

## STRATEGIC COMMUNICATION IN THE DIGITAL AGE: NAVIGATING THE INTERSECTION OF TECHNOLOGICAL ADVANCEMENTS, ORGANIZATIONAL DEVELOPMENT, AND PUBLIC PERCEPTION IN EDUCATIONAL INSTITUTIONS

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**Abstract.** This research investigates organizational communication strategies in the digital age, focusing on the impact of Augmented Reality (AR) and Virtual Reality (VR) integration at Soegijapranata Catholic University's library. Qualitative methods are employed to understand organizational responses, internal dynamics, and stakeholder perceptions regarding technological advancements. The concept of Era 5.0 serves as the foundational premise, emphasizing deep technological integration into daily life. Schwab (2016) and Phillips (2019) provide contextual frameworks, while Cutlip, Center, and Broom's (2019) principles offer guidance for effective communication management amidst technological change. The study underscores the growing significance of organizational communication in higher education, particularly within library settings, aligned with Shiu's (2018) theoretical framework. Interviews with library personnel offer insights into technology application, emphasizing the strategic importance of libraries as highlighted by Fidel (2018). Stakeholder reactions, including faculty, students, and community members, are explored, drawing on insights from Wilcox (2019) and Grunig (2019) to craft outcome-oriented communication strategies. By integrating organizational communication theory, qualitative approaches, and library science, this research aims to provide actionable insights for adapting communication strategies to the digital age, especially beneficial for higher education institutions like libraries in effectively managing technological change.

**Keywords:** Organizational Information Process; Communications Studies; Augmented Reality; Virtual Reality; PR Digital.

**Abstrak.** Penelitian ini menyelidiki strategi komunikasi organisasi di era digital, dengan fokus pada dampak integrasi Augmented Reality (AR) dan Virtual Reality (VR) di perpustakaan Universitas Katolik Soegijapranata. Metode kualitatif digunakan untuk memahami tanggapan organisasi, dinamika internal, dan persepsi pemangku kepentingan mengenai kemajuan teknologi. Konsep Era 5.0 menjadi dasar pemikiran, yang menekankan pada integrasi teknologi yang mendalam ke dalam kehidupan sehari-hari. Schwab (2016) dan Phillips (2019) memberikan kerangka kerja kontekstual, sementara prinsip-prinsip Cutlip, Center, dan Broom (2019) menawarkan panduan untuk manajemen komunikasi yang efektif di tengah-tengah perubahan teknologi. Studi ini menggarisbawahi pentingnya komunikasi organisasi dalam pendidikan tinggi, khususnya dalam lingkungan perpustakaan, sejalan dengan kerangka teori Shiu (2018). Wawancara dengan personil perpustakaan memberikan wawasan tentang penerapan teknologi, yang menekankan pentingnya strategis perpustakaan seperti yang disoroti oleh Fidel (2018). Reaksi pemangku kepentingan, termasuk fakultas, mahasiswa, dan anggota masyarakat, dieksplorasi, dengan memanfaatkan wawasan dari Wilcox (2019) dan Grunig (2019) untuk menyusun strategi komunikasi yang berorientasi pada hasil. Dengan mengintegrasikan teori komunikasi organisasi, pendekatan kualitatif, dan ilmu perpustakaan, penelitian ini bertujuan untuk memberikan wawasan yang dapat ditindaklanjuti untuk mengadaptasi strategi komunikasi di era digital, terutama yang bermanfaat bagi lembaga pendidikan tinggi seperti perpustakaan dalam mengelola perubahan teknologi secara efektif.

**Kata Kunci:** Proses Informasi Organisasi; Ilmu Komunikasi; Realitas Berimbang; Realitas Virtual; Humas Digital

### INTRODUCTION

Digital era has been begun by the communications transformation. This research seeing the institutions, has been evolved significantly due to technological advancements. Organizational communication

theory is at the forefront of this evolution, as educational institutions strive to navigate the intersection of technology, organizational development, and public perception. Understanding how different communication strategies and technologies influence organizational dynamics and public perception is crucial for educational institutions to effectively engage with students, staff, and the community (Huang et al., 2004). Effective communication plays a vital role in building the image and public trust of educational institutions, especially when it comes to promoting the dignity of judges and justice Indonesia.

