must be insightful and not hard-selling. This aims to strengthen the existence of Ngesti Pandawa on the internet. Internet users can more easily find Ngesti Pandawa in the initial pages of the search [10] so that internet users have no difficulty in finding information related to Ngesti Pandawa before and after making purchasing tickets for a Ngesti Pandawa performance. The history, background, purpose and information on the Ngesti Pandawa shows presented in an educational form will convince prospective audiences to continue the ticket purchase transaction. Visitors can also be a

part of positive word of mouth through rating system. It creates impact on increasing the interest of Google Map users.

Promotion is not only done through the internet but also in hotels popular amongst tourists using QR Code and short URLs in promotional media to direct tourists, marketing can be done effectively. A young and stylish feeling can be created through the use of both these technologies and the presence in prestigious hotels. The impression of being an old-fashioned art can be changed and become more modern through the use of information technology. Ticket purchase transactions can still be carried out independently without having to open outlets that incur new costs. Cooperation with the Tourism Department in the region is one of the keys in the willingness of hotel managers to display promotional media in their place.

At the end of the day, theatre goers who have bought Ngesti Pandawa tickets expect to get a rich and memorable experience when they are at the venue. Locations for selfies and WiFi connections need to be provided so that they can upload their photos to the internet as part of marketing involving the audience. In addition, the opportunity to take pictures with actors can also encourage viewers to share them on social media. But more importantly, the audience should be able to follow the storyline that is displayed simultaneously during the show. Slides in various languages will help those who do not understand the Javanese language to understand the story being staged.

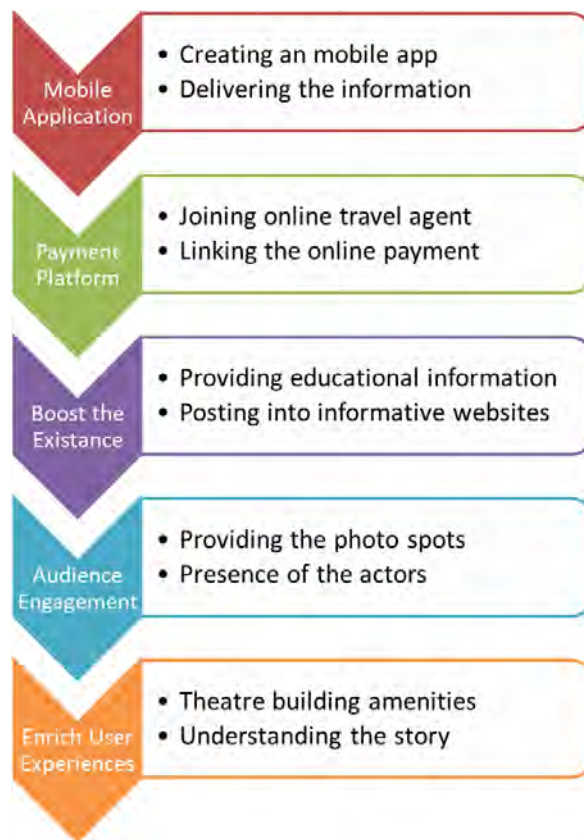


Fig. 13. Marketing improvement steps of Ngesti Pandawa

Some technical undertakings that can be carried out to enrich the audience experience are as follows:

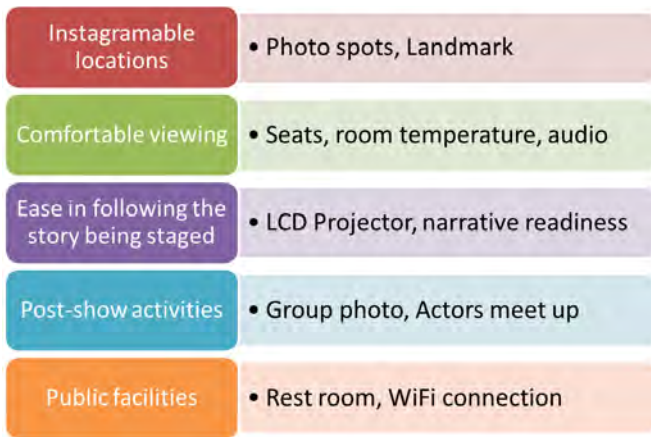


Fig. 14. Adjustment to enrich the audience experience

In less than a month after the introduction of technology in marketing and ticket payment transactions, several foreign tourists have booked tickets to watch the performance of Ngesti Pandawa. This was also followed by domestic tourists visiting the city. The number of transactions obtained through online travel agents indicates a growth in the public interest resulting from the integrated marketing using information technology. In the past, the audience who came were only people from around the show location.

A simple mechanism will strongly supports the management task carried out by internal organizations. The organization will not be dependent on an external party or incur costs to recruit a third party to regularly disseminate information about the show. Continuous information dissemination will have an impact on increasing public interest to find out more or watch the show when visiting the city.

