Designing a Study on Educational Communication in the New Normal and Digital Era

Shinta Prastyanti¹, Adhi Iman Sulaiman², Tri Nugroho Adi³, Petrus Imam Prawoto Jati⁴, Wahyuningrat⁵, Muhammad Yamin⁶, Niken Hapsari Arimurti Susanto⁷

¹,²,³,⁴,⁵,⁶ Jenderal Soedirman University
⁷ Peradaban University.

Abstract. The 2019 Coronavirus Disease (COVID-19) pandemic has resulted in restrictions across various sectors, including the economy, social activities, tourism, and notably, in the field of education. Therefore, it is imperative to investigate and formulate a design for the study of educational communication in the new normal and digital era. This research employs a qualitative case study methodology, involving data collection through observation, interviews, documentation, and Focus Group Discussions. Informant selection utilizes purposive sampling from prominent schools in Purwokerto City, comprising school foundation executives, primary school principals, primary school teachers, representatives of eleventh or twelfth-grade students, as well as education experts and practitioners. The research analysis utilizes an interactive analysis approach, encompassing data collection, data reduction, verification, triangulation, and conclusion drawing. The findings reveal that educational stakeholders, such as teachers and students in both urban and rural schools, face similar challenges in adapting to the use of online educational media and applications. This difficulty arises from the lack of prior exposure before the onset of the COVID-19 pandemic. Schools, teachers, and students necessitate socialization, adaptation, and the adoption of innovative digital media and technology applications, as exemplified in Electronic Learning (E-Learning). E-Learning is an electronic learning system utilizing computer and internet technologies that support remote learning without the need for face-to-face interactions. The negative impact of using digital media in the educational process during the COVID-19 pandemic includes feelings of monotony, reduced concentration, and diminished humanistic interaction between students and educators, as well as among students themselves due to the absence of direct face-to-face contact. However, the positive impact of employing digital educational media lies in diversifying, enhancing, attracting, and innovation the educational process.

Keywords. Educational Communication, New Era, Digital Media, Digital Literacy, Innovation

1. Introduction

The educational process during the 2019 Coronavirus Disease (COVID-19) pandemic in Indonesia, commencing in early 2020, underwent significant changes. The traditional face-to-face or offline (outside internet network) interaction between educators or teachers and learners or students shifted to online or virtual learning (within the internet network). This transformation was necessitated by the escalating global incidence of COVID-19, not limited to Indonesia alone.
The recorded COVID-19 cases continued to rise, as evidenced by data from the Indonesian COVID-19 Team (covid19.go.id), reaching 79 thousand cases from March to July 2020. The latest update as of December 1, 2021, indicated a confirmed total of 3.9 million cases. Consequently, all public activities and community mobilization were restricted, encompassing economic, social, religious (worship), tourism, and transportation activities, including education. In response, the government implemented the Large-Scale Social Restrictions policy, supported by regulations such as Government Regulation Number 21 of 2020 concerning Large-Scale Social Restrictions for Accelerating COVID-19 Handling and Health Minister Regulation Number 9 of 2020 regarding Guidelines for Large-Scale Social Restrictions to expedite COVID-19 management. Both regulations represent interpretations and implementations of Law Number 6 of 2018 concerning Health Quarantine, with legal consequences for violations. This was followed by additional regulations, including (1) Minister of Home Affairs Instruction Number 15 of 2021 on the Enforcement of Emergency Community Activity Restrictions for Coronavirus Disease (COVID-19) in the regions of Java and Bali, (2) InMendagri Number 25 of 2021 on the Enforcement of Community Activity Restrictions Level 4 (four), Level 3 (three), and Level 2 (two) for COVID-19 in the regions of Java and Bali, and (3) InMendagri Number 53 of 2021 on the Enforcement of Community Activity Restrictions (Level 3, Level 2, and Level 1 for Corona Virus Disease 2019 in the regions of Java and Bali.

From late 2020 to mid-2021, particularly in the education sector, policies such as Large-Scale Social Restrictions (and the Enforcement of Community Activity Restrictions led to significant changes, necessitating adjustments to the educational process and services for children. Direct face-to-face interactions shifted to online digital media platforms, including Google Meet, Zoom Meetings, or other e-learning platforms.

The learning culture in the digital era, characterized by practicality, must be balanced with access, data quotas, and internet media, which are imperative requisites to be possessed and mastered by both educators and learners. The development of online digital media for learning is now an unavoidable necessity and challenge in the digital era, not solely due to the COVID-19 pandemic but has become an essential need.

