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# Resilience of Jakarta's Performing Arts Studios: A THIO Analysis of Digital Technology in the Creative Ekonomi

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**Abstract:** Many things have altered as a result of the rise of information and communication technology, and society's transition to the digital age. Advances in digital technology have transformed how performing arts studios understand and produce works of art. The purpose of this study is to determine the value of the contribution of performing arts studios in running their businesses, as well as solutions in choosing digital technology in art activities. This research is quantitative; the sample in this study was 30 respondents. This figure was derived from five performing arts enterprises, each representing six areas in DKI Jakarta, together with input from eight experts. The analysis technique used in the research uses THIO (Technology, Human, Information, Organization) analysis and creative economy theory. This study's findings indicate a Technology Contribution Coefficient (TCC) of 0.339 for the use of digital technology in performing arts studios in Jakarta, categorized as a reasonable value.

**Keyword:** Creative Economy, Digital Technology, Performing Arts Studio, THIO

## INTRODUCTION

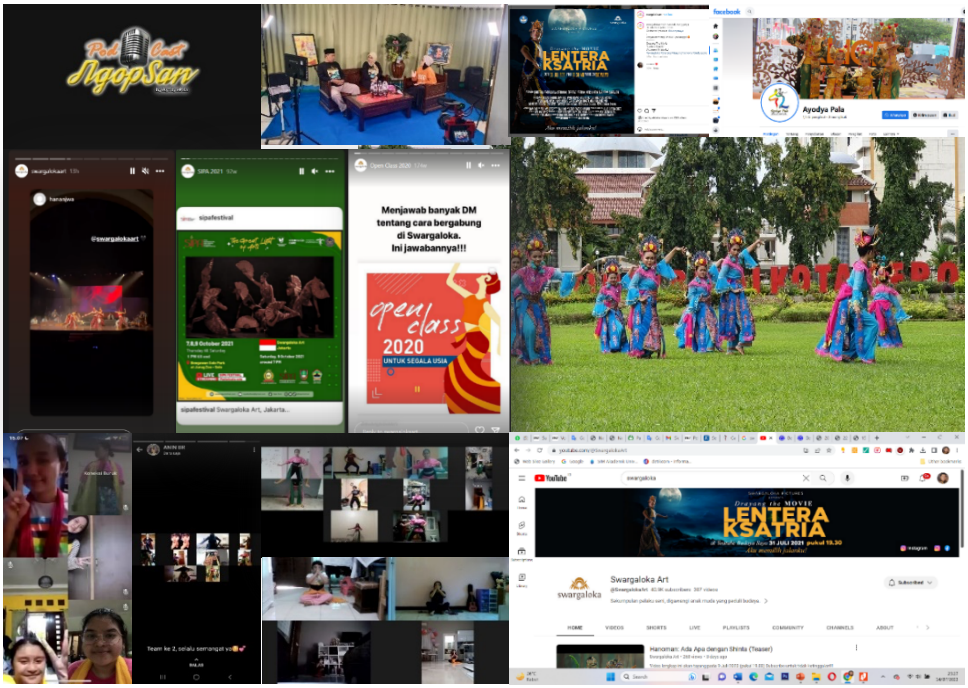
Performing arts studios serve as hubs for learning, training, and developing individual potential while also providing a space for expression, self-actualization, and socialization for their members (Sudarsono, 2002). These studios give rise to art education, which supports students' creative, intellectual, artistic, social, and emotional growth. The researcher notes that performing arts studios are essential community catalysts in maintaining the ideals intrinsic to the evolution of art and culture.

Globalization, technological advancements, and the Covid-19 pandemic have significantly altered the operations of performing arts studios. Based on initial observations by the researcher, Numerous performing arts studios in the Jakarta, Depok, Bogor, Bekasi, and Tangerang regions have seen a reduction in student enrollment, cancellation of performances, and even operational closures during the pandemic. The researcher understands that art and culture are being impacted by global phenomena including protectionist policies, economic uncertainties, and fast technology breakthroughs.

Arts education begins in the art studio, functioning as a discipline that promotes students' intellectual, aesthetic, social, emotional, and creative development (Coutts, Glen, and Jokela, 2008). Currently, art galleries as cultural symbols are also changing and transforming due to technological developments and the pandemic situation. In general, art studios are now required to improve their skills and abilities, utilise digital technology as a support in the learning process, and carry out performing arts activities as a medium for promoting their institution (Wainwright, L., & Zijlmans, 2017).

