

THE ROLE OF THE KEPUL APPLICATION IN MANAGING WASTE FORMS OF SOCIAL CONSTRUCTION TECHNOLOGY IN NEW MEDIA

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INTRODUCTION

Technology is something that is familiar with the life of modern society today. Technology has been integrated into human life where technology has an impact and influence in all aspects of human life. Technology is born from human thought which tries to simplify its activities which are then applied in life.

Now technology has developed rapidly and increasingly sophisticated along with the times. Technological progress is something that cannot be avoided in this life, because technological progress will run in accordance with scientific advances. Every innovation is created to provide positive benefits for human life. Technology also provides many conveniences, as well as a new way of carrying out human activities. Humans have also enjoyed many benefits brought about by technological innovations, especially the emergence of the internet in the 90s era providing many conveniences for human life. Where the internet makes human life no longer limited by space and time, and makes human life more effective and efficient.

The internet or the era of digitalization encourages rapid technological advances, especially information and communication technology. Information and communication technology continues to be born with new innovations to answer the needs of the community. Since appearances *smartphone* (smartphones), as a product of advances in information and communication technology. Smartphones have a tremendous impact on the social and cultural aspects of society. Smartphones are the most important thing in supporting human daily activities, smartphones are not only a means of communication, but also as a medium that can help with daily needs, both as an information center, a tool

for work, a tool for payment, and various other functions through applications. -apps downloaded. Talking about applications, applications are the use in a computer device, instructions (instructions) or statements (statements) that are arranged in such a way that the computer can process input (input) into output (output) (Jogiyanto, 2001).

Applications for devices *smartphone* or gadgets known as mobile applications (mobile applications). Mobile application is software that runs on a mobile device such as a smartphone or tablet PC. Mobile applications are also known as applications that can be downloaded and have certain functions that add to the functionality of the mobile device itself. To get the desired mobile application, users can download it through certain sites according to their operating system. GooglePlay and i Tunes are some examples of sites that provide various applications for Android and iOS users to download the desired application.

Various applications are created as solutions that exist to help people's daily activities by utilizing technology. Today there is the latest breakthrough, namely the innovation of -based cleaning services *mobile application* which is supported by communication technology via smartphone. This mobile application-based cleaning service is an amalgamation in terms of communication technology. The presence of Kepul is made to be a solution to the community's need to sell used goods to be recycled and so that people do not throw away used goods in their homes in any place. The community's need for fast, efficient and profitable hygiene will always be high, especially for people who only have a minimalist land area.

The ability of humans to determine the development of technology explains that humans have power over technology. Humans determine what technology will be like or useful for what. This is what is called the social construction of technology. Technological developments are formed because of the needs of the community. According to Neil Postman, technology was created for two purposes: *to solve specific and urgent problems of physical life and to serve the symbolic world of art, politics, myth, ritual, and religion* (to solve the specific and pressing problems of physical life and to serve the symbolic world, art, politics, myth, ritual, and religion) (Postman, 1992). An example is the many farmers who use tractors to plow the fields today to make their work more efficient and save energy, unlike in the past where farmers had to work extra hard by using buffalo to loosen the soil in the fields. Technology is formed and continues to innovate to meet human needs.

THEORETICAL BASIS

Technology Social Construction

Social Construction Theory of Technology or Social Construction of Technology, also referred to by the abbreviation SCOT, originated from Trevor Pinch and Wiebe Bijker's (1987) article "The Social Construction of Facts and Artefacts: or How the Social of Science and the Sociology of Thechnology Might Benefit Each Other" (Klein & Kleinman, 2014). Pinch and Bijker conceptualized the Theory of Social Construction of Technology which originated from bicycles. the beginning of bicycle technology and design aimed at men. The construction of the bicycle then underwent a change when

women wanted to also cycle. This happened in line with the incessant feminism movement. Thus giving birth to a bicycle that is designed for women. Changes in the concept of bicycle design is a form of construction of a technology.

