TRANSFORMATION OF INDONESIA'S COMMUNICATION SYSTEM IN THE ERA OF DIGITALIZATION

Siti Nur Efitrianisa[1]

[1] UIN Sunan Gunung Djati, Bandung

E-mail: [1] efitrianisasn@gmail.com

Abstract

The purpose of this study is to discuss the transformation of communication systems in the digital era. On the other hand, this study also discusses the impact resulting from the transformation of this digital communication system. In the framework of this supporting study, the authors use a qualitative research method. This method is used to describe and analyze the data obtained which is then drawn conclusions in non-numeric form. The results of this study indicate that the transformation of communication systems in the modern world is due to the development of information and telecommunication technology and digital media. More and more areas of contemporary human society and activity are determined by the development of various systems of communication. Twenty-first century communication systems have changed the way we see the world in three important ways: connectivity, authenticity, and style. In this way it is clear that this communication system has changed and caused upheaval in the digital world which can be achieved easily.

Keywords: ***Transformation; Communication System; Digital Era; Technology.***

1. INTRODUCTION

The postmodern era is an era of development that develops based on the modern era. This postmodern era is accompanied by an era of rapid digital development. This era is also known as the digital era which will present the concept of social problems that lead to more complex problems than social problems in other eras. This digital era is inseparable from the relevance to the development of various science tigers in the present and the next, especially in the branch of technology and information science. Indirectly, this digital era encourages various knowledge to continue to develop considering the social changes that continue to occur.

Many problems that exist in this digital era come through the concept of penetration that does not feel entered into the culture of society through easy access to what is presented by digitalization facilities. So it is necessary to hold filtering based on the provisions of applicable values and in accordance with the state system (Burlian, 2019). This condition exceeds the conditions of the modern era, which makes institutional complexity more pronounced (Giddens, 2012). This problem will certainly degrade the stability of security and national order which affects the cultural values in society. The presence of this problem, of course, there must be preventive efforts made by a nation and state. In the Indonesian communication system, it includes communication patterns that are constructed by the surrounding community. The constructed communication system in Indonesia was initially dominated by traditional communication systems. However, along with the times that spur

technological progress so rapidly as if the concept of traditional communication systems fades a little.

The importance of implementing a communication system is to support the orientation of a nation, a state is nothing but a stability that covers various aspects of life such as, social, cultural, legal, political, and other aspects. The stability obtained by society in each of these eras is determined by public policy, whether it regulates in terms of communication systems or other policies. Where every policy issued by this leader will have an influence on the community which of course will determine the stability. Plus this is faced with the digital era which has many more complex problems. This digital era shows the reality of events that undergo a process of social change by Indonesia due to several factors such as the fall of the new order, the birth of information technology which results in changing interaction patterns. This problem spreads to various social sectors, including communication interaction patterns that occur in society and the State.

The resulting effectiveness is the occurrence of social integration that must be faced with the form of adjustment that must be experienced by the community. Even this change can give birth to social disintegration which means the process of division between the two parties. This disintegration can be born due to the occurrence of anomie where the community is saturated with the norms that have been in force and new norms have not been formed massively so that it has the potential for chaos. Historically, communication systems were easy to define because they functioned in specific fields—such as publishing (newspapers, magazines, books), radio, television, sound recordings, and film. Media companies can be further distinguished because they tend to focus on one area in the media value chain; specialize in development (content), production, distribution, or exhibition. As media companies began to consolidate, larger conglomerates such as Disney and News Corporation developed brands and businesses in a horizontal pattern, traversing different media markets, as well as engaging in vertical integration, where many value chain activities were placed under one corporate structure.

Based on previous research, conducted by Albarran, (2009) shows that not only the pattern of communication systems is changing but also this is experienced by the media and communication industry which is also undergoing unprecedented transformation in the 21st century. This paper examines this transformation process using the case study method by analyzing the traditional and new media sectors using the following criteria: the markets in which they are involved, the leaders in each industry, the economic potential of these clusters, and their continuing process of evolution and transformation. The paper argues that the media and communications industry can no longer be identified in terms of core sectors such as broadcasting or newspapers , but rather distinct activity structures involving areas such as content, distribution, and search features. Furthermore, the paper argues that new theoretical and methodological tools are needed by scholars to better understand the massive changes and transformations taking place in the media sector. A series of propositions concludes the paper, offering a framework on which to build future research and analysis.