In the learning system through digital-based media, there are points of effectiveness, attractiveness, and efficiency in its activities (Ruastiti et al., 2020). The digitalization of cultural education must be based on selected materials that support the concept of cultural preservation in the learning process. This process uses appropriate strategies and methods so that students can be proactive, creative, and understand the concept of cultural preservation through digital media during the COVID-19 pandemic (Finahari et al., 2021).

Nevertheless, the researcher also found that some performing arts studios managed to endure the COVID-19 epidemic. by utilizing new media to interact with audiences, as shown in Figure 1.




Source: The Online Media of Sanggar Ayodya Pala dan Sanggar Swargaloka Accessed on September 07, 2024)

**Figure 1. Various Views of Performing Arts Studio Activities in Jakarta**

Based on initial observations in Figure 1, the researcher found that using a variety of internet media for educational purposes was second nature to these performing arts studios, performances, promotion, and other new ideas. For example, learning activities were conducted through platforms such as Zoom, Google Meet, as well as Skype, with not all of them are using hybrid learning models. Various art performances were streamed live on Instagram and YouTube. Promotion was carried out via Instagram, Facebook, and TikTok, while other innovations included the creation of cultural podcasts and taking part in worldwide contests or global festivals. These observational results indicate that performing artists from the studios have begun adopting technology as a means of communication and presentation of their work. The digital age offers various benefits, such as fast and simple access to information, encouraging innovation based on digital technology to aid work processes, facilitating public

access to sources of knowledge and information, and making human resources better by creating and using information and communication technologies (Lestari et al., 2021).

Digitalization, or the shift from mechanical and analog electronic technology to digital technology, has been underway since the 1980s (Lestari et al., 2021). A revolution triggered by the younger generation in that decade gave birth to the digital era, which is characterized by the convenience offered by technology in various aspects of human life, replacing old technology with more practical and modern solutions. Research by Ritzer & Esposti (2018) highlights the changing trends in the digital era, which are characterized by the rapid development of hybridization devices and technologies.

Responding to the presence of digital technology in performing arts studios, Attention must be directed on the preparedness of human resources, knowledge, potential community resources, supporting infrastructure, driving energy, and the social and cultural relations of the community. The utilization of digital technology in the activities of performing arts studios requires a balance between local wisdom and technology. The urgency of using digital technology for developing performing arts studios is closely linked to its utilization in learning, performances, and promotion (Batubara, 2021). In general, digital technology in art learning aims to facilitate teaching and learning activities and improve the learning process and outcomes (Smaldino, 2005).

Setiaji (2023) argues that advances in digital technology have changed the way artists understand and produce digital art. Citrawati and Wahyuni, 2023) adds that the digital era gives artists greater freedom to experiment, create complex visual effects, and convey messages through their work. Virtual art, which allows audiences to interact with the world of artwork, has become a way for artists to create strong sensory experiences and encourage innovation in art. This paper makes the case that performing arts studios may thrive by using adaptation tactics to make use of digital technology via a variety of mediums (Birowo et al., 2016). Creativity arises through preparation and effort and can be achieved by anyone who wants to achieve it (Tharp, 2004). Based on this argument, digital technology can be utilized by performing arts studios to improve skills and abilities in art learning, carry out performing arts activities, and serve as a promotional medium.

Contributing to the attainment of SDGs 8 (Decent Work and Economic Growth), 9 (Industry, Innovation and Infrastructure), 11 (Sustainable Cities and Communities), and 17 (Partnerships to Achieve the Goals), this research is pertinent to Indonesia's Sustainable Development Goals (SDGs), particularly in Jakarta. Additionally, this research is crucial for preparing generasi mendatang untuk melestarikan seni budaya, khususnya generasi milenial dan generasi Z within their communities. The role of performing arts studios becomes important in efforts to maintain cultural values and identity. The spirit of preserving arts and culture, which begins at the grassroots level within the community, will serve as a powerful catalyst in fostering cultural resilience. The utilization of digital technology by performing arts studios in Jakarta is a form of innovation and development for their activities. Currently, the existence of performing arts studios is included in one of the creative economy's 17 subsectors, namely performing arts, which is expected to become a new force in a sustainable national economy, emphasizing the addition of value to goods through creativity and human thought.

Based on data, the performing arts sub-sector is able to absorb as many as 212,740 workers. Over the period from 2018 to 2022, the performing arts sub-sector grew by 1.92 percent per year. In 2020–2021, there was a decrease in the number of workers in this sector due to the Covid-19 pandemic. In 2022, it jumped drastically to 212,740, which is still lower than the initial figure before the Covid-19 pandemic in 2019.

**Table 1. Development of the Workforce in the Performing Arts Sub-Sector, Years 2018 – 2022**

| 2018 | 2019 | 2020 | 2021 | 2022 |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| 197.160 | 217.690 | 155.940 | 163.410 | 212.740 |

Source: Tourism and Creative Economy Labor Statistics BPS 2018-2022, Accessed on October 20, 2024

Understanding the creative economy requires an understanding of creativity as the core of an innovation. Not only artists have creativity, but everyone must have it. The general public, particularly in the academic world, still views creativity incorrectly and unclearly. Schools have not implemented creativity and education effectively and progressively, and teaching staff are not comprehensive in creative thinking and acting (Sartika et al., 2022). According to (Fatimah et al., 2019), the concept of creative economy refers to an economic idea in the new economic era that enhances information and creativity by using human resources' ideas and expertise as the main source of output in economic activity. The global economy is undergoing a rapid transformation from being dependent on natural resources (SDA) to human resources (SDM).

In formulating a approach to the growth of the creative economy, performing arts studios need to analyze the situation in order to identify the possibilities, threats, strengths, and shortcomings of this sector of the economy (Sartika, et al., 2022). To determine its survival strategy, this potential must be considered, including resilience in terms of development and job creation (Agustina et al., 2020). Sustainability can be defined as a structure or framework that meets current needs with the aim of meeting those of future generations (Assembly, 1987).

Sustainable innovation is essential for long-lasting businesses and usually results in long-term survival and requires new methods for developing processes (Madonsela et al., 2017). In reality, maintaining sustainable business practices takes a long time and innovation to create a business culture demonstrated by the company. To achieve sustainability, a business needs an approach that has a systematic (efficient and effective) workflow. Several approaches focus on products, ecosystems, processes, innovation, integration, and locality and can be used to build a creative economy development strategy (Sartika, et al., 2022). The limitations of performing arts studios in running their businesses are weaknesses that certainly affect the unstable motivation to expand networks and develop their business scale. Thus, in short, This research aims to examine the long-term viability of Jakarta's performing arts studios by utilizing THIO (technoware, humanware, infoware, orgaware) analysis within the creative economy to digital arts and cultural activities.

## METHOD

Quantitative research methods are used in this study, an organized approach for scientifically examining components, phenomena, and their relationships (Daud, 2024). This approach involves gathering information that may be quantified using statistical analysis. This study was performed in chosen performing arts studios signed up for the Budaya Jakarta app, covering six Jakarta comprises South Jakarta, Central Jakarta, West Jakarta, East Jakarta, the Thousand Islands, and North Jakarta, customized for their specific artistic disciplines. The performing arts studio premises served as the research site or another location consented to by the participants, researchers and resource individuals. Research data was collected from primary and secondary sources the use of documentation, FGDs, in-depth interviews, and observations.

The research sample consisted of 30 participants, selected to represent five performing arts studios from each of the six regions. The selection of studios used a purposive sampling technique, with the criteria that the selected performing arts studios have an adequate number of participants/members, have been established for a minimum of 5 years, and actively use digital technology in their artistic activities. The purposive sampling technique was used to

select a sample that represents a specific group with characteristics appropriate to the research objectives, especially if the focus is on a specific subpopulation that is to be analyzed in depth (Bryman, 2016).

The determination of the five performing arts studios in each region was not only based on the researchers' observations but also through coordination with the DKI Jakarta Culture Department via the Sub-Department of Culture. In addition, this study involved seven expert sources who have experience in digital technology studies and entrepreneurship, as well as holding doctoral degrees and having in-depth understanding and expertise in qualitative research. These experts are expected to provide feedback on the research questions (Bryman, 2016), as well as ensure the relevance of the interview questions to the research problem and their ability to answer them.

Using the THIO framework which stands for technology, human, information, and organization this research analyzes how technology has impacted the performing arts studio industry. The THIO approach offers a comprehensive view of the effective integration of human resources and technology to achieve organizational goals (Burgelman et al., 2008). This study also attempts to integrate the creative economy theory from (Florida, 2012) or a more in-depth analysis. This theory emphasizes three main pillars: talent, tolerance, and technology. The researchers aim to analyze how the interaction of these three pillars affects the sustainability of performing arts studio businesses in the digital era. We ensure data validity to validate the research as scientific and to test the collected data (Bryman, 2016)

## RESULTS AND DISCUSSION

In the digital age, the THIO framework provides performing arts studios with strategic direction for long-term success. Studios can remain competitive while preserving the value of art and culture in the context of contemporary society by strengthening organizations, fostering innovation, using technology, and empowering human resources. Implementing THIO helps performing art studio become resilient and develop into internationally significant artistic organizations. Table 2 shows how the THIO variables relate to one another.

**Table 2. Operationalizations Of the THIO Variables Are Applied in The Context of Performing Arts Studio Ventures.**

| Variable | Definition | Indicator |
|---|---|---|
| **(1)** | **(2)** | **(3)** |
| Technoware | *Technoware* is embodied within the facilities or apparatus in the manufacturing process | The apparatus used in the manufacturing process |
| Humanware | *Humanware* is manifested in human resources acting as executors of activities or serving as drivers/operators | Human Resurces Skills |
| Infoware | *Infoware* is embodied in the operational processes or procedures within performing arts activities | Information |
| Orgaware | *Orgaware* is implemented through the management and operational activities of the performing arts studio. | Organization |

(Source: Researcher, 2024)

The Technological Contribution Coefficient (TCC) value, calculated using technometrics, serves as the basis for classifying levels. The technometric model has proven effective in measuring technology components across various industry scales, including creative industries such as performing arts studios. Given the importance of small to medium-sized performing arts studios the impact of technology on the wellbeing of artists warrants particular consideration.

Technoware, Orgaware, Humanware, and Infoware are the components of technology, collectively form the technology contribution. We calculate the Application of the multiplicative formula to the Technology Contribution Coefficient (TCC): TCC = $T^{\beta t} * H^{\beta h} * I^{\beta i} * O^{\beta o}$ ……. (1). In the formula, T, H, I, and O represent how much each part of THIO (Technoware, Humanware, Infoware, and Orgaware) contributes. The exponents βt, βh, βi, and βo show how important each of those parts is in determining the final TCC. In general, entrepreneurially run studios for the performing arts have a low rate of technological adoption. Low Technoware score is a reflection of this phenomenon, which indicates a simple use of technology in various artistic activities such as dance, music, and theater. Artistic activity processes, learning, advertising, showcasing, and performing are also still carried out conventionally.

The humanware component remains low, with just a handful of artists having adequate knowledge of information technology and building upkeep. From teaching to marketing, proprietors of performing arts studios play an essential role in all aspects of their studios. Infoware demonstrates superior outcomes, especially in collecting data gleaned from online forums, user groups, and pupils. This is relevant to the teaching of many different kinds of art. The Orgaware component shows that most performing arts studios are still micro-scale with an adequate framework for managing organizations, despite the ambiguous delineation of tasks prevents entrepreneurs from focusing on business development. Table 3 illustrates the extent of digital technology usage within the performing arts studio sector.

**Tabel 3. Shows the Sophistication Level of Digital Technology Components in Performing Arts Studio Businesses.**

| Technoware | Humanware | Infoware | Orgaware | Skor |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| Physical Equipment of Performing Arts Studio | Human Resources Ability to Use Physical Facilities | Insights into Equipment Utilization | The company is self-managed, with limited capital and a small workforce | 1 2 3 |
| Production Equipment of Performing Arts Studio | Human Resources Ability to Produce Digital Technology | Insights on Comprehending the Fundamentals of Efficient Facility Utilization | The company is capable of producing high-quality artwork. | 1 2 3 |
| Adaptation of Performing Arts Studio using Digital Technology | Human Resources Ability to Adapt Digital Technology | Data Facilitating Understanding of the Design and Operation of Digital Technology Facilitie | Capable of competing by maintaining the level of creative endeavors and consistently diversifying mediums. | 1 2 |
| Technology Digilization in Performing Arts Studio | Human Resources Ability to Create Content and Market Online | Insights into Market and Consumer Research | Able to identify and utilize digital technologies that align with evolving consumer preferences and emerging markets. | 1 2 |

(Source: Researcher, 2024)

Expert interviews revealed a Technoware score of 13, indicating the use of basic physical facilities and equipment along with limited digital technology utilization (WhatsApp, Instagram, Facebook, TikTok) in the performing arts studio business. A Humanware score of 15 reflects positive relationships and effective communication between employees and owners, as well as a family-oriented leadership style. The Infoware component scored 17, suggesting reasonably good efforts in obtaining market information, with art community networks serving as the primary source for collaboration and client relationship development. The Orgaware

component, encompassing aspects of profitability, capacity utilization and future orientation achieved a score of 11. The findings suggest that businesses in the performing arts studio sector generally do not prioritize profitability and capacity optimization. Business owners tend to focus more on operational activities, such as creating artwork and marketing it. Scores of Technoware Intelligence (STI), Score of Humanware Intelligence (SHI), Score of Infoware