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Implications of the Communication Technology Revolution in Education and Society of Indonesia

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ABSTRACT

The communication revolution is growing in the assumption that communication is a vital element in human life. The problem that emerges in the use of communication technology is the perception of the Indonesian people that the social, educational, and economic spheres of technology are regarded as tools that can solve the problems of this world of life easily without paying attention to the effects of these three areas. Industry implications in the field of communications technology are significant for social life, economic growth, and educational dynamics in Indonesia, but also have a threat of negative impacts that are difficult to avoid. The industrialization of the media is increasingly demonstrating how much society and all aspects connected with it, including social, economic, and educational aspects, are in need of information through mass media technology that is growing so rapidly in the age of globalization.

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1. INTRODUCTION

This is an incredibly exciting, astonishing and at the same time challenging revolution for mankind. This revolution is interesting because it brings a change in the patterns and structures of human communication processes. It is also astonishing because from the revolution grows and develops human information technology that is eventually able to transcend the limits of space and time. There's a revolution going on and being experienced by mankind. That revolution is called the communication revolution [1]. This communication revolution follows the footsteps of previous revolutions, namely the agricultural revolution (the nomadic paradigm revolution towards settlement)[2], the French Revolution (a revolution of social political paradigm)[3] and the industrial revolution[4]. The communication revolution is growing in the assumption that communication is a vital element in human life. When information becomes one of the constituent elements of a society, then people begin to "do not want" to open themselves to mass media and global communication. The cycle of production, consumption and distribution of information is increasingly experienced and possessed by a new system of global societies supported by the

strength and expansion of the economy, the network of global information systems and finally backed by technology. By measuring the evolution of communication from the influence of pre-literacy, oral traditions, writing, printing, mass media and finally telematics, it can be estimated how slow the movement of the cultural process of communication was at the beginning, but then accelerated rapidly and massively in recent times [5].

Technology in the development of the flow of production, consumption and distribution of information plays an important role. The urgency of the role of technology in the process of massification of information lies when the results of technology help transform communication patterns limited by space and time into unlimited information communication pattern. So, basically, technology is good. So it is not surprising when there is a shift from traditional mass media to new mass media. In the end, new media in the context of technology and globalization undergo such a complex shift. Globalization has become one of the key factors in the industry and communication media technology. The dynamics of the relationship between technology, culture, the presence of mass media and globalization as the pivotal dynamic of the communication revolution. For this reason, this study is divided into three major discussions. The first discussion is about the understanding and perception of technology in general. Second, the relationship between the different dimensions of education and the dynamics of communication technology development. Third, industrialization and communication technology with the structure of globalization now follows its relevance to the social society in Indonesia.

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2. METHOD

This study uses a qualitative research approach, i.e. research whose type of data is an analysis that is presented in the form of a manuscript without through numerical processing[6]–[8]. This research is structured by the step of collecting library data sources from various journals, books, and other important sources and has relevance to the topic that is being discussed, namely about the role of technology in education and also society.

3. RESULTS AND DISCUSSION

This study is divided into three major discussions. The first discussion is about understanding and perception of technology in general. Second, the relationship between different dimensions of education with the dynamics of the development of communication technology. Third, industrialization and communication technology with the structure of globalization now follows its relevance to social society in Indonesia.

3.1. Problematics of the Communication Technology Revolution in Indonesia

The development of information and communication technology has accelerated the dynamics of messages and information sent and received by humans. The process of accelerating information creates a process of saturation and overloading information that eventually makes information no longer seen as a necessity but as a temporary substitute for entertainment and commercial information[9]. Technological advances often throughout the process of development will undoubtedly mitigate and minimize the role of information in the entire system of society. Speaking of media technology, then the empirical measure that exists is about the existence of communication media. While billing technology is just about goods, it's also about the value system that's behind the technology and its logical implications for society. Whether so information can be seen and measured empirically. Another potential problem that is worth studying is that communication technology raises access issues, which will ultimately relate to issues of power and capital. Who can guarantee the expropriation of information and technology. In addition to the above, there is a very crucial problem, the problem of modern media deregulation. Let us not forget that the various deregulation of communications and telecommunications is a trigger for the development of communication and telecoms technology. The systematic development of communications services has a far-reaching influence on competition, efficiency and the development of new communications media applications [10].