The difference between this research and previous research lies in the discussion of different study objects. Where the previous research moved on aspects of communication and information industry policies that have changed, while this study will focus on studies that occur in the midst of society in Indonesia in facing the digitalization era. Based on the description above, the essence of this study is to discuss the transformation of communication systems in the digital era. On the other hand, this study also discusses how the impact of the transformation of this digital communication system? In order to support this study, the author uses qualitative research methods . This method is used to describe and analyze a data obtained which is then drawn conclusions in non-numeric form (Abdurrahman, 2003). The approach used by the author applies the literature study method, meaning that the author uses data related to literature and information (J. Moleong, 2018). The data in question is about the transformation of communication systems that occur in this digital era.

2. IMPLEMENTATION METHOD

The research methods used in exploring the transformation of Indonesia's communication system in the era of digitalization include several important steps. First, the research begins with the preparation of an in-depth conceptual framework, involving a literature review of the latest developments in digitalization, digital communication trends, and related policies and regulations in Indonesia. Furthermore, case studies and policy analyses were conducted to understand government strategies, telecommunications infrastructure regulation, and the role of stakeholders in the telecommunications and digital media industry. In addition, surveys and interviews were conducted to obtain primary data on public perceptions of communication digitization, while data analysis used qualitative and/or quantitative methods to identify relevant patterns and trends. Finally, comparisons with the international context are carried out to draw conclusions about how Indonesia can take lessons from other countries in managing communication transformation in the era of digitalization. Thus, this research method is designed to provide a comprehensive understanding of the dynamics of Indonesia's communication system transformation in the era of digitalization.

3. RESULTS AND DISCUSSION

Evolution of Communication and Media Systems

Speaking of communication transformation in the modern world, we will first pay attention to the development of information and telecommunications technology and digital media. More and more areas of contemporary human society and activity are determined by the development of various communication systems: from scientific research and industrial production to everyday ways of communication between people. Social ties in the modern world are changing; They become more diverse and inconsistent. Previous social relationships organized on the basis of spatial proximity gave way to the bonds of communication "distance" (contact occurs at a distance, or we overcome distance to meet). New connections are short, fragmentary, intense, and not defined by narrative sequence;

they have increased volatility. Mass media and media reconfigure the spatial and temporal parameters of perception and experience, allowing us to hear and act at a distance. We're talking about the ability to transcend space and compress time through different generations of media (from writing to the Internet). However, digital technology is enhancing these capabilities on an unprecedented scale.

The emergence of electronic means of communication (starting with the telegraph) opened up the possibility of fundamentally overcoming (and, possibly, even eliminating) territorial limitations from the scale of social networks. Now the necessary compactness is provided due to the high speed of information exchange, which makes it possible to ignore the time spent on the transmission of information and reach a situation where, regardless of the geographical location of network participants, from the point of view of process communication, they are all "close together" New information and telecommunications technologies not only change the forms and methods of communication between people but sometimes question the viability of "traditional" methods and forms of communication. So, an illustrative example of this is the rapid growth in popularity of online dating platforms , which are replacing classic offline dating. Apps like Tinder and Badoo are used by very young people (called millennials) and older people (generation X); in addition, women are more likely to build long-term relationships and men to short-term acquaintances.

Highlighting the specificity of modern communication systems, we can note the following:

1. Communication systems are based on complex computational processes (algorithms).
2. People are no longer the sole agents of communication. As a result, it becomes more difficult to control the procedures and techniques of communication itself. More and more communication formats are built in "machine-machine" or "human-machine" modes of interaction (Digital Government, NeuroNet, Internet of Things, etc.).
3. Communication systems (that is, systems that generate, broadcast, transform and store information) are better suited to the daily regime of human existence, no longer belonging, for example, to research institutions or advanced industries.

