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Diffusion of Innovation: The Hologram Shape of President Jokowi's Appearance at Smart Citizen Day 2019 Event

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Abstrak

Hologram telah dianggap sebagai media komunikasi, yang pada kenyataannya juga, teknologi ini telah diadopsi dalam berbagai kesempatan dan tujuan serta untuk menyediakan karya kemajuan teknologi. Pada Smart Citizen Day 2019 telah dicatat sebagai terobosan karena alih-alih memiliki video pembukaan atau pidato langsung dari Presiden Joko Widodo, Menteri Sekretaris Negara telah membuat keputusan dalam menghadirkan bentuk holografik presiden. Pada kesempatan kali ini, media baru dengan segala turunannya digunakan oleh presiden untuk menyebarkan pesan yang dibuatnya. penelitian ini adalah tinjauan literatur dengan sumber data utama adalah buku tentang teori gaya komunikasi dan kepemimpinan, serta teori tentang teknologi media baru. Sekunder bahan yang digunakan adalah berbagai laporan tentang kegiatan komunikasi Jokowi ke Millennial. Dengan konsep difusi inovasi, inovasi holografik di bidang pemerintahan ini perlu diapresiasi, serta diukur bagaimana perspektif khalayak terhadap adaptasi teknologi dalam acara tersebut.

Kata kunci: Media komunikasi, hologram, difusi inovasi

Abstract

The hologram has been considered as communication medium, which is also in fact, this technology has been adopted in varied occasions and purposes as well as to provide a showcase of a technology advancement. Smart Citizen Day 2019 has been noted quite a breakthrough since instead of having an opening video or live speech from President Joko Widodo, the Ministry of Secretary State has come to a decision in presenting a hologram form of the president. New Media, with all its derivation is used by the president to dissemination message he made. This research paper is a literature review with the main data sources are books on communication style theory and leadership, as well as theories about new media technology. The secondary of materials used is a variety of reports about Jokowi communication activities to the Millenials. With the concept of diffusion of innovation, this hologram innovation in government area needs to be appreciated, as well as to be measured on how the audiences' perspective towards the technology adaptation in the event

Keywords: Communication medium, hologram, diffusion of innovation

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INTRODUCTION

Now, in this twentieth century, with the development of technology, which is more into one-second information phase, most of all aspects in life and businesses have changed into something more opportunist than before. This has become another highlight on how globalization takes a step forward in dealing with how human lives and does businesses, which could evolve on how to make it simpler and more on omni channel business models. It goes with the current phenomenon when technology has brought enthusiasm to the next level, which is the hologram trend.

When defining the word hologram, it captures a certain “magic” that captivates the mind. A three dimensional photographic innovation that is created using laser and the speed of light. First developed in 1960s by Hungarian engineer Dennis Gabor, its initial purpose was to improve electron microscopes (Jonston, 2017). Who knew it could developed into a 21st century communication medium? With the rise of technological advancement such as the much anticipated 5G. According to BBC.com experiments took place in 2017 at giant telecom companies such as Verizon (United States) and Korean Telecom (South Korea) to experiment what they called “the world’s first live hologram International call” using their 5G networks (Thomas, 2018).

Moving forward to the context of hologram use for Presidential appearances: France Presidential candidate Jean-Luc Melenchon successfully attended two places at the same time for his presidential campaign, physically in Paris and emerge as a hologram 450 kilometers away in central city Lyon with a crowd of 6000 supporters (The Local.Fr, 2017). Not only as medium to appear in both places at once, the Reagan Museum in California, US is featuring the late president as hologram inside an oval office setting at the museum (Edelman, 2018). Earlier this year, the President of Indonesia, Mr. Joko Widodo attended Smart Citizen Day 2019 event as a hologram. The event was held on 28th of March 2019 at The Tribrata, Opus Ballroom located in South Jakarta. With a reported of approximately 3000 millennial participants gathered to contribute to a smart citizen movement held by a local owned Mobile App Tech Start-up company Qlue(Rahayu, 2019).