As organizations increasingly leverage VR and AR technologies for communication purposes, it is important to consider the impact on organizational communication. How do these technologies influence the flow of information within educational institutions? What are the implications for leadership communication and organizational culture? These questions reflect the ongoing development of communication theories in the context of technological advancements. In today's organizations, the use of AR and VR technologies is transforming communication processes. The implementation of these technologies showcases how staff and internal organizations are developing programs to deliver improved results. The specific impact and future implications of using these technologies should be carefully considered in organizational communications theory.

Furthermore, the study of strategic communication in educational institutions involves examining the role of leadership in shaping communication strategies. How do leaders utilize digital platforms and virtual environments to engage with stakeholders within and outside the institution? Exploring these dynamics through the lens of organizational communication theory provides valuable insights for enhancing communication effectiveness in educational settings. The intersection of technological advancements, organizational development, and public perception presents a complex landscape for communication professionals in educational institutions. By examining these dynamics through the lens of communication theory, educational institutions can adapt their communication strategies to effectively navigate the digital age.

The use of technology, particularly audiovisual media technologies, has become omnipresent in educational institutions (Nicolaou et al., 2019). These technologies offer new approaches to teaching methodologies and can greatly enhance the learning experience for students. In addition to the impact of VR and AR technologies on communication processes, the rise of social media platforms has also reshaped communication strategies in educational institutions. The integration of social media into communication efforts has expanded the reach of educational institutions and provided new avenues for engaging with students, parents, and the community at large.

Furthermore, the shift towards online learning and remote communication in response to global events has accelerated the adoption of digital platforms for educational purposes (Yun, 2023). This trend poses both opportunities and challenges for educational institutions as they navigate the complexities of virtual communication and remote collaboration. Understanding the implications of these shifts from the perspective of organizational communication theory can offer valuable guidance in leveraging digital tools for effective communication.

Leadership in educational institutions plays a pivotal role in championing effective communication strategies. Researchers have identified a trend towards strategic communication activities at Soegijapranata Catholic University through the use of integrated and up-to-date systems. As leaders embrace digital platforms and virtual environments, they have the opportunity to foster a culture of transparent and inclusive communication within the institution. By exploring the dynamics of leadership communication through the lens of organizational communication theory, educational institutions can leverage the potential of digital technologies to enhance stakeholder engagement and cultivate a positive organizational culture. In today's educational landscape, it is evident that communication in educational institutions is undergoing a profound transformation driven by technological advancements. As educational institutions continue to grapple with the complexities of the digital age, the role of strategic communication becomes increasingly paramount.

The integration of VR and AR technologies has not only revolutionized communication processes but has also reshaped the learning and teaching methodologies within educational institutions. These immersive technologies offer unprecedented opportunities for interactive and experiential learning, redefining the educational experience for students. Furthermore, the use of social media platforms has expanded the communication reach of educational institutions, allowing them to interact with students, parents, and the community in novel ways.

The recent shift towards online learning and remote communication has presented both challenges and opportunities for educational institutions. As they embrace virtual communication and collaboration tools, it is essential for educational leaders to harness the power of these digital platforms to foster transparent, inclusive, and effective communication within the institution (Wilcox, 2019). By exploring the evolving dynamics of leadership communication through the lens of organizational communication theory, educational institutions can tap into the potential of digital technologies to strengthen stakeholder engagement and cultivate a positive organizational culture.

This study examines how strategic communication in the digital age navigates the intersection of technological progress, organizational development, and public perception in educational institutions. The research focuses on Soegijapranata Catholic University Semarang. The research subjects include the human resources department, the university library manager, and the student affairs office. In order to optimize the ability of educational institutions to proactively adapt their communication strategies and navigate the ever-evolving digital landscape, the continuation of this research is crucial. To shape a resilient and responsive communication framework for educational institutions, it is important to embrace strategic communication principles and leverage insights from organizational communication theory.