IV. DISCUSSION

The image of being old-fashioned and archaic must be replaced by an image refinement and elegance. Information technology can create this image if information about Ngesti Pandawa in the internet can be maintained. Art and cultural organizations need to adapt by involving young people in the management of information distributed to the public because social media is something that young people are familiar with.

Entrepreneurship in organizations such as Ngesti Pandawa people must be developed if it wants to survive in today's modern world and have implications for regional outcomes [11]. However, to suddenly change itself into an industry might have a negative effect on its artistic side. The actors often see their job not merely as a livelihood but more as an idealistic endeavor to maintain the nation's cultural heritage. However, it has implications for regional outcomes.

Internal involvement is a natural and ingenious way to encourage the organization to develop entrepreneurship. The involvement of the younger generation in updating information and news about Ngesti Pandawa on the internet becomes the first element in the development of entrepreneurship in this organization. Support and trust from internal organizations in delivering news to the public through new media will encourage widespread promotional activities.

The second element is information technology-based businesses, such as Tiket.com and KioskTix. They are involved in facilitating the technical side of digital payments that is difficult for art and cultural organizations such as Ngesti Pandawa to carry out. Online ticket providers will simplify and speed up payment transactions for the consumers. Wikipedia, Google Maps, or TripAdvisor which is the main website in search engines will help facilitate tourists in finding Ngesti Pandawa on the first pages of the search engines [12].

The third element is a third party that can boost the publicity of the Wayang Orang show to tourists visiting the city. The third party can be the local government, hotels, or the mass media. Tourists who are visiting the city need to be convinced through the information displayed by the three parties in the form of promotions, information, and news.

The last element is the collaboration between performers and manager. The audience must be able to enjoy an attractive show in a comfortable venue. This will encourage the audience to return in the future and invite others to also watch the show, through word of mouth and testimonials on the internet.

The relation between the four elements is illustrated as a model in the application of entrepreneurship in the Wayang Orang creative industry supported by information technology.

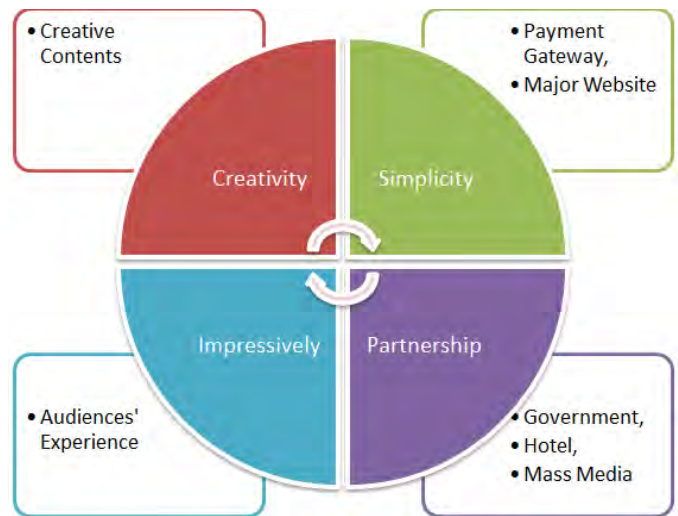


Fig. 15. The model of Technology Entrepreneurship Implementation for Human Wayang Creative Industry

The Creativity of the internal organization will improve its existence through the publication of educational information and news of their activities. Production of creative contents will increase the number of visitors to the website, to find out more about their events, and to see the show.

Simplicity or easiness to find out the location of the show, reviews their shows, and in purchasing tickets. Utilizing various major websites available on the internet makes it easy for consumers to find information on the first page of the search engine. The provision of tickets that can be directly purchased from their mobile devices can be realized through collaboration with online travel agents.

Partnership or the involvement of many parties such as local government, hotels and mass media, are able to encourage a more comprehensive marketing of Wayang Orang [13]. The government can connect travel agents and hotel managers for promotional purposes and support them through the right policies. Relations with the government were established because of the duties of the relevant departments in the government, the involvement of the organization in government programs, and the participation of government figures in special shows. As the result, hotels are willing to support them through strategically placed and attractive promotional materials for its guests. The involvement of mass media is needed to reach the general public. They can be a trusted media in sharing information and testimonials of art and cultural activities. However, the show must have new innovations, special agenda, or involvement of government figures in the show.

Impressively or attractiveness has an objective that the show must not only impress the audience, but also enrich the audiences' experience through new knowledge presented in the show, new opportunities to learn more about the local art and culture, and new things to share with others.

The relation between those elements could be restarted simultaneously to make the environment of Technology Entrepreneurship always sustainable in the organization. Their creativity will create their ability to benefit almost all economic sectors [14]. However, the effort to make it sustainable is the important role of the organization. The organization should support the entrepreneurship activity and the involvement of the people who care for it.