Adopting the concept of diffusion of innovation by Everett M. Rogers, this study explores the experiential, relational, and expressive value in order to perceive the new adapted technology by the audiences beyond the globalization era and technology development. Therefore, in order to measure it, the indicators are derived from Rogers’ concept of diffusion of innovation, such as; The Innovation, Communication Channels, Time, and A Social System. With this said, this paper makes the following contributions in assessing the audiences’ perception towards President Jokowi appearance as a hologram at Smart Citizen Day 2019 event. As an innovative breakthrough in the Indonesian government to use technological strategy as a communication tool, it is said that according to *Instruksi Presiden No.9 2015*, one of it is to conduct a development of programs “Using hologram for events such as, this is one of our developments” said Mr. Rudiantara the Minister of Communication and Information (Jemadu & Rahmat, 2019). Objectives are as followed:

1. Identify the key aspects of how Globalization is at the core of President Jokowi’s hologram appearance at this event.
2. Obtain knowledge of and discuss the people perception of President Jokowi’s hologram appearance from the audiences/receivers point of view.

Diffusion of innovation is defined as a process by which an innovation is communicated through certain channels overtime among the member of social system (Rogers, 2009). The diffusion of innovation consists of two equivalent words namely diffusion and innovation. By its definition, the diffusion of innovation is an attempt to disseminate or disperse innovation in the form of

technological advancements, ideas or any other forms having elements of novelty. Changes as a result of the diffusion of innovation may also give rise to certain changes in the structure and function of social systems in the area of which the diffusion of innovation targets. The main purpose of diffusion of innovation is the adoption or acceptance of a technology, ideas or any other forms having elements of novelty towards a social system in a particular region, which may be considered as having the capacity to provide a number of benefits or increase in value.

The diffusion of innovation theory is considered a significant subject for studies, research and utilization. However, although the benefits of innovation have been proven, it is still not susceptible to public acceptance. As defined by Rogers (2009), the process of diffusion of innovation are, as follows:

1. Innovation

Innovation is an idea, practice or an object that is understood or felt which are considered as a novelty that may be adopted. If an idea, opinion, object or technology is considered as new or proven that it has never existed before then it is deemed an innovation. In this element of innovation, Rogers (1983) emphasized on five characteristics of innovation, namely: relative advantages, compatibility, complexity, trialability and observability.

2. Communication Channels

Communication channels are inseparable in the process of diffusion of innovation. Communication channels are one of the determinants of the success in achieving mutual understanding or in the process of delivering messages and the disperse of an innovation.

3. Duration

Element of time is a period of time that begins as soon as the discovery of something new up to the time the innovation is adopted or rejected.

4. Social System

The social system consists of a group of members who are gathered and connected to one another working side by side in an attempt to solve a mutual problem. Said social system may be in the form of a community, organization, grouping, informal group or a subsystem. Therefore, this study will try to reveal on how the audiences perceive the hologram of President Joko Widodo at Smart Citizen Day 2019 event by engaging the indicators and process that aforementioned on the explanation above.

METHOD

This study uses a qualitative approach because this study aims to explain the phenomena that exist through collecting data - data that researchers get (Kriyantono, 2006, p.58). Researchers dig up information about the President's communication style in the opening speech Hologram on Smart Citizen day to explain communication phenomena that occur in the hologram. Researchers explain as a whole the style of President Jokowi's communication in the form of olograms. In qualitative research approaches have special characteristics is intensive and researcher participation takes a long time in setting the field because the researcher is an important role in research. Of course researchers also must be subjective so that researchers itself which is a means of extracting interpretation of this research data. This research is also

more towards inward than towards broadness, and the relationship between theory, concepts, and data will also bring up or shape a new theory (Kriyantono, 2006, p.59).

FINDINGS AND DISCUSSION

As this study is about President Joko Widodo's appearance on the form of hologram at Smart Citizen Day 2019, it could be stated that the experience of the initiator as well as the attendee is important to be highlighted and discussed in this study. The subjects of this study consist of two people that are based on the initiator's perspective and also the attendee's perspective.

The first subject is Rangga Hilman, a professional public relations for Ministry of Secretary State. He is hired as a professional worker for government that follows President's instruction number 9 about Managing Public Communication, whereas the Ministry of Communication and Informatics acts as the composer of *Narasi Tunggal Negara*, who is in charge in planning, preparing and coordinating government's agenda. The authority of deliver information, policy and program through any communication platform promptly to form an equivalence news among the press. Thus, Rangga works to support the role of public relation in the ministry in order to create the whole program and public information from the ministry on the account of good socialization and counteract miscommunication between ministries that involved. In this case, Rangga and his team at the Ministry of Secretary State initiate the use of hologram of President Joko Widodo to open Smart Citizen Day 2019.