Social Construction of Technology(SCOT) is a technology formed from social construction. Social construction in this concept is intended that social life in society forms the existence of a technology. This SCOT theory states that technology does not determine human actions but rather humans shape technology. If we talk about Technological Determinism, then the technology that shapes social life, is a term that was first coined by a character named Thornstein Veblen in 1920 who thought that technology is an independent entity that is autonomous. All actions and events that are carried out by humans due to the influence of technological developments are the actual determination of technology. because without realizing it, humans have been affected by everything brought by technology. Technology shapes individuals how to think, behave in society and the technology ultimately directs humans to move from one technology century to another (Mc Luhan, 1994). In other words, technology is the main cause of change in society and technology is seen as forming the structure of organizations and society. The Social Construction of Technology (SCOT) argues that human actions shape technology (Yousefikhah, 2017). technology is the main cause of change in society and technology is seen as forming organizational structures and society. The Social Construction of Technology (SCOT) argues that human actions shape technology (Yousefikhah, 2017). technology is the main cause of change in society and technology is seen as forming organizational structures and society. The Social Construction of Technology (SCOT) argues that human actions shape technology (Yousefikhah, 2017).

So the SCOT theory has the opposite view of the theory *Technology Determinism*. The difference between the two is seen from who is affected or formed. Where if Technology Determinism, then technology that shapes social life, but according to the SCOT theory it is society that shapes technology or society that influences technological development. The basic concept of SCOT states that technology design is an open process where social conditions during the development stage have a role in determining the final design. Different social conditions during the design development process have the opportunity to produce different final designs (Klein & Kleinman, 2014).

In *Social Construction of Technology* (SCOT), the SCOT conceptual framework consists of 4 components, namely: Interpretive flexibility (interpretive flexibility), The relevant social group (relevant relationship with social groups), Closure and stabilization (ends and stabilization), The wider context (context that is more area) (Klein & Kleinman, 2014).

The first component is interpretive flexibility. This concept is taken from the relativism empirical program in the social sciences of the sciences, showing that technological design is an open process so that it can produce different results depending on the social circumstances of the technology building process itself. Free meaning shows how the same artifact after going through the needs of a group makes the artifact have several different designs. (Klein & Kleinman, 2014).

The concept of relevant social groups is the second component of the SCOT framework. According to Pitch and Bijker (in Klein & Kleinman, 2014) Relevant social groups are embodiments of certain interpretations: "all members of certain social groups share the same set of meanings, are attached to certain artifacts". They are agents in an agency-centered approach whose actions manifest the meaning they give to artifacts. Technological development is a process in which multiple groups, each embodying a particular interpretation of an artifact, negotiate its design, with different social groups viewing and constructing very different objects. For example, groups may have different definitions of the technology they are working with, so development continues until all groups reach a consensus that their common artifact works. Design stops not because the artifact works in an objective sense but because the relevant set of social groups accepts that it is working for them (Bijker, 1995). So the sense of relevance here, occurs when other groups manifest different interpretations of the same artifact, a negotiation process over the design ensues. Each artifact used by each group will contain its own meaning and meaning after negotiating with the meaning of the artifacts from other groups.

The third component of the SCOT framework is closure and stabilization. The creation of designs between different groups can be controversial in terms of the interpretation of images regarding technological artifacts. The conflict can be resolved when the design of the artifact no longer poses a problem to any relevant social group. This occurs when the multi-group interpretive process reaches agreement so that no further design modifications occur, and the technological artifact reaches its final stable form (Klein & Kleinman, 2003).2014).

The fourth component is the existence of a wider context of technological social construction, which is related to the social, cultural and political aspects in which the construction of artifacts takes place. It played a minor role in the original SCOT Pinch and Bijker concept. The background conditions of group interactions, such as their primary role, the rules governing their interactions, and the factors that contribute to their different strengths (Klein & Kleinman, 2014). So social groups have different perspectives in carrying out social, cultural and political values.

Social Construction of Technology in New Media

Talking about new media, the internet or digital technology has changed the way people interact with the media. Advances in digital technology gave birth to new media or better known as "*new media*". New Media is a term intended to encompass the emergence of digital, computer, or networked information and communication technologies in the late 20th century. The characteristics of new media are editable, network, dense, interactive and user generated content. User Generated Content is the content or content of articles on the internet written by the general public, indicating that internet media content can no longer only be monopolized by interested parties but can be uploaded by all internet users (Solomon, 2011).

Term *new media* (new media) was introduced by one of them by McLuhan. New media in question is the development of communication technology which historically has expanded the range of human communication (Salaz, Hodson, & Davey, 2010). On

the other hand, McLuhan uses the term media new media to define something very similar to what is meant by new media to define something very similar to what is meant by new media today. As the development of new communication technology produces a strong cultural effect, so the presence of new media produces a new mass communication model where previously one to many communication became many to many communication. So new media has an interactive and free nature. Interactive which means interactive to the audience directly the media they consume. The free nature in question is that the audience can freely create media content that contains information. The audience is in control of the distribution and consumption of content in new media. New media offer the possibility of shifting the balance of power from sender to receiver, so that users and voters can get a variety of content choices, without having to depend on mediation systems and mass communication controls (McQuail, 1994).