One of the modern trends is the formation of new models and methods of communication that allow not only to expand and make communication more convenient between people, but also to expand the scope of communication between a person and non-human agents (objects, artificial intelligence, etc.). The technological revolution 4.0 created the infrastructure for the mass distribution of these forms of communication. The fourth industrial and technological revolution implies a series of social, economic, structural and organizational changes in all spheres of society, which occur due to the daily introduction of radio electronics, ICT (information and communication technologies) and ICT-based production and financial technologies . This revolution includes the development of industry 4.0 (automation and robotization of production based on digital technologies), digital economy (widespread use of ICT in business, management, production, and finance based on digital platforms and networks), major changes in the financial system (transfer of transactions to electronic form).

Pay attention over time to the growth of the presence of telecommunications companies, as well as the growth of larger media conglomerates GE, Time Warner, Disney and News Corporation. So, we see evidence of two trends: the growth of content-related companies, as well as the importance of distribution through telecommunications, much of the latter coinciding with the rapid growth of mobile phones and the Internet. Furthermore, it was during this period that telecom operators began offering "triple play" services, or telephone bundling, high-speed Internet services, and multichannel video services to homes, providing direct competition with cable television providers offering similar services.

This traditional media and communication market focuses on one business model : advertising. Content attracts audiences, and advertisers buy time and space to gain access to audiences. There is one other business model used by traditional media, namely the subscription model. With a subscription, consumers buy goods or services, usually monthly. Among the items that use subscriptions are newspapers and magazines, as well as cable or satellite television services. Consumers also engage in direct purchases, whether buying CDs, movie tickets, or books.

Companies in the media industry generally enjoy strong cash flow and profit margins—until new technologies allow for more choice and choice for consumers, creating fragmentation and decreased audiences. This is especially true for the younger demographic, which finds little use in newspapers, radio stations, or even traditional television. The younger demographic can easily acquire the content they want over the Internet, and watch or listen on laptops or Mp3 players.

The fate of traditional media companies became clearer when the United States fell into recession in late 2007. By the end of 2008, advertisers had pulled millions of dollars away from traditional media, partly to save money, but also to put more investment into the online world. As advertising erodes from the three best sectors of the ad market (e.g., financial services , automotive, retail), its influence on media companies is dramatic. Many media companies saw the value of their companies plummet, with stocks trading for pennies, and some companies were forced into the early stages of bankruptcy protection. The long-term economic outlook for traditional media suggests a continued shrinkage in terms of value, and continued fragmentation (and thus erosion) of existing audiences (see Carr, 2008; "Fitch Touts Grim '09 Outlook"; Webster, 2005).

The possibilities of Internet communication are not something that arises from nothing, from their "absence" fixes objective trends in changes in human life, generated by the technical and semiotic features of cyberspace on the World Wide Web. At the same time, existing on the basis of technological realities, they precisely act as opportunities in a philosophical sense: some of them exist only as potentials either for the whole of humanity or for individual countries, regions, social groups and individuals; potential opportunities under certain conditions (social, technological, psychological, etc.) can become real; The Internet itself as a hypertext, virtual society and technology is the possibility of building semantic, social and technological dimensional spaces.

Restrictions are requirements for a person and his activity posed by new risks posed by Internet communication in technological and sociocultural manifestations. As a result, the opportunities and limitations created by modern Internet communications directly affect their future transformation. The array of available information is practically unlimited, which significantly expands the limits of human self-realization. Infinity characterizes the volume and structure of information: from scientific knowledge to recreational details of the most diverse content and forms. The most important thing is the availability of professional information: professional knowledge, previously mostly possessed by specialists, was shared by the widest layers of the population. Scientific data for most residents of economically developed countries become personally significant knowledge. On the one hand, this leads to qualitatively new possibilities for using professional information and, on the other, practically unlimited opportunities for distance learning and self-education.

In the field of institutionalized education, not only the content and forms change, but also the meaning and purpose of the educational process itself. Instead of specialized training for a narrow field of activity through the transmission of traditional knowledge, higher education began to solve the problem of forming universal professional abilities of an employee in demand in the labor market, regardless of its structural changes.