The second subject is Kusuma, that happened to be one of the attendees of Smart Citizen Day. He is the founder of his own technology startup called ArmanaVesona which this company focuses on the backend coding and technology in system integrator. Verham attended the event as he was interested in the development of technology for the concept of smart city.

Therefore, in order to reveal the audiences' perception towards President Joko Widodo's appearance as a hologram at Smart Citizen Day 2019, the experiences from the two subjects would be discussed under the scope of diffusion of innovation by Rogers.

Globalization as the Driver of the Technology Advancement and Application

Now, in this twentieth century, with the development of technology, which is more into one-second information phase, most of all aspects in life and businesses have changed into something more opportunist than before. This has become another highlight on how globalization takes a step forward in dealing with how human lives and does businesses, which could evolve on how to make it simpler and more on omnichannel business models. It means that, businesses could be seen as prospective in broader view and it could be done with a simple go-to market strategy.

According to Silverstone (1999), globalization itself is the product of a changing economic and political order, one in which technology and capital have combined in a new multi-faceted imperialism. In which another phrase, it means that globalization has been rooted in everyday life for a significant number of the world's citizens, hence as a result of the restructuring of economic and cultural activities on global lines, which also leads to digitalization.

Digitalization means turning interactions, communications, business functions and business models into more digital ones which often strikes down to a mix of both channels, conventional and digital, as in omni channel customer service, integrated marketing, mix-autonomous, semi-autonomous and manual operations (Gartner CIO Agenda Report, 2014). This digitalization era has changed how the world circles, into a period characterized by deep innovation beyond

process of optimization, exploitation of a broader universe of digital technology and information which connects people, companies, and places, all in highly efficient networking mechanisms. Therefore, the hologram technology is beyond innovation to be applied in order to represent certain characters, which could have the impact to have a sense of real existence.

Hologram

Holography, as invented by Denis Gabor (Kompas.com, 2019), is the science and practice of the making of holograms, a typically three-dimensional image. Holograms is a technology of which invention was a result of the development of laser in the 1960s. Along with advances in technology, holograms continue to be perfected and are currently used for various productions both in the world of science and the world of entertainment. It has also played a significant role in the world of education, being developed for science such as physics, and for the world of entertainment, such as in film productions, holograms are often displayed to exhibit futuristic technological advances.

Alongside globalization, many businesses are now providing services to make holograms applicable in real world situations. In the world of music entertainment this hologram is often used to commemorate deceased entertainers. Some of which are the Tupac Shakur hologram which was exhibited in Coachella in 2012, the Michael Jackson hologram in 2014 and the Indonesian singer Chrisye hologram in 2012. More interestingly, hologram technology is now viewed as a creative innovation in politics, such example is the use of holograms in political campaigns. Previously, campaigns had to be carried out personally by the candidates but with the existence hologram, the dissemination of campaign programs may be carried out simultaneously throughout various regions, where candidates are displayed in the form of a hologram.

The first known political campaign using a hologram was carried out extensively by the Indian Prime Minister Narendra Modi in the 2012 legislative assembly election and after successfully winning the election, he continued to make extensive use of this technology in the 2014 general election (dw.com, 2019). His success portrayed in the media both conventional and digital encouraged many political candidates from other countries to follow in his footsteps for its creative novelty as a mean to reach new and wider audiences. Recep Tayyip Erdoğan, the Prime Minister of Turkey, the French President Candidate Jean-Luc Mélenchon (2017), and New Zealand Prime Minister, Jacinda Ardern (2018) all benefited from holograms for speeches at state events up to the use of hologram to commemorate Ronald Reagan, American President (1981-1989) in his museum (USA TODAY, 2018).

The success, effectiveness and news of the world's admiration for the use of holograms in politics has finally found its way to Indonesia. Candidates for presidential and its vice candidates, Joko Widodo and Ma'ruf Amin used hologram technology to disseminate messages and campaign promises during the 2018-2019 presidential election campaign (Liputan6.com, 2019). In this journal, the authors aims to discuss that the effectiveness and attraction of the use of holograms in the political field is not merely contagious internationally, but in its development, the use of presidential holograms are visually accepted by the public as a substitute for the president's figure in physical form.