This transformation manifests in the form of the E-Learning process (Electronic Learning), an electronic learning system utilizing computer and internet technologies that supports distance learning without the necessity for face-to-face interaction between educators and students.\(^{1-3}\)

Learning processes through online digital media serve as a form of mass communication, where communication occurs through electronic or print media that is uploaded and downloadable by all parties involved, provided they have the requisite access and media. This presents both a challenge and a necessity, even evolving into a contemporary lifestyle or cultural phenomenon, as elucidated, stating that media reflects societal culture.

According to McQuail\(^4\), media serves as a window to reality, expanding perceptions and distorting events, leading to a change in meaning as constructed by others through the media. This evolution progresses into new media, utilizing networks, access, and internet media, resulting in disruption or drastic changes in lifestyle patterns across all fields, making society inseparable from the internet realm.

The new media era and the era of disruption have been emphasized by scholars such as McLuhan\(^5\), who asserted that electronic media expands thought within the context of a global village. Holmes\(^6\) characterize internet media as cyberspace (virtual world) intentionally created as Netizen-Computerization-Internet-Digital. Christensen\(^7\) introduces the era of disruption, the Innovator's Dilemma, signifying a fundamental shift from the old system to a new system (innovation) across various aspects of life (social-economic).
As noted by Kashali\cite{8} and Schwab\cite{9}, a technological or industrial revolution is occurring, marked by characteristics of the fourth industrial revolution that emphasizes digital economy, artificial intelligence, big data, and disruptive innovation in robotics. Furthermore, the highlights the era of digital learning media through the presence of Electronic Learning (e-learning) systems and Learning Management Systems (LMS) on educational institution websites.

Consequently, it becomes strategically vital to research education and child services models based on digital innovation during the COVID-19 pandemic, transitioning towards the new normal era. This research serves as an evaluation tool and contributes significantly, particularly to the learning process for children, presenting both a challenge and a necessity in the digital era that can provide effective and high-quality learning outcomes.

Drawing on previous research studies, scholarly journal articles, reference books, and research conducted in the first year of 2021, several crucial and strategic potentials were identified in the education and child service processes during the COVID-19 pandemic era. These include:

(1) the shift from direct face-to-face teaching between educators and learners, with physical attendance at school (offline or 'Luring'), to indirect online teaching through internet media (online or 'Daring').

(2) increased flexibility in learning processes, allowing for real-time synchronous communication through online digital media such as Google Meetings, Zoom Meetings, chatting, and video calls, as well as asynchronous communication through online digital media such as websites, e-mail, forums, and reading/writing online documents through Learning Management Systems (LMS).

(3) a diversification of learning media, particularly through online digital media such as Google Meetings, Zoom Meetings, chatting, video calls, and Learning Management Systems (LMS).

(4) the sustainability of digital media-based learning and services into the new normal era, demonstrating innovation, creativity, productivity, and effectiveness.

However, several issues were identified, including: (1) limited ownership and access to online digital media for economically disadvantaged children or students, who may lack the means to purchase laptops, computers, or smartphones, especially in remote areas with limited internet access.

(2) a continued challenge in adopting online digital media innovation by some educators and learners due to limited knowledge, understanding, and proficiency (skills) in mastering digital learning media or e-learning.

(3) the need for support, assistance, and development in digital technology adaptation in the learning process, including improvements to system applications, usage, and proficiency in learning with limited digital media and facilities, necessitating specific training or workshops and the procurement of digital media facilities.

(4) a decline in student motivation and increased monotony in the learning process due to the inability to interact directly with classmates and teachers, as well as the extended periods spent at home, which demands serious attention.

(5) the perception of digital media innovation in the educational and service processes as a temporary solution during the COVID-19 pandemic, despite its potential to remain a viable learning and service medium in the innovative and more effective new normal era.

2. Methods

The study employed a sequential mixed methods strategy\cite{10}, wherein the researcher combined and extended the findings obtained from one method with those from another. The research stages were as follows: (1) Conducting qualitative descriptive research initially to facilitate research access, such as obtaining permissions, approaching and interviewing key informants, observing tutorial locations, and documenting necessary data. The obtained results were then identified, processed, and analyzed to
complement or improve the research questionnaire, ensuring the location, informants, and research samples were accurately determined.

(2) Implementing quantitative descriptive research by distributing questionnaires to predetermined research locations and respondents, processing and analyzing the questionnaire results as a basis for the subsequent research stage.

(3) Conducting qualitative case study research to refine and deepen the findings from stages one and two, utilizing in-depth interviews and Focus Group Discussions with experts, practitioners, tutors, classroom teachers, and student representatives. The analysis included documentation and observation.