The dynamics of the growth of the digital industry in the realm of journalism can be seen in the emergence of various online media channels in Indonesia. Information from the Press Council in 2019 shows that the number of online media in Indonesia reached 43. 000 (Leksono 2019). The implication that after that arises is a change in media work methods due to digitalization which is not only intertwined at the industrial level but also changes in the work patterns of journalists as producers of news content (Ashari 2019). The growth of digital media is inevitable at a time when citizens are networking. Information is the main commodity and the position of journalism is not only presenting data, educating, entertaining, and watchdogs, but increasing with citizens' needs for data and networking (Nurlatifah& Irwansyah 2019).

In the process of searching for news, the arrival of the internet facilitates and erases the distance of space and time. Information search activities can be tried by using a search engine connected to the internet, the ease of interviewing sources virtually, listed news curation processes that are tried online. This matter is definitely different from conventional journalism applications which are dominated by information and data search activities in the field directly through a face-to-face process with sources. Although the debate about the need for journalists to arrive in the field is still ongoing, it cannot be denied that the arrival of the internet makes the work process of journalists in collecting information and data simpler and easier. Malik and Shapiro reported by Ashari, (2019) reported that digital journalism can be recognized from some personalities, namely the existence of interactive engagement, cooperation between journalists and writers, there is unity of publication as an implication of multimedia, there are more pronounced consequences of wider content dissemination patterns, and a more global reach due to aspects connected to the internet network.

In the process of creating news, internet-based digital journalism applications share editorial flexibility to enrich information in the process of making news. Not only information from interviews, sources that can be used as material for news, but also various data spread on social media and other online media portals can be used. The arrival of the internet also clarifies the comparison of journalists' patterns in producing news, where newsrooms are not only in one place but in various regions. Journalists can digest and send their news to the newsroom anywhere and anytime. Meanwhile, in the process of news publication, the existence of the internet enriches the media for news publication facilities to the public, one of which is social media. Social media is a form of digital media convergence application. Social media as part of new media can combine and match reading, sound, photos, and videos with technology, so it is different from traditional media (Tresnawati& Prasetyo 2018).

The trend of social media use in the realm of journalism is directly proportional to the increasing number of internet users and social media in Indonesia. Based on the results of the We Are Social Hootsuite study released in January 2019, as quoted by katadata. co.id, social media users in Indonesia reached 150 million or 56 percent of the total population. This number is up 20 percent from the previous survey (We Are Social 2019). Moreover, based on research information from Statist in 2022, internet users in Indonesia are predicted to continue to grow to reach 25.3 million users or increase by more than 30 percent, (Statista 2017).

The Effectiveness of Digital Communication System Transformation

Technology is now the most important communication aid for a society, group, institution or an organization. Technology has changed the way organizations conduct public relations and marketing, including the way they interact with media and stakeholders. The rapid development and adoption of new technologies has changed the face of communication from traditional media. The technological revolution has also changed marketing dramatically. Companies can no longer rely on traditional advertising to generate revenue. This trend has resulted in a number of developments in marketing communications: The proliferation of technological devices means that almost everyone in a company has a computer at home and a mobile phone in their pocket. It is also common for employees to bring their mobile devices (BYOD Bring Your Own Device) to work or to do work from their homes. Communication technology can be both a blessing and a curse for businesses. Technology increases productivity, but it also complicates marketing and public relations strategies, as well as internal communications.

In today's global economy Technology allows us to easily connect with people around the world using forums of their own choice. We don't have to wait for stamped mail to traverse miles or collect large long-distance phone bills (as happened not so long ago); instead through the Internet we can directly reach almost anyone either through email, instant messaging, social media, or countless applications. As the speed of communication has increased, costs have been dramatically reduced. Information overload is becoming a reality, with the Internet providing more knowledge at the click of a mouse than could have been

imagined in the past. This means there is more data that can be communicated on any topic than was possible before, limited only by our own ability to find, absorb and store this information. As a result, savvy communicators have learned to turn to specialized technology solutions to help them harness, organize, and manage a flood of data. The Spreadsheets application of WPS Office's multi-platform office solution, for example, allows users to load and categorize different types of data more efficiently using commonly used formulas. The app offers built-in tables and cell styles that simplify data organization and presentation.