No less important is the development of new media, which has a technological level and the ability to avoid regulation, like intemet. It seems that the Internet is making a constructive contribution to humanity, but there is still a question of uncontrolled "freedom" over the effects of the Internet on society.

Anthony Giddens once stated that modemity, characterized by technological advances, has become an inevitable condition [11]. Humans as subjects can and have the ability to make technology, but at some point humans can no longer control technological progress. Technology as a dynamic entity is uncontrollable, including when incoming technology drives the development of public information systems. The first perception that we might have to pay attention to is the perception of understanding the meaning of technology itself. I mean, technology should be seen as a whole of human activity. This means that when we look at technology as just artificial things, that understanding is a superficial understanding. Technology at least has interrelated aspects, that is, technical aspects that include knowledge, technical capabilities, patterns of work followed by all its activities, organizational aspects which include economic and industrial activities, professional activities, users and consumers; where technology is seen as a dynamic system and cultural aspect that includes the purpose of technology, values - codes of ethics and creativity[12].

The feature of technology is that technology always involves two important factors, namely efficiency and a clear purpose. Efficiency refers to the conception that shows the best comparison between a work and the result obtained. Technology is a human activity that clearly means that human activity is done to meet needs, solve problems, or overcome certain difficulties. But nevertheless, it is recognized that technology is an extension of the human hand [13]. Technology at the same time provides a value offer, that is, that human work is increasingly assisted by the presence of technology. It can be said that technology at some point is a human effort to shape the world according to its perception and understanding. Thus, technology is part of human culture. This engineering culture is more of a cultural system that makes "second world" after the environment where humans are thrown. The second perception that might need to be looked at further is the position of technology in human culture. The agreed adagium is that technology is the whole of human activity aimed at making human life easier. When the definition of technology uses the definition above then there is indeed a certain point that can state that technology can be said as a culture. When technology is seen as a whole of both aspects of value, organization and material objects, then it can be said that technology is a culture - or it could be said again - culture is technology. But on the other hand, we can also say that technology is part of culture. It does bring its own problems, about how we should master technology. The third perception is some of the beliefs that accompany technology as a system and practice. Technology as a system of values and work practices that it follows is in the constellation of the process of human progress or progress. Dynamics of efficiency and specific objectives do not want to assume the system's progress in technology. Industrial efficiency and technology result in mechanization, automation, massification of production and consumption, expansion of distribution and stabilization of natural resources used for the development of technology itself [14].

The degree of technological progress is expected to make human work easier. In other words, the belief in technological progress is increasingly placing humans as the beneficiaries of technology without having to question how it is processed. Although technology is always trying to provide the best, the most efficient, the cheapest, the easiest to mankind, yet technology has not been able to solve the mystery of the whole process of its invention. The level of technological sophistication and human needs also require a level of expertise. The demand for such a sophisticated technology is the human ability not only to wear it but also to create or reproduce the technology itself.

3.2. Implications of the Communication Technology Revolution in Education

Technology in industrial society enables mass media to centralize and transform into media capable of holding and compressing large amounts of information and then distributed massively or individually simultaneously and quickly Communication technology cannot be separated from the process of industrialization. The whole reason the world of education in industry is getting the tools to increasingly consolidate the position of education within technology [15].

The communication technology revolution implies changing the paradigm of the world of education, shifting from conventional face-to-face education to open education. The role of information technology in education can support this. As science and technology progress, learning processes begin to shift towards learning, case-based, contextual, and not restricted to certain categories. During this learning process, students are asked to participate more actively and optimize their learning resources [16]. Because of the fact that today's education has evolved with the advancement of technology. Teachers generally underestimated differences of opinion between teachers and pupils, thus affecting dictating educational methods, but today education has shifted more humanistically, there is a high tolerance between teacher and pupil that demonstrates multicultural management in education. It is also influenced by rapidly evolving information and communication technologies. Students can contain more information than teachers give, so teachers are required to talk about technology, learn more, and strengthen the tolerance of paradigm differences between teachers and students [17].