Research data were gathered through a preliminary study, questionnaire distribution, interviews, documentation, direct observation, Focus Group Discussions, and Participatory Decision Making. This research targeted the Technology Readiness Level over two years (2022 to 2024) at the levels of (1) Basic principles of social engineering under investigation. (2) Social engineering and applications had been formulated. (3) Concepts and essential characteristics of a technology/social engineering had been analytically and experimentally substantiated.

For the quantitative research method, the study determined the population and samples homogeneously, selecting samples using Non-Probability Sampling with a quota system\(^{[11]}\)

In the qualitative research method, purposive sampling was employed, selecting research informants based on considerations of representing a community or informant category, and the researcher's judgment that the research subjects or informants could provide the necessary information for the study. The research locations were in the city of Purwokerto and Banyumas Regency. Research informants included school foundation executives, school teachers, representatives of 10th and 11th-grade students, as well as education experts and practitioners. Respondents were selected from 11th and 12th-grade classes that had experienced a two-year online education and service process in 2020 and 2021. Schools were chosen both in urban areas and as favorites, whether public or private. Research analysis for quantitative data involved descriptive analysis, while qualitative data analysis utilized interactive analysis\(^{[12]}\) involving data collection, reduction, categorization, and drawing conclusions.

3. Result and Discussion

3.1 The Study and Benefits of Educational Communication in the Digital Era

The research aligns well with the implementation of Unsoed's vision and commitment to the development of tropical rural resources and local wisdom. The Research and Community Service Institute at Unsoed set its vision for the year 2022 as “menjadi acuan pengembangan desa mandiri sejahtera” (To become a reference for the development of prosperous self-reliant villages) with a mission aligned with one of Unsoed's flagship themes, namely, "Social engineering, rural development, and community empowerment," with the specific topic of "Gender, anak dan pelayanan masyarakat khususnya bidang pendidikan di perdesaan sebagai bentuk rekayasa sosial dan pemberdayaan masyarakat untuk pendidikan" (Gender, children, and community services, especially in the field of rural education as a form of social engineering and community empowerment for education).

The model of education and child services based on digital innovation in the era of the COVID-19 pandemic towards the New Normal is crucial in supporting a creative, innovative, and productive education to develop the capacity and quality of human resources, especially in rural areas, as an implementation of enlightening the nation's life.

The research target is highly strategic and significant, particularly for the development of scientific knowledge, study materials, student assignments, and practical work. It adds to the references on the model of education and child services based on digital innovation in the era of the COVID-19
pandemic towards the New Normal as a unique, interesting, and novel social engineering in rural areas that has not been explored before.

The research was determined through a series of studies involving the results of research, preliminary studies, and discussions to establish the state of the art of research that is crucial in finding similarities and differences. Several research findings were explored. First, on mass communication, with its developmental history, types, and functions of media, proven useful in the development process as a modernization characteristic, drawing from Rogers[13], Littlejohn[14], Rogers and Kincaid[15], McQuail[16]. Second, on new media and the era of disruption, drawing from McKuhan[17], Christensen[18], Holmes[19]. Third, on education with e-learning systems as modern learning media adopting technology, and drawing of the importance and strategic nature of educational management evaluation to ascertain the achievements, successes, feedback, and improvements in programs, implementation, or policies for a higher-quality, more trustworthy, and satisfying public assurance, drawing from Rukayah and Ismanto[20], Amad and Sinen[21], Ferdianto and Rusman[22].

Based on several research findings on food resilience, the researcher conducted a preliminary study, including (1) an in-depth study of literature, including research results, journals, textbooks, and media cases.

(2) preliminary research at the end of 2021 and the first year of research in 2022 on the process of education and child services based on digital innovation in the era of the COVID-19 pandemic towards the new normal.

(3) discussions and studies with the research team, colleagues, practitioners, and experts.

(4) Based on the similarities and differences in research studies and preliminary studies, formulation of problems, objectives, methodology, and research location was made up to the state of the art and novelty of the research.

Partnership Benefits are (1) The educational institutions participating as research subjects include both public and private high schools, including favored private and religious schools in Purwokerto and Banyumas Regency, Central Java Province.

(2) Engaging communities of education enthusiasts or activists, experts, practitioners, and academics in the empowerment of education in the village involved in the research process and utilization of research results for more beneficial social engineering efforts to enhance the competency of rural children.

(3) The village government, mass media communities, and private entities participate and support the implementation of the research results' usefulness.