The nature of communication has changed along with the increase in its speed and volume. Mobile devices that fit snugly in our pockets have small keyboards that make communication practically desirable; hence the increased use of new shortcuts, symbols, abbreviations, and words that convey intent with fewer characters. The sheer number of devices also makes communication fast like smart phones, laptops, tablets, or desktops. These tools give teams access to each other's edits and comments on the same document or spreadsheet, facilitating communication and collaboration toward a common goal. While technology is often seen as the culprit behind the decline in face-to-face conversation, we should appreciate technology for opening up many new avenues to expand the relatively limited communication options we have had in the past.

For many of us, communicating with family usually means sending letters and cards in the mail and not getting a response until weeks later and a pay phone is the only option to call home if our car breaks down by the side of the road, or if we have to stay after school. Over the past decade or so, technology has changed the way we communicate, to some extent due to the advent of the Internet. Instead of sending letters, we write emails via Gmail or Hotmail that can be sent instantly to recipients. We can even add multiple recipients to this email, so that more than one person can read it. What's more, we can send greeting cards-No postage required! Mobile phones have been a godsend, allowing us to make calls wherever we are—on the way to work, at the beach, at school, etc.

It is true that technology also makes society somewhat impersonal. As a result, it's hard to tell if someone is serious or sarcastic—our witty turn of phrase can easily be misinterpreted. Technology tends to make communication and faster to get out of your seat and walk up to the person, or just pick up the phone. To make matters worse, the younger generation has forgotten how to spell and write complete sentences due to the increasing use of text messaging on mobile phones. The State Examiner's Commission of Dublin, Ireland said in a report that in many cases, adolescents seem to "rely too heavily on short sentences, simple word forms, and limited vocabulary" and with the use of phonetic spelling and little or no punctuation; it begins to threaten traditional writing, not to mention oral communication. In addition, we've seen how people get addicted to their smart phones, such as the Apple I-Phone and other smartphones (you've probably heard the term for it: "Crack Berry.") People have an obsessive need to constantly check their e-mail , even while on vacation with family. It's as if we're afraid we'll miss something important or get out of the loop.

Twenty-first century communication has changed the way we view the world in three important ways: connectivity, authenticity, and style. The first way is obvious to any living being, but it has changed politics, business and culture, causing the upheaval of the reachable digital world. The digital age has radically flattened the ubiquitous hierarchy of communication, and completely reshaped the old power relations between rulers and the masses. Now, one angry customer can tear down a restaurant, one fiery person can spark support for a cause, and one disgruntled citizen can start a movement and bring down the government. This shift has two implications for communication. First, it necessarily increases the volume and consequently decreases the accuracy and suitability of the information flow. Second, anyone's voice can be heard, and may even be heard as it should be. That's the good news. You're competing with fake news, but if you persist, your story will most likely be heard.

The next impact of this communication system transformation can be seen from the shift of conventional journalism methods to digital journalism systems. Salaverria (2019) defines digital journalism as all forms of journalism that use digital energy sources. Not only energy sources on the internet or mobile internet networks, but also digital TV and digital radio . This definition of Salaverria has a wide range. But in describing the example, he said a lot about the use of digital media technology by journalists. Kawamoto (2003) highlights digital journalism as a form of old application in a new context. More specifically, he referred to digital journalism as a synthesis of tradition and innovation. Journalism is called an old application and has been traditional because its practice has been identified since the era of Julius Caesar's empire in Rome. At that time, there was an attempt to record data overriding the public interest in a notice board called Acta Diurna. While digitalization, for him, is an application that emerged in the 20th century, the century of electronic PC technology.

Furthermore, Kawamoto defines digital journalism as the use of digital technology in producing content for the public universally . Some examples of digital technology he mentioned are such as the web, digital audio recorders, and weblogs. Similar to Kawamoto's approach, Bosch (2016) defines digital journalism from the point of view of journalists' use of digital media. In his paper, Bosch studied the use of digital media by journalists in South Africa. The digital media he meant was a kind of use of online news messages (e-paper) by the Mail& news messaging industry Guardian and Financial Mail. Not only that, social media such as Facebook and Twitter are also used by journalists with the aim of reaching more audiences and creating engagement.