Hologram as international media

In all that have been discussed so far throughout the chapters, now we seek to find how does Hologram technology is interpreted as International Media? At a broad sense, International Media could be viewed as an instrument that communicates a new way of thinking, a further

perspective of a current subject. An idea was discovered during a recent study about Hologram technology which was done in Kudus, Central Java. A furniture store in Kudus, started using hologram technology for their catalog (Listyorini, 2017), this allows consumers to view products in the utmost detail, almost like real. This does not only imply holographic photography strategy as a medium, but as an idea for innovation. We have discussed how hologram technology continues to evolve and being used as many functional and communicative purposes around the world. It is a clear depiction of how technology continuously moves forward, at a constructivist point of view: inspiration to aspire innovation.

Hologram technology communicates the imminent possibilities for future generation and fuse the line between time and space. How? Other than tools for political campaigns, promotional business strategies, we have also seen a growth in Holographic use for educational purposes. A Holographic mobile-based application were used by Cerezo, Calderon & Romero (2018) for a study to practice the pronunciation of basic English vocabulary words. By using a funny 3D holographic robot character that interacts as virtual teacher in charge of practicing, the experiment was conducted to 70 Spanish pre-school children. Results shown a significant impact on the children's motivation and performance. The findings indicate that affective implementation of hologram as a medium in educational and computer science should acknowledge the role of emotional importance in academic settings by addressing the study of the full range of emotions experienced by students when introducing cutting edge educational methods such as the hologram.

As a new form of international media, there are different aspects of everyday human life that could be affected by the growth of hologram technology. Taking a reference from an article written by Andrew Pepper at Nottingham Trent University (TheConversation.com, 2017), there are a few of how he thinks hologram technology are affecting society of today: 1) Military Mapping, holographic maps of "battle-spaces" for the United States army are one form of strategies and vision of their advanced military system. The term is Geographic intelligence, the company Zebra Imaging transfer complex computerised image data, which then is made into a holographic sheet. Not only can users "look into" the high quality 3D image of the terrain stored in the hologram sheet, but the technology is simple to use and can be rolled up for easy storage and transportation. 2) Information era, as the demand for digital storage raises every year, there are insatiable desire to be able to store our data for lifetime with less risk of losing it. Unlike Compact Discs (CD) and Universal Serial Bus (USB), the hologram does not store its data at one layer of the software. A holographic image is stunningly realistic because the recording process stores all of the information about the light reflected from the recorded subject. That is a massive amount of information. Holograms don't have to record information about a visual object – they can also record pure data, pages and pages of it. If you make an optical hologram of a page of information and then smash it, for example, you can reconstruct it from any of the pieces. This makes holographic data storage extremely reliable. 3) Medical, a breakthrough in Scotland by a company called Holoxica are now using 3D holography by making static digital holograms from any kind of dataset including medical scans, scientific data or engineering designs. They have holographically imaged everything from sub-atomic particle physics to models of the universe; and even mapped the entire human anatomy. These are then used by students and surgeons for simulations.

Discussion

Diffusion of Innovation: The Audiences' Perception Towards President Joko Widodo's appearance as a Hologram

Diffusion of innovation is defined as a process by which an innovation is communicated through certain channels overtime among the member of social system (Rogers, 2009). In this case, the interviewees agreed that the hologram form of President Joko Widodo is something new that could lift up the ambience at the venue of Smart Citizen Day 2019.

The Innovation

The diffusion of innovation of President Joko Widodo's appearance as hologram at Smart Citizen Day 2019 is concluded using the innovation's indicators, as this program is not only for the technology showcase, but it is only effective to have the sense of President Joko Widodo's appearance due to the limitation of time and activities that he has.

The relative advantage of this hologram application is to provide an alternative for President Joko Widodo' appearance due to his busy schedule and also as a showcase for the hologram technology. From this application as well, it could be seen that Indonesia is so much more open in the adaptation of technology.