(4). Partners are actively involved in the research process to identify and analyze problems, potentials, and prospects as efforts in advanced social engineering for education in rural areas.

(5) Partners act as sources, instructors, facilitators, and mentors in research and the implementation of models for education and child services in the era of the COVID-19 pandemic towards the New Normal, which is essential in supporting a creative, innovative, and productive education.

(6). The locations and research results can be utilized for further research, community service, academic assignments, practical work, internships, and Student Community Service.

3.2 Designing a Study on Educational Communication in the Digital Era
During the process of formulating a research proposal, the researcher engaged in preliminary study phases, including: (1) Conducting a literature review on cases in mass media, research findings from theses, and scholarly journals to articulate the research problem.

(2) Engaging in discussions with peers, practitioners, experts, and the research team to determine the research problem and title.

(3) Initiating access, documentation, observation, and interviews at the research site to determine the topic, formulate the research problem, objectives, methods, and research location.

(4) Engaging in discussions on the results of literature reviews and field studies with the research team for the preparation of the research proposal, specifically focusing on the model of community empowerment through the utilization of backyard land for community food resilience.

This aligns with the vision of the Unsoed Research and Community Service Institute for the year 2022, “menjadi acuan pengembangan desa mandiri sejahtera.” (To become a reference for the development of prosperous self-reliant villages) The mission and one of Unsoed's flagship themes, "Social engineering, rural development, and community empowerment," with the specific topic of "Gender, anak dan pelayanan masyarakat khususnya bidang pendidikan di perdesaan sebagai bentuk rekayasa sosial dan pemberdayaan masyarakat untuk pendidikan” (Gender, children, and community services, especially in the field of rural education as a form of social engineering and community empowerment for education).

The achieved results underscore the importance of researching (1) the factors that act as facilitators and obstacles in the process of education and child services in the era of the COVID-19 pandemic towards the New Normal and (2) the implementation of education and child service strategies in the post-COVID-19 pandemic era towards the New Normal.

Research Plan (2022-2024): The model of education and child services based on digital innovation in the post-COVID-19 pandemic era towards the New Normal is crucial in supporting a creative and innovative education.

Figure 1. Study Design Phase 1

Student Challenges in Distance Learning programs include feelings of boredom due to a lack of interaction or isolation, difficulties in understanding instructional materials, and challenges in receiving timely feedback on questions and assignments. Additionally, students may struggle with
adapting to distance learning, as they were previously accustomed to face-to-face instruction and guidance from teachers in traditional classrooms. Therefore, a distance education system requires an academic program that includes face-to-face tutorial services to assist students optimally in the learning process\cite{24-26}.

In accordance with Minister of Education and Culture Regulation number 24 of 2012 concerning Distance Learning Implementation in Higher Education, Article 1 (4) defines tutorials as a form of academic learning assistance that can be conducted through face-to-face interactions or utilizing information and communication technology.

The development of educational systems in the era of globalization and digitization has incorporated web-based and internet technologies. However, face-to-face learning must still be conducted with appropriate teaching methods to achieve learning objectives, expected outcomes, and motor skills, as well as behavioral changes. Tutorials facilitate and motivate the learning process for students, fostering motivation and skills in thinking, learning, observing, behaving, and achieving the goals of each course. The success of tutorials is not only determined by the motivation and abilities of students but also by the tutor who has the influence to serve as a facilitator or instructor.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure2.png}
\caption{Study Design Phase 1}
\end{figure}
The research closely aligns with the implementation and institutional commitment of the education sector in the development of rural resources and local wisdom. The primary focus lies in gender, children, and community services, particularly within the realm of rural education, as a means of social engineering and community empowerment for education.

The model of education and child services based on digital innovation in the era of the COVID-19 pandemic towards the New Normal is crucial to support creative, innovative, and productive education for the development of human resources' capacity and quality, especially for learners, as an implementation to enrich the nation's life. The research's target is highly strategic and important, especially for the advancement of scientific knowledge, study materials, student assignments, and practicums, contributing to the reference on the model of education and child services based on digital innovation in the era of the COVID-19 pandemic towards the New Normal as a unique and novel social engineering in rural areas that has not been explored before. The research is determined through a series of studies, including research results, preliminary studies, and discussions to establish the state of the art research that is crucial in identifying similarities and differences.

Based on several research findings from advanced literature studies on research results, journals, textbooks, and media cases, a preliminary study was conducted from late 2021 to mid-2022 on the processes of education and child services based on digital innovation in the era of the COVID-19 pandemic towards the new normal. Discussions and studies were conducted with the research team, peers, practitioners, and experts. The formulation of research problems, objectives, methodology, and research locations, as well as the state of the art and novelty of the research, was developed based on the similarities and differences identified in the research and preliminary studies.