Another impact is that in the process of creating news, internet-based digital journalism applications share editorial flexibility to enrich information in the process of making news. Not only information from interviews, sources that can be used as material for news, but also various data spread on social media and other online media portals can be used. The arrival of the internet also clarifies the comparison of journalists' patterns in producing news, where newsrooms are not only in one place but in various regions. Journalists can digest and send their news to the newsroom anywhere and anytime. Meanwhile, in the process of news publication, the existence of the internet enriches the media for news publication facilities

to the public, one of which is social media. Social media is a form of digital media convergence application. Social media as part of new media can combine and match reading, sound, photos, and videos with technology, so it is different from traditional media (Tresnawati& Prasetyo 2018).

Based on a review of the description related to the development of communication systems that provide a lot of changes where a lot of changes are presented in the aspects of the communication field system. This is driven because of the development of the times that always provide technological developments from every time. With this, the communication system process will also continue to undergo transformation along with technological advances that become a practical means of delivering messages. There are so many positive values that we can take by utilizing the ease of communication system.

4. CONCLUSION

After going through many explanations, which according to this author still has a lot of shortcomings, considering the discussion of this communication system is so broad and coupled with discussions related to technological advances. Of course, this discussion needs to be deepened in the aspect of connectivity between technological advances and communication systems. However, this study can conclude several things including the following: Communication transformation in the modern world, we will first pay attention to the development of information and telecommunications technology and digital media. More and more areas of contemporary human society and activity are determined by the development of various communication systems: from scientific research and industrial production to everyday ways of communication between people. Social ties in the modern world are changing; They become more diverse and inconsistent. Previous social relationships organized on the basis of spatial proximity gave way to the bonds of communication "distance" (contact occurs at a distance, or we overcome distance to meet). New connections are short, fragmentary, intense, and not defined by narrative sequence; they have increased volatility. Mass media and media reconfigure the spatial and temporal parameters of perception and experience, allowing us to hear and act at a distance. Studies talk about the ability to transcend space and compress time through different generations of media (from writing to the Internet). However, digital technology is enhancing these capabilities on an unprecedented scale. The emergence of electronic means of communication (starting with the telegraph) opened up the possibility of fundamentally overcoming (and, possibly, even eliminating) territorial limitations from the scale of social networks. Now the necessary compactness is provided due to the high speed of information exchange, which makes it possible to ignore the time spent on the transmission of information and reach a situation where, regardless of the geographical location of network participants, from the point of view of process communication, they are all "close together" New information and telecommunications technologies change not only the forms and methods of communication between people, but sometimes questioning the viability of "traditional" methods and forms of communication. So, an illustrative example of this is the rapid growth in popularity of online dating platforms, which are replacing classic offline

dating. Apps like Tinder and Badoo are used by very young people (called millennials) and older people (generation X); in addition, women are more likely to build long-term relationships and men to short-term acquaintances.

Twenty-first century communication has changed the way we view the world in three important ways: connectivity, authenticity, and style. The first way is obvious to any living being, but it has changed politics, business and culture, causing the upheaval of the reachable digital world. The digital age has radically flattened the ubiquitous hierarchy of communication, and completely reshaped the old power relations between rulers and the masses. Now, one angry customer can tear down a restaurant, one fiery person can spark support for a cause, and one disgruntled citizen can start a movement and bring down the government. This shift has two implications for communication. First, it necessarily increases the volume and consequently decreases the accuracy and suitability of the information flow. Second, anyone's voice can be heard, and may even be heard as it should be. That's the good news. You're competing with fake news, but if you persist, your story will most likely be heard.

REFERENCES

Abdurrahman, S. dan H. (2003). Metode Penelitian Hukum. Rinerka Cipta.

Albarran, A. B. (2009). The Transformation of the Media and Communication Industries: A 21st Century Examination and Analysis. New Media and Information: Convergences and Divergences International.