A new era of education based on foundations, knowledge practice as well as the professionalism of mastering information technology provides affirmation that education is based on knowledge. Knowledge here is also meant by the ability, skill content of knowledge in science that is constantly growing significantly as an idea in the learning process of teaching. [18] Here are general characteristics of the educational model in the era of the communication technology revolution. First, digitization, the technological shift from analog to digital technology enables communication to carry compact, rich information of all kinds in common; with information technology, information can be combined, converted and presented in various forms. Virtualization, the transformation of material or anything that is physical into virtual reality, also means changing the metabolism of social and educational realities, the type of institutions and the educational pattern of social life itself. In an educational institution, there is a change in the form of an institution into a more existing and functional institution in the virtual world. Third Molecularization, which means that new education forms units of smaller and independent new educational units. With information technology, institutional systems and educational institutions are transforming into a reality that doesn't pay attention to the size and limitations of time and place. These small educational units are capable of becoming the basis of independent and global educational activities. Four Network Integration, New Education is an education based on network technology. Connectivity in networking enables networking in a wide range of spheres, local - regional - national - metropolitan - nation - global. There's no intermediary in the new education system. This means that the new education doesn't really need a tutor. It even happens that retailers or media agencies are in the middle of producers and consumers. Technology in the context is now shifting designs to build multilevel computations into models that are more integrated into the network. Convergence is the keyword of new education. I mean, there's a concentration of media fusion capabilities and educational substance. The creation of this combined ability forms a more sophisticated ability. Equipment, systems, content and control of information are interrelated. Sixth Innovation. In other words, innovation is an important factor in educational activity and business success. In this sense too, the level of human creativity and imagination becomes an important source of value. Seventh Assumption. The boundary between students and teachers becomes blurred. Students are consumers of information and technology becoming also producers of education. Human collaboration in the network becomes part of the multimedia company's information source. Users can be designers. Moreover, the contribution of applications and artificial intelligence or Artificial Intelligence sometimes makes students seem smarter than their teachers. Eight Discordances. Massive social contradictions emerged. There was a conflict between old-fashioned opinions and new ones. In this context will also appear who says technology and who is left behind by technology, between the rich and the poor, knowing and not knowing. It's all about access to information and education. It also grows the potential for new trauma and unforeseen conflict [19].

The communication technology revolution has had an impact on the side of people's lives, so creating a safe, comfortable, and quiet life, needs improvement due to the rapid development of information and communication technology. Positive Impacts of Information and Communication

Technologies: d. Information and communication channels become faster, more accurate, and more precise; e. human activities are fulfilled faster; f. technology will make learning more efficient, effective, and enjoyable; and g. distance learning can save costs and time and offer the ability to learn more. h. distance education can save cost and time as well as reach students who live at a distance. Negative impacts: a. the amount of information we often receive makes it difficult for us to prioritize the news and set the truth of the news; b. Internet technology is abused to access porn sites; and c. Social media leads to laziness; and d. The more information we display and share with others without us realizing increases the likelihood of abuse by unauthorized parties. e. There are comments on social media that sometimes deliberately or unintentionally harm the lives of others [20].

3.3. Industrialization of the Media in the Information Society

Technology in media industrialization is crucial. At least the industrialization of the communication media requires technology to be an effective extension of the hand that increases the scale of the economic gains obtained. But there are still some arguments that need to be studied, besides economic arguments. The first is the argumentation of a growing culture of communication. This argumentation wants to show the evolution or change of human mobility and the limitations of space and time can affect the patterns of human communication. The second is the arguments of the development of the economic, social and cultural systems in which modern human beings live. At least it is necessary to study the significant relationship between development of economic systems, social, and cultural with the question of the urgency of the use of technology in the industrialization of the media. Third, is a subjective argumentation human being who is always not satisfied with development of modern communication media. The means of communication need to be adapted to local mentality and patterns of human action Some beliefs that accompany technology as a system and practice. Technology as a system of values and work practices that it follows is in the constellation of the process of progress. Dynamics of efficiency and specific objectives do not want to assume progress (linear progress) in technology. Industrial efficiency and technology result in mechanization, automation, massification of production and consumption, expansion of distribution and stabilization of natural resources used for the development of technology itself. The industrialization of the production of content and the variety of communications media is in the process of increasing: convergence in terms of existing media technologies, digital, optimization of fiber optic technology and network technology on the nodes of modern communications technology. The high level of mobility in the distribution of modern media has become a reasonable demand in the information society. The level of Mobility and the flow of information traffic has become the pattern of distribution in the mass media. Moreover, the modern media also centralizes the patterns of duplication, satellite systems, digitalization of remote information, tele-text in the entire process of modern communication media distribution[19].