Referring to Law Number 18 of 2002 on the National System for the Development and Application of Science and Technology, diffusion is the activity of adoption (acceptance and application) and implementation of innovation results to enhance its potential utility. Meanwhile, innovation is the activity of research, development, and/or engineering to develop the practical application and value of science and technology into products or production processes. According to Rogers [27], the innovation adoption process consists of (1) Awareness: the existence of a new innovation policy action (Knowledge), (2) Interest: gathering interest in information (Stimulus), (3) Evaluation: reflection on benefits and drawbacks (Decision to accept/reject), (4) Trial: testing the innovation change (Implementation and practice), (5) Adoption: acceptance and application of innovation (Confirmation).

The process of adopting technological innovation is a process of accepting new things, observable through individual or group behaviors, while technological innovation is a creative process to produce new products or modify products to provide more utility and meet market preferences. Factors determining the adoption of technological innovation include entrepreneurial type, business scale, availability of credit and labor, characteristics of entrepreneurs (such as age, education, risk attitude, or entrepreneurial ability), situational factors (such as market conditions), psychological factors of innovation receivers, attitude and values embraced by the community, communication networks, and the type of innovation itself [28-31]

Management comprises interrelated elements or a unified whole that complements each other, starting from planning, organizing, implementing, and evaluating. In assessing or measuring the success of management and making appropriate, effective, and accurate decisions, precise evaluation activities and accurate information data are required. Evaluation functions to identify problems and opportunities to meet and assess needs, explaining relevant contexts. Evaluation can be conducted before, during the
process, and after the program is implemented, and the results can serve as recommendations for decision-making or strategies to maintain, modify, or improve irrelevant aspects.[32-35]

4. Conclusion

The educational and student service processes in urban and rural schools during the COVID-19 pandemic, particularly in the years 2020-2021, underwent technological disruptions. The shift from direct face-to-face interaction to indirect interaction through internet technology was drastic. This transformation included the acquisition of digital media devices that were initially lacking, both in terms of internet network access and technological media ownership.

Educational stakeholders, such as teachers and students in urban and rural schools, faced similar challenges in adapting to the use of online educational media and applications. This difficulty stemmed from the fact that prior to the COVID-19 pandemic, they had not utilized these technologies. Both schools and teachers, along with students, required socialization, adaptation, and the adoption of innovative media and digital technology applications, such as E-Learning (Electronic Learning). This electronic learning system utilizes computer and internet technology to support distance learning without the need for direct face-to-face interaction.

The educational media and applications used during the COVID-19 pandemic included Google Meetings, Zoom Meetings, Microsoft Teams, chatting, and video calls through social media. However, the establishment of a Learning Management System in elementary schools has not been realized.

The negative impact of digital media use in the implementation of education during the COVID-19 pandemic included feelings of monotony, reduced concentration, and a lack of humanistic interaction between teachers and students, as well as among students themselves. Nevertheless, the positive impact of using digital educational media made the education process more varied, effective, attractive, and innovative.

Innovative digital-based learning and service media can continue to be employed as complementary tools for the educational process in the new normal era, which is characterized by innovation, creativity, productivity, and effectiveness.

The availability of access to and internet media in schools and homes has become a requirement and variation in the current digital era, not solely due to the presence of the COVID-19 pandemic. However, since the use of internet media among students must be controlled, supervised, and directed, its usage must still be limited. This restriction is crucial to prevent students from becoming addicted to the internet, such as online games and movies, leading them to neglect their studies, physical activities, and direct interactions.

Surprisingly, innovative and engaging internet media use cannot fully replace students’ desire for direct interaction in the learning process, such as meeting and conversing directly with teachers and peers, playing, and joking. As a result, students generally still prefer face-to-face interactions in the learning process at school.

5. Acknowledgments

We would like to thank the Research and Community Service Institute of Jenderal Soedirman University for providing basic research funding, as well as all research informants who supported this research process.
References


2. B. Suwarno, Z. Ramadhan, A. Bhakti, J. Simon. Socialization Of The Business World - The Industrial World As An Implementation Of The Independent Learning Policy - Independent Campus At The Faculty Of Social And Political Sciences, Riau University. *International Journal Of Community Service, 2*(2), 201–211. 2022. [https://doi.org/10.51601/ijcs.v2i2.22](https://doi.org/10.51601/ijcs.v2i2.22)