New media related to the development of information and communication technology, constructed in the form of digital media is a terminology that covers all technical equipment for processing, storing, and conveying information. That is, information and communication technology is related to various things process, use as a tool, manipulate, and process information. Digital media is related to the use of tools to process and transfer data from one device to another. (Arianto. S, 2016). According to Hariyanto in (Arianto. S, 2016) the presence of this digital media can facilitate humans in their work. Although on the other hand, it can also be understood that new media using the internet can have positive and negative impacts on their use.

According to Bungin, that in the social world, humans create social reality, because humans are creative actors in creating that reality. Reality itself arises from the power of social construction on the environment (Bungin, 2014). If it is associated with current technological developments, humans create technological realities in such a way based on the constructions they view on the social world around them. For example: In today's society and technological developments, there is no difficult term for it get information or people cannot be "reached" (reached). Advances in technology, especially communication, make all information easily accessible and everyone can communicate without the boundaries of space and time. Society constructs that with this technology narrows human boundaries in communicating and obtaining information.

New media emerged as a result of the social construction of society in taking advantage of the rapid development of information technology advances in this digital era. Today's society needs something that is instant, and practical in supporting their lives. The emergence of online applications or the present mobile application was created to overcome the problems that exist in society. The SCOT perspective focuses on how technology emerges as a result of social processes. Social Constructivism is how social drives influence the discovery of new technologies. Not only the discovery of new technology, social constructivism also forces existing technology to continue to innovate to meet the demands of the user, in this case the community. As an example of the vlog trend (videoblog) being crowded among the new media user community, applications such as WhatsApp, Facebook, Instagram, as social media applications make innovations

by adding videos in their application features, known as Instastory, My Status, videos on WhatsApp and Facebook Stories. .

METHOD

This research is a qualitative research to understand the phenomena that occur descriptively in a context (Moleong, 2018). This research was conducted using a case study approach. The case study approach is carried out by examining data in the form of information obtained in detail on a case and the circumstances around it that can connect abstract ideas to the case under study so that abstract ideas can be linked to real life experiences (Neuman, 2019).

The data collection technique was carried out through in-depth interviews to obtain detailed information through developing questions based on the answers given by the informants (Morissan, 2019). This was executed by asking questions to informants involved in the case and process being studied, namely M. Suryaddin Siregar as a worker in Kepul, to see how many conveniences people get when using the Kepul application. The data analysis technique of this research uses the Miles and Huberman model by performing data reduction, data presentation, and drawing conclusions or verification (Yusuf, 2016). Data triangulation will be carried out to obtain interconnected data that will represent different data on a particular event (Rosyada, 2020). The primary data obtained through the interview will then bereduced in order to present data that is in accordance with the focus of the research to be then drawn conclusions and linked and analyzed.

DISCUSSION

The presence of internet technology has greatly influenced the interaction joints of the world community in general and Indonesian society in particular, not only about the conventional mass media industry or traditional media, media convergence into the online media industry and in the trade industry where the online shopping industry is growing very rapidly, but now every human need From various aspects, applications (new media) were also developed in the form of online digital application services. Various kinds of applications are presented in smartphones or gadgets that encapsulate many conveniences for individuals in carrying out their daily routines, including the online-based transportation industry.

The emergence of this online cleaning service application in Indonesia has brought tremendous changes to the social and cultural life of the community. One of the servicescleanliness via the mobile application is KEPUL. Talking about Kepul cannot be separated from the figures of Abdul Latif Nasution and Afrizal Yusuf Rangkuti, these young graduates of Information Technology (IT) at the University of North Sumatra (USU) have successfully launched an application for selling recycled waste called Kepul. The initial idea came from a young man who is often called Latif, saying "because he is really concerned about the problem of garbage that has not been resolved and in fact in some places in the field it is getting worse".Therefore, he said that as an effort to maintain a good environment, then a solution was sought for how to solve the waste

problem immediately. One of them is by creating service applications that can be accessed by the public easily, quickly and cheaply. With the Kepul application, people can collect garbage and then find the nearest garbage collector and place their garbage there.