## LITERATURE REVIEW

**Era 5.0 and Technology Integration.** Era 5.0 is a concept that describes the latest stage in the evolution of technology, which is increasingly permeating various aspects of human life. It reflects the deeper integration of digital technologies into everyday life, creating a more connected and responsive environment. Schwab (2017), has been delegating the concept's history can be traced through technology evolution, which went through several eras. The first era (Era 1.0) was characterized by the initial industrial revolution, which was triggered by the use of steam engines and the mechanization of production. With the advent of electricity and the mass production of goods came the second era (Era 2.0). Era 3.0 followed with the development of computers and digital technology, which revolutionized the way we work and communicate. Meanwhile, Era 4.0, also known as Industrial Revolution 4.0, involves the integration of digital technology with physical systems, such as the Internet of Things (IoT) and artificial intelligence (AI). Era 5.0 is an evolution of Industrial Revolution 4.0. It places a greater emphasis on the integration of technology into everyday life, including communications. In Era 5.0, technology is an integral part of everyday activities, including education, entertainment, business, and public services.

The concept of Era 5.0 revolves around the integration of advanced technology and robotics with human collaboration to enhance work processes (Napitupulu et al., 2021). This concept stems from the observation that the previous era, Industry 4.0, focused primarily on digitalization and enhancing production efficiency and flexibility, with less emphasis on social fairness and sustainability. However, in Era 5.0, there is a shift towards recognizing the importance of social values and sustainability alongside technological advancements. This integration of technology in Era 5.0 is expected to bring about improvements in various aspects of people's lives, making them more comfortable and sustainable in terms of cost and time.

Due to the rapid development of technology, Era 5.0 is having a significant impact on the field of communication science (Phillips, 2015). During the pandemic, blended learning has introduced unique communication dynamics between teachers and students. Thaariq (2023) describes how blended learning at SDN Cengkareng Timur 15 Pagi utilized both synchronous and asynchronous media, including WhatsApp, Google Meet, and Zoom. These communication tools enabled linear, interactional, and transactional patterns, bridging interaction gaps in a digital education context. This development affects the way we communicate and interact with each other. We can connect globally more quickly and efficiently than ever before through social media, digital platforms, and other digital communication tools. Digital communication allows for innovations in new forms of communication, such as augmented reality (AR) and virtual reality (VR), which enhance communication experiences and enable more immersive interactions.

In the context of communication science development, Era 5.0 requires a deep understanding of how technology affects patterns of communication and human interaction. The examination of new media, digital communication, and the influence of technology on culture and society is essential in

confronting the challenges and possibilities encountered in this era. The Role of Communication in Establishing Public Image and Trust: Promoting the Dignity of Judges and Justice in Indonesia In Indonesia, building a positive public image and trust in the judiciary is crucial for promoting the dignity of judges and ensuring justice (Mulfida & Maulida, 2022). Effective communication plays a vital role in achieving this goal. One of the key ways in which communication can help build public image and trust is by promoting transparency and openness.

**The Integrations of AR & VR.** These technologies marks a significant step forward in the evolution of technology and communication in the 5.0 Era. AR and VR are no longer just entertainment tools or virtual experiences, but also powerful and transformative communication tools. Augmented Reality (AR) is a technology that blends virtual elements with the real world, while Virtual Reality (VR) creates a fully virtual environment that users can explore and interact with. These two technologies, when properly integrated, can form an amazing experience and present new opportunities for communication and interaction.

In this research, the substance of communication science sees that the integration of AR and VR offers a new approach to delivering messages and building relationships with audiences. AR and VR provide the ability to create a more immersive and emotional experience for users, allowing them to be able to "feel" the message rather than simply receive information. According to Yang (2016), in his article in the "Journal of Advertising Research" shows that the use of VR in advertising can increase the level of user engagement and strengthen brand memory. This suggests that VR not only presents an opportunity to create engaging experiences, but can also improve communication effectiveness.