The argumentation of the relationship of technology with the information media is the logic of the expansive development of public communication processes globally. People can no longer avoid the process of communication. Communication has become a primary necessity. Communication needs a medium to be a transmitter (menyangkut teknologi informasi yang mempermudah manusia mengirim dan menerima pesan). When space and time are the limiting factors of the communication process, technology is needed to deal with the problem. Communication technology is created and developed to support human communication processes. The dramatic development of communications technology is not just about the hardware system, it's about how to interconnect the communications network. Communication technology isn't just about goods, it's about network technology itself. If we want to talk about the structure of media industrialization, then we do not separate ourselves from the content of the media created and created. Communication technology is a cost-intensive device, so only large capitalists can master the technology. So it is not surprising that industrialization and technologization of communications media has brought the media industry into conglomerate ventures. In similar developments the newspaper industry has become a networking industry. The networking industry clearly emerged a number of big players. The film, radio and music industries are no longer growing vertically but also horizontally [21].

4. CONCLUSION

The communications technology revolution has affected Indonesian people who are truly ready to step into an information society. It's not just a technological development but also an image and culture development of information technology, there are some considerations to beware of in this regard. The first is about defining the concept of technology and what kind of communicative society to build. Those questions are not too late to answer right now. Our societies need to adopt communication technology without leaving local cultural values. Second, technological developments influence social transformation. Social transformation that is balanced and consistent with the social strengths of society. That transformation includes the integration of technology-based education, the empowerment of public participation of state authorities and private forces to act more socially responsible, the transformation of regulation necessary for the rules of common play equal in terms of industrial and media technology development, aspects of leadership transformation in the discovery and creation of new economies as the expansion of jobs and access to information more broadly. Thirdly, the image change of communication technology itself. The image change in communication technology is driven to create the adoption of innovation. As for the adoption of innovation technology, it encompasses the comparative use of living practices, the compatibility of values with the needs of society, the simplicity of use, available at all times, proved beneficial. Thus, communication technology can be applied in society and communication technology becomes more human and more human.

REFERENCES

[1] C. L. Coyle and H. Vaughn, "Social Networking: Communication Revolution or Evolution?," *Bell Labs Tech. J.*, vol. 13, no. 2, pp. 3–18, 2008, doi: 10.1002/bltj.

[2] J. P. Gee and M. Handford, *The Routledge Handbook of Discourse Analysis*. 2012.

[3] T. Sugino, E. Abe, and M. Ueda, "Coping With Teacher Demotivation Toward Directed Motivational Currents," *J. Lit. Art Stud.*, vol. 7, no. 5, 2017.

[4] W. S. Lafitri, A. Suryatmoko, and V. T. Suharto, "Improving Student Recent Writing Skills Using the Project Based Learning (PJBL) Model For Class XI MIPA 3 SMA Negeri 6 Madiun," *Int. J. Corner Educ. Res.*, vol. 1, no. 3, pp. 138–143, 2023, doi: 10.54012/ijcer.v1i3.167.

[5] A. Briggs and P. Burke, *A Social History of the Media: From Gutenberg to the Internet*, 4th ed. Cambridge: Wiley, 2020.

[6] M. Herman, C. Mulya, and S. Apriyanto, "The Implementation of Education Financing Through Bos Fund Management in Improving," *J. Inspiratif Pendidik.*, vol. X, no. 1, pp. 90–101, 2021.