The use of video to represent the president's existence for some events and occasions have been done many times before, but there is an urgency for a technology update to ensure that it feels real, that the president is among the audiences. Therefore, after a long discussion between the president's staffs at the Ministry of Secretary State, there is an idea to form a hologram shape of the president, which could be referred as one of great innovations. Therefore, this innovation could represent the president who is opened for innovation and always supports the technology advancement as well as supports high quality human resources in Indonesia.

For compatibility aspect, President Joko Widodo's appearance as hologram at Smart Citizen Day could be sorted it from the audiences of the event as well as the theme of the event. In a certain way, the audiences are mainly millennials, that could be suitable for a breakthrough event such as Smart Citizen Day 2019. In term of the hologram application, it is a great fit as well since the event is about the advancement of technology.

However, this hologram application also faced a complexity challenge. This covers budget issue, since it is not cheap to adopt the hologram technology, and then from the facilities and utilities as well, it needs high quality devices in order to give the best effect which is to have as real as possible for the president's form in the hologram shape. Moreover, the challenge also comes when doing the recording since the president's schedule cannot be negotiated.

Communication Channels

Communication has become an important indicator for the diffusion of innovation, whereas through this communication, an approach could be executed in order to present the hologram version of President Joko Widodo. As aforementioned above on how hologram was firstly developed by Dennis Gabor in 1960s, now, it is used as a communication medium for varied occasions. According to BBC.com, experiments took place in 2017 at giant telecom companies such as Verizon (United States) and Korean Telecom (South Korea) to experiment what they called "the world's first live hologram International call" using their 5G networks (Thomas,

2018). In this case, it could be concluded that hologram is considered as an international medium that could transfer message in the form of three dimensional photographic innovation.

At Smart Citizen Day 2019, the medium to deliver the message involves high quality devices in order to make the hologram possible to be presented. In another side, the communication channels used to leverage the use of hologram shape as President Joko Widodo are online and printed publishers, social media, radio, television and so on. This could be seen on the coverage of how this innovation could bring such a hype among people.

Duration

The time for the process of diffusion of innovation is gradually applied. It first started when by coordinating with the president schedule, it seemed impossible for him to attend Smart Citizen Day 2019. Due to the importance of this event for the technology advancement in Indonesia, the Ministry of Secretary State tried to figure out another way on how to create an ambience that the president attended the event. Then, after a long discussion and consideration on the complexity of the application, they came up with the idea to create hologram shape of President Joko Widodo. However, in doing so, it was quite a work for the Ministry of Secretary State in order to record videos of President Joko Widodo due to his tight schedule.

A Social System

In this study, the diffusion of innovation has been adopted and presented to the people, which in this case are the audiences of Smart Citizen Day 2019. The social system that has been targeted by the innovator is mainly the millennials who attended the event, as well as the other audiences. For the attendees' profile, it is varied since they come with different routines, jobs or even education. If it is seen from the job perspective, the audiences consist of; entrepreneurs, digital enthusiasts, public services, students, and so on. Therefore, the approach used to communicate the innovation is considered effective, since Smart Citizen Day 2019 is a technology event, means that most of attendees are aware of the technology advancement.

Therefore, the effectiveness of targeting this audiences' pool could also be seen on how the enthusiasm they had when the hologram of President Joko Widodo appeared on stage, which most of the attendees put their phones on and took videos as well as pictures.

CONCLUSION

The use of holography technology for state events carried out by heads of state have influenced more and more countries to adopt such technology and is currently being carried out by other countries and has become the latest trend in governments which has had a huge positive outcome. Within just a short period of time, the hologram is easily received and appreciated by the public, especially the younger generation. However, the use of this technology is still implemented for one-way communication, and consequently, real time interaction with the hologram are still not possible. As a result of this limitation, the physical presence of the candidate that are represented through the hologram cannot be fully replaced by the hologram.

Even though currently incapable of presenting real-time communication, the ability of the hologram to replace the physical presence of state leaders directly is still highly anticipated, especially for more serious events. In addition, a lot more research and development is necessary to examine further the needs and possible impacts both positive or negative. However, there is no doubt that the possibility for its application will become reality soon enough, for the reason that technological advances can also result in shift of values, protocols,

and many other aspects. In addition, what needs to be taken into account is the classification of events and the individuals who attend them, both of which are important elements that determine the use of communication platform such as the Hologram.

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