Personalized communication is possible with AR and VR. This technology delivers messages in a relevant context and according to the user's preferences. Research conducted by Algharabat (2019) indicates that using AR in marketing campaigns increases purchase intentions and customer satisfaction, especially when the AR experience is tailored to individual preferences. AR and VR not only provide an immersive experience but also allow communicators to better customize their messages, increasing the impact of communication.

In the context of corporate communications, AR and VR also have tremendous potential. VR can be used for interactive and realistic employee training, while AR can deliver messages more engagingly and effectively to audiences. Fang's (2018) research shows that using VR in organizational communication campaigns increases brand recognition and public trust. AR and VR offer new opportunities for organizational communication practitioners to create unique and inspiring experiences. This can improve relationships with stakeholders and help achieve organizational goals.

**Organizational Communication Theory.** Organizational information theory in a system, starting with the definition that organizational information theory is a theory whose main activity is to process and understand unclear or ambiguous information. In this theory, members of a particular organization have a desire to achieve this process by understanding it through the enactment stage, the selection stage, and the information retention stage (Paules, 2013). This theory emphasizes more on an organizational group that can filter all the information received by each member and can provide the right response for each source of information they find.

Organizational information theory has several concepts to conceptualize information. Karl Weick in this case puts forward several concepts, first, the information environment, which is the availability of all stimuli in an organization. In the first concept, two main tasks must be carried out, namely, members of the organization must be able to interpret external information in their information environment and each member can organize information to make it meaningful to other members of the organization with the same goal.

Information vagueness questions members' beliefs about information. The text clearly describes three concepts related to information ambiguity. Ambiguity reduction refers to an organization's efforts to clarify information. The cycle of action and response explains a series of communication behaviors aimed at reducing information ambiguity. Responding is a decisive reaction to ambiguous information. Adapting involves actively seeking relevant information and adapting it to the organization (Paules, 2013).

This theory explains principles regarding vagueness in the relationship between concepts. An organization must analyze the relationship between information vagueness, the rules to eliminate this

vagueness, and the communication cycle. The number of rules used to reduce the vagueness of information is related to the organization. The number of cycles used directly affects the amount of vagueness remaining. Organizational Information Theory states that an organization's information is influenced by its conditions, whether good or bad. When an organization is in an unstable or declining state, it needs to gather as much information as possible from the environment, including both positive and negative information, in order to survive.

Organizational information theory is complemented by the hierarchical structure that exists in organizational systems. However, Karl Weick (Griffin, 2003) contends that hierarchical structures, chain of command, and standard operating procedures may hinder innovation. Weick's theory of organization is significant in the field of communication because it emphasizes communication as the foundation of human organization and provides a logical basis for understanding how people organize. Weick defines organizing as an evolutionary process that relies on three key processes: enactment, selection, and retention. Enactment is the process of defining the situation or gathering information from external sources. It requires paying attention to stimuli and recognizing vagueness. Selection allows the group to accept certain aspects of the information while rejecting others, narrowing field by removing irrelevant details.

## METHOD

This study adopted a qualitative descriptive research approach to investigate the application of Augmented Reality (AR) and Virtual Reality (VR) technologies at Soegijapranata Catholic University Library. The qualitative approach was chosen because it allows the researcher to gain an in-depth understanding of the users' experiences and perceptions of these technologies, as well as their impact on the communication processes and information management of the organization. Qualitative research is used to explore phenomena in depth and to understand the context, significance, and meaning of individual or group experiences, as stated by Creswell and Creswell (2017).

A case study was chosen as the research method, focusing on Soegijapranata Catholic University Library as the research site. According to Yin (2014) and, Pujileksono (2016), a case study is an appropriate approach to explore complex phenomena in a real context, such as the implementation of technology in an institution. In this research, focusing on University Libraries was chosen because libraries are important centers of information and knowledge for academic and research activities in universities.

This research focuses on enacting, selecting, and retaining AR and VR programs in libraries. Karl Weick's concepts emphasize how individuals and organizations construct and maintain their understanding of social reality through the action, selection, and retention of information (Burke, 2017). This research analyzes changes in the process of participation in improving literacy within the organization after the COVID-19 pandemic. It focuses on the internal information management of Soegijapranata Catholic University.