[7] I. Ayu, H. Erlina, D. Santoso, and S. Apriyanto, "Perspective of Parents of Online Learning in Pandemic Covid-19," *J. Res. Business, Econ. Educ.*, vol. 2, no. 6, pp. 1346–1350, 2020.

[8] S. Apriyanto and A. Anum, "Gender Dynamics on Speaking Interaction in the College Classroom," *J. Smart*, vol. 4, no. 2, p. 73, 2018, doi: 10.26638/js.692.203x.

[9] J. K. Burgoon, J. A. Bonito, B. Bengtsson, C. Cederberg, M. Lundeberg, and L. Allspach, "Interactivity in human-computer interaction: A study of credibility, understanding, and influence," *Comput. Human Behav.*, vol. 16, no. 6, pp. 553–574, 2000, doi: 10.1016/S0747-5632(00)00029-7.

[10] Z. Nasution, "Konsekuensi Sosial Media Teknologi Komunikasi Bagi Masyarakat," *Reformasi*, vol. 1, no. 1, 2011, doi: 10.33366/rfr.v1i1.9.

[11] A. Giddens, *The Third Way and its Critics*. Cambridge: Wiley, 2013.

[12] A. F. Sari, "Etika Komunikasi," *TANJAK J. Educ. Teach.*, vol. 1, no. 2, pp. 127–135, 2020, doi: 10.35961/tanjak.v1i2.152.

[13] M. McLuhan and W. T. Gordon, *Understanding Media: The Extensions of Man*. California: Gingko Press, 2003.

[14] Y. A. Tangkasiang, "STUDI PENERAPAN TEKNOLOGI TEPAT GUNA TERHADAP

PERUBAHAN SOSIAL NELAYAN KARAMBA DI KELURAHAN PEMBUANG HULU I, KECAMATAN HANAU, KABUPATEN SERUYAN, PROVINSI KALIMANTAN TENGAH," *J. Sociopolitico Fak. Ilmu Sos. dan Ilmu Polit.*, vol. 4, pp. 71–79, 2022.

[15] J. D. Straubhaar and R. LaRose, *Media Now: Communications Media in the Information Age*. Ohio: Wadsworth, 2000.

[16] M. D. Anggraeni, R. Mucharromah, B. Z. Taqiyya, R. E. Fadilah, I. K. Mahardika, and F. Yusmar, "PERKEMBANGAN TEKNOLOGI DAN KOMUNIKASI DALAM PENDIDIKAN," *FKIP e-PROCEEDING; 2022 Semin. Nas. N-ConferSE III 2022*, Jan. 2023.

[17] M. S. Al Auny and A. Arrohmatan, "MANAJEMEN PENDIDIKAN HUBUNGAN MASYARAKAT BERBASIS HUMANIS MULTIKULTURALIS ABDURRAHMAN WAHID," *J. Insa. Cendekia*, vol. 4, no. 1, pp. 11–24, 2023.

[18] S. S. Hasnida, R. Adrian, and N. A. Siagian, "Transformasi Pendidikan di Era Digital," *J. Bintang Pendidik. Indones.*, vol. 2, no. 1, pp. 110–116, 2024.

[19] S. Handayani, N. Alfira, L. N. Rokhman, and E. Inayah, "Komunikasi Pembangunan di Indonesia: Telaah Pemikiran M. Alwi Dahlan & Santoso S. Hamijoyo," *Imagining e-Indonesia Local Wisdom Midst Media Technol. Commun. Policy*, vol. 53, no. 9, pp. 1689–1699, 2015.

[20] L. Harahap, "PERAN TEKNOLOGI INFORMASI DAN KOMUNIKASI DALAM PENDIDIKAN," in *Prosiding Seminar Nasional Teknologi Pendidikan Pascasarjana UNIMED*, 2019, pp. 375–381.

[21] N. Masruroh, "Media Sosial Dalam Lanskap Masyarakat Industri Dan Kaitannya Dengan Budaya Populer," *Publiciana*, vol. 15, no. 1, pp. 28–37, 2022.