V. CONCLUSIONS

Special knowledge such as those in the art and culture field cannot be obtained if the knowledge owner does not find an easy way to share the information. It will prevent it from being disseminated to the young people. One of the ways to help knowledge owner to share their knowledge is by providing mobile application linked to websites with RSS features. WordPress is one of the blogging platforms that provide RSS features. The existence of Open Live Writer to add information into WordPress will help knowledge owner in adding information without difficulties in internet connection and website authentication. Updating information on a regular basis will help the purpose of knowledge sharing with young people.

However, the distribution of information alone is not enough if it is not accompanied with the ability to accept payment transactions in this modern era. In addition, it must be strengthened by the cooperation of many parties to boost the existence of this show. And most importantly, they have to give a good impression for the people who have come to watch their show.

The entrepreneurship in the art and culture performance in digital era should cover four elements such as Creativity, Simplicity, Partnership, and Impressively. Even though it should

start with the digital tools and ease of maintaining the digital content, it should continue with the human interactions to promote the show and enrich user's experiences. However, in case organizations have a limited budget, these technical aspects can help them in providing digital tools and maintaining the sustainability of entrepreneurship in the digital world.

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REFERENCES

- [1] A. Dwiyoga, R. Sanjaya, T. Rahardjo, and R. Djati, "Review on the Application of Financial Technology for the Wayang Orang Ngesti Pandowo Cultural Creative Industry," in *Proceedings of 2017 4th International Conference on Information Tech., Computer, and Electrical Engineering (ICITACEE)*, 2017, pp. 221–225.
- [2] D. P. Tripathi, "What Next in an Academic Library? A Conceptual Framework," 2017. [Online]. Available: [http://dspace.nitrkl.ac.in/dspace/bitstream/2080/2826/1/2017_NS_DP_Tripathi_What next.pdf](http://dspace.nitrkl.ac.in/dspace/bitstream/2080/2826/1/2017_NS_DP_Tripathi_What%20next.pdf).
- [3] M. Ally and G. Needham, *M-Libraries 4: From Margin to Mainstream - Mobile Technologies Transforming Lives and Libraries*. London: Facet Publishing, 2013.
- [4] R. Sanjaya, R. Admiral, and P. Sribhadung, "Web 2.0 and Its Implementation to eLearning," *Int. J.*, vol. 14, no. SP1, pp. 1–8, 2006.
- [5] R. Sanjaya, "Collaboration of Blog and Social Networking for eLearning," *Int. J. Comput. Internet Manag.*, vol. 17, no. SP3, pp. 17–18, 2009.
- [6] H. Agrawal, "How to Configure Open Live Writer for WordPress blogs," *shoutmeloud.com*, 2017. [Online]. Available: <https://www.shoutmeloud.com/how-to-configure-window-live-writer-for-wordpress-blogs.html>.
- [7] K. W. Tracy, "Mobile application development experiences on Apples iOS and Android OS," *IEEE Potentials*, vol. 31, no. 4, pp. 30–34, 2012.
- [8] S. Poeplau, Y. Fratantonio, A. Bianchi, C. Kruegel, and G. Vigna, "Execute This! Analyzing Unsafe and Malicious Dynamic Code Loading in Android Applications," in *Proceedings 2014 Network and Distributed System Security Symposium*, 2014, no. February, pp. 23–26.
- [9] A. A. Smith, D. P. Synowka, and A. D. Smith, "E-commerce quality and adoptive elements of e-ticketing for entertainment and sporting events," *Int. J. Bus. Inf. Syst.*, vol. 15, no. 4, pp. 450–487, 2014.
- [10] M. Yoshida, Y. Arase, T. Tsunoda, and M. Yamamoto, "Wikipedia page view reflects web search trend," in *Proceedings of the ACM Web Science Conference*, 2015, p. 65.
- [11] S. Baum, K. O'Connor, and T. Yigitcanlar, "The implications of creative industries for regional outcomes," *Int. J. Foresight Innov. Policy*, vol. 5, no. 1–3, pp. 44–64, 2008.
- [12] P. R. Kumar, A. K. Singh, and A. Mohan, "Efficient methodologies to overcome the effects of hanging pages in search engine optimisation," *Int. J. Web Eng. Technol.*, vol. 10, no. 2, pp. 129–151, 2015.
- [13] R. Nunkoo, "Tourism development and trust in local government," *Tour. Manag.*, vol. 46, pp. 623–634, 2015.
- [14] M. do R. Cabrita, V. Cruz-Machado, and C. Cabrita, "Managing creative industries in the context of knowledge-based urban development," *Int. J. Knowledge-Based Dev.*, vol. 4, no. 4, pp. 318–337, 2013.