The significance of this research is highlighted by the fact that the Soegijapranata Catholic University Library serves as the main information center in the university environment. The library serves as a provider of information resources and a space for learning, research, and collaboration for students and faculty. Integrating AR and VR technology positions the Library as a hub of innovation in developing interactive and comprehensive information services. This research will provide valuable insights into the use of technology in libraries. It will improve the effectiveness and relevance of information services in higher education environments.

## RESULTS AND DISCUSSION

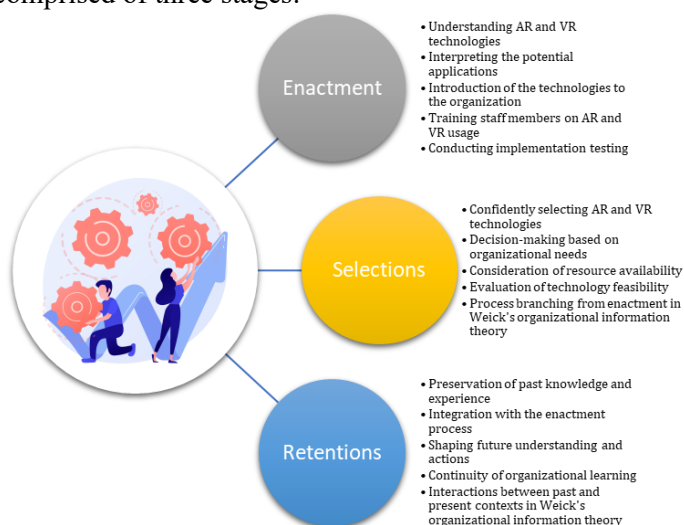
**Results.** The study highlighted the disconnect between technology and human responsiveness. The challenges of integrating AR and VR technology at the Soegijapranata Catholic University Library were thoroughly investigated by interviewing the Library Director, technical staff, and other related parties, and the study revealed a number of significant findings. AR and VR programs were socialized before the COVID-19 pandemic occurred. Significant obstacles hindered the implementation. Due to the high level of internal activities in study programs and faculties, the process of internal knowledge transfer was slow and faced many obstacles. These delays had an impact on the AR and VR programs that were

planned to improve the literacy of the students and to facilitate the lecturers in carrying out the tridharma of higher education.

However, a significant change occurred in mid-2020. The COVID-19 pandemic accelerated and facilitated the implementation of AR and VR programs. These technologies facilitated the transfer of knowledge to students and instructors. This overcame obstacles that had previously hindered the program. As a result, AR and VR programs have received positive attention in the development of literacy at the national level and at the level of university libraries. Organizational communication has a significant influence on employee motivation, especially in adapting to remote work and organizational changes during the COVID-19 pandemic. Nababan (2023) found that an increase in the organizational communication score by one unit correlated with a motivation coefficient of 0.599, emphasizing the essential role of communication in sustaining employee engagement and performance under challenging conditions.

Research shows that an obstacle to achieving the main goal of improving literacy has been the stagnation and lack of innovation in many libraries out there. However, through the AR and VR program implemented at the Soegijapranata Catholic University Library Sub-Division, this can be overcome. This breakthrough reflects the impetus for change finally within the university library.

**Discussions.** In order to meet the challenges that libraries face in improving literacy and institutional relevance, AR and VR technologies have a critical role to play. The integration of these technologies expedites the knowledge transfer process and enhances the quality of services provided to library users. This passage is consistent with Karl Weick's organizational information theory, which asserts the importance of collective understanding and adaptation to changes in the organizational environment. Weick's theory is comprised of three stages:



**Diagram 1.** Enactment and Retention Processes in Selecting AR and VR Technologies: A Weickian Perspective  
Source: Researcher (2024)

**Enactment Process.** Enactment emphasizes the formation of a shared understanding of social reality through actions and interactions among organizational members. In the implementation of AR and VR technology in libraries, the process of understanding formation starts from the awareness of the need to improve services and literacy through technology. This initiative may arise from observations of technological developments outside the organization, requests from users, or internal initiatives to improve efficiency.