Ashari, Muhammad. (2019). "Jurnalisme Digital: Dari Pengumpulan Informasi Sampai Penyebaran Pesan." Inter Komunika: Jurnal Komunikasi Vol 4, No 1.

Barnet, S. (2011). The Rise and Fall of Television Journalism, Just Wires and Lights in a Box? UK: Bloomsbury Academic.

Bashynska, I., Smokvina, G., Yaremko, L., Lemko, Y., Ovcharenko, T., Zhang, S. (2022). Assessment of investment and innovation image of the regions of Ukraine in terms of sustainable transformations. Acta Innovations, 43, 3-77. DOI: 10.32933/ActaInnovations.43.6

Bessarab, A., Mitchuk, O., Baranetska, A., Kvasnytsia, O., Mykytiv, G. Social networks as a phenomenon of the information society. Journal of Optimization in Industrial Engineering, 2021, 14(1), pp. 35–42

Bosch, T. (2010) Digital journalism and online public spheres in South Africa. Communicatio: South African Journal for Communication Theory and Research, 36:2, 265-275, DOI:10.1080/02500167.2010.485374

Burlian, P. (2019). Patologi Sosial. Bumi Aksara.

Deuze, M. (2011). Managing Media Work. Thousand Oaks, CA: SAGE.

Deuze, M. (2017). Considering a Possible Future for Digital Journalism. Mediterranean Journal of Communication, 8(1), 9–18. Retrieved from https://www.doi.org/10/14198/MEDCOM2017.8.1.1

Franklin, B., & Eldridge, S. (2017). The Routledge Companion to Digital Journalism Studies. Park Square: Routledge. Galtung, J. and Ruge, M. (1965) Structuring and selecting news, in S. Cohen, and J. Young (eds) (1973) The Manufacture of News: Deviance, Social problems and the Mass Media Communication and Society Series (4th Ed). London: Constable. pp. 52– 64.

Giddens, A. (2012). The Consequences Of Modernity. Polity Press.

J. Moleong, L. (2018). Metodologi penelitian kualitatif (Ce.38). PT Remaja Rosdakarya Kawamoto, K. (2003). Digital Journalism: Emerging Media and The Changing Horizons of Journalism. USA: Rowman & Littlefield Publishers, Inc.

McShane, D. (1979). Using the Media. London: Pluto Press.

Leksono, Ninok. 2019. "Pendidikan Jurnalistik dan Kesiagaan Mengguncang Diri Sendiri." Jurnal Dewan Pers Edisi 20 November: 38.

Malik, A., & Shapiro, I. What's Digital? What's Journalism? Dalam Franklin, B. & Eldridge, S (Ed). (2017). The Routledge Companion to Digital Journalism Studies. New York: Routledge.

Nurlatifah, Mufti & Irwansyah. (2019) "Fact-Checking Journalism sebagai Platform Kolaborasi Human and Machine pada Jurnalisme Digital." Jurnal Komunikasi Volume 13, Nomor 2, April: 121-134 DOI: 10.20885/komunikasi.vol13.iss2.art1.

Nurlatifah, Mufti. (2020). "Persimpangan Kebebasan Berekspresi dan Tanggung Jawab Sosial pada Regulasi Jurnalisme Digital di Indonesia." Jurnal IPTEK-KOM (Jurnal Ilmu Pengetahuan dan Teknologi Komunikasi) Volume 22, Nomor 1: 78-79 DOI: https://dx.doi.org/10.33164/iptekkom.22.1.2020.77

Steinhorst, S. (2020). Internet of Things" it - Information Technology, vol. 62, no. 5-6, pp. 205-206. DOI: 10.1515/itit-2020-0047

Wenger C. (2022). Mobility and Communications Systems In: The Supportive Network. DOI: 10.4324/9781003206989-5

Zhang, X., Zhu, C., Song, H. (2022). Communication System. In: Wireless Power Transfer Technologies for Electric Vehicles. Key Technologies on New Energy Vehicles. Springer, Singapore. DOI: 10.1007/978-981-16-8348-0_8.