So application users who want to collect recyclables can find the nearest collector, because it utilizes the GPS navigation system. Of course, the waste received is waste in the form of paper, plastic, metal, and goods that can be recycled. From this application, people can get money that is adjusted to the weight of their waste. The application also provides a market for recycled products from used goods collected by collectors, of course, by selling MSME products from processed recycled waste.

Viewed from the perspective of SCOT theory (*Social Construction of Technology*) the emergence of online-based cleaning service application technology such as Kepulm before there was an online-based cleaning service application technology, the choice of cleaning services included mobile butchers who did not pass in front of our homes every day. While we as a society need money quickly and easily, because the bottist doesn't come or pass through our upgrading house, the Kepul Application makes it easier and faster for the recyclers to come quickly to sell to him. This social context encourages inventors to innovate, find and develop new technologies to meet the existing demand for more effective cleaning service options. From the online-based cleaning service application, it is humans who act as agents of change and their thoughts are influenced by the social context that is currently in society. These inventors also have priorities to determine what else needs to be developed or innovate from the technology that has been created, for example in the application of collecting used goods (garbage) online, Kepul continues to innovate to produce new technology to meet the needs of the community.

CONCLUSION

New media emerged as a result of the social construction of society in taking advantage of the rapid development of information technology advances in this digital era. Today's society needs something that is instant, and practical in supporting their lives. The emergence of online applications or mobile applications was created to overcome the problems that exist in society, such as Kepul. Talking about SCOT is a theory that has the perspective that technology does not determine humans as in the view of technological determination theory, but humans who regulate the actions of technology itself.

Social Construction Of Technology(SCOT) is a focus on how technology emerges as a result of social processes. Social constructivism is how social drives affect the discovery of new technologies, social constructivism also forces existing technologies to continue to innovate to meet the demands of users, in this case society. As Kepul does, which continues to innovate by presenting Customer Service & Community, and other features.

REFERENCES

- Arianto.S. (2016). Use of New Media in Farmers & Fishermen Communities. Jakarta : Aptika IKP Research and Development Center, Agency for Research and Development of Resources Ministry of Communication and Information of the Republic of Indonesia.
- Bijker, Wiebe. (1995). Of bicycles, bakelites, and bulbs: Toward a theory od *sociotechnical change*. Cambridge, MA: MIT Press.
- Bijker, Wiebe E. and Pinch, Trevor J. (1987). The Social Construction of Technological System : New Direction in The Sociology and History of Technology.
- Bungin, M. Burhan. (2014). Sociology of Communication, Theory, Pradigma and Discourse Communication Technology in Society. Jakarta: Kencana Prenadamedia Group.
- Kepul Medan Indonesia, <https://www.kepul.com/about/> (Accessed on January 1st 2022).
- Jogiyanto, HM. (2001). Understanding Applications and Its Development. Yogyakarta: Andi offset.
- Klein, HK, & Kleinmann, DL (2014). The Social Construction of Technology: Structural Considerations, 27(1), 28-52.
- McLuhan, Marshall, (1994). Understanding Media: The Extension of Man. London: The MIT Press.
- McQuail, Deniz. (1994). Mass Communication Theory, Second Edition. (translated by: Agus Dharma and Aminuddin Ram). Jakarta: Erlangga.
- Postman, Neil. (1992). Technopoly The Surrender of Culture to Technology. United States: Vintage Books.
- Salaz, K., Hodson, T., & Davey, CJ (2010). New Media and The Courts: The Current Status and a Look at The Future. Papers.Ssrn.Com.Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1666332.
- Solomon, Michael R and Tracy L. Tuten. (2011) Social Media Marketing. UK: SAGE
- Moleong, LJ (2018). Qualitative Research Methodology. (Revised Edition, Issue 38). Bandung: PT Pemuda Rosdakarya.
- Morrisan, (2019). Qualitative Research. (Issue 1, Issue 1). Jakarta: Prenada Media.
- Yusuf, AM (2016). Research Methods: Qualitative, Quantitative, and Combined Research. (Issue 1, Issue 4). Jakarta: Prenada Media.
- Neuman. WL (2019). Social Research Methodology: Qualitative and Quantitative Approach (Issue7, Issue 1). Jakarta: PT Index.
- Rosyada, D. (2020). Qualitative Research For Educational Sciences. (Issue 1, Issue 1). Jakarta: Prenada Media.
- Yousefikhah, S. (2017). Sociology of innovation: Social construction of technology perspective. AD-Minister, (June), 31-43. <https://doi.org//10.17230/administer.30.2>.