Enactment emphasizes the significance of involving all members of an organization in creating a shared understanding. Active engagement involves participation in discussions, idea mapping, and decision-making related to the integration of AR and VR technologies. This engagement allows the organization to consider multiple perspectives and develop a shared understanding of the benefits and challenges of such technologies.

Enactment involves adapting to environmental changes. Libraries need to continuously monitor and assess their use of AR and VR technologies, and be responsive to changing user needs and

technologies. Enactment represents a continuous learning process in which organizations update their understanding and practices in response to evolving conditions.

**Selection Process.** Selection emphasizes the importance of using a process that is based on relevant and accurate information to choose from. When implementing AR and VR, libraries must select the technology that best meets their needs. This involves a thorough analysis of the different technology options available and an assessment of the potential benefits and risks.

The selection of AR and VR technologies should also be based on a deep understanding of the needs of library users. In this case, libraries will need to consider how these technologies will add value to their users in terms of improving their information literacy and access to information. The selection process must consider the different preferences, needs and expectations of users in the presentation of the technology.

Selection of AR and VR technologies should also align with a library's institutional goals and vision. Libraries need to select technologies that not only improve internal services and efficiencies, but also help achieve the organization's long-term goals of increasing information literacy and empowering higher education.

Managing risk and uncertainty, selection also involves managing the risks and uncertainties associated with implementing new technologies. Library organizations must consider several risk factors, including cost, security, integration with existing infrastructure, and staff readiness to manage the technology. Organizations can maximize the benefits of technology while minimizing potential negative impacts through effective risk management.

**Retentions Process.** Retention is critical for organizations to preserve past knowledge and experience as valuable resources in changing times. In this research, libraries can use their knowledge of best practices in library services and experience with previous technologies to foundation for making decisions regarding the integration of AR and VR technologies.

In order to successfully implement AR and VR, it is critical to understand the organizational culture and identity that has been developed from past experiences and traditions. The library must maintain its core values and identity, which are formed from history and existing work practices. This understanding will provide a strong framework for the integration of new technologies while still preserving the essence and mission of the organization.

Retention serves as inspiration for sustainable innovation. Libraries will be able to use past knowledge and experience to identify new opportunities and develop creative solutions using AR and VR technology. Using new technologies can be enriched with traditional elements that have proven successful in creating added value for users.

By leveraging retentions, organizations can adapt to change more effectively. Leveraging lessons learned allows organizations to confidently learn from past successes and failures when adopting new technologies. This allows for better planning and execution of the implementation of AR and VR technologies, as well as smoother change management for libraries.

## CONCLUSION

The conclusion of this study confirms that the integration of Augmented Reality (AR) and Virtual Reality (VR) technologies in organizational communication, especially in the library of Soegijapranata Catholic University, has great potential to improve service quality and literacy among students and lecturers. While these technologies face a number of challenges and ethical considerations, the use of AR and VR can be an effective tool in creating inspiring and impactful experiences.

This research, raises new ideas by considering the development of this technology, organizations need to pay attention to several things. First, it is necessary to periodically evaluate the implementation of AR and VR to ensure its effectiveness in achieving organizational goals. Second, efforts are needed to strengthen the synergy between the library and other units or bureaus in the university as well as with related external organizations. While AR and VR have great potential, it is also worth noting the development of other technologies that may be more appropriate for educational organizations to undertake. Other technologies, which can be seen in the reasoning and suitability of AI (Artificial Intelligence) technology, can be a relevant alternative in improving the efficiency and

personalization of educational services.

Libraries should confidently continue to develop and strengthen their use of AR and VR as part of their communication and information management strategies. In the long term, however, it is imperative to diversify the technology used. This should be based on the needs of the organization and its users. The researchers emphasize the importance of continuous adaptation and evaluation of the implementation of these technologies, providing a balanced perspective on the potential and challenges of using AR and VR in organizational communication. In the future, by paying attention to synergies between university units and considering broader technological developments, organizations can effectively use technological innovations to achieve their educational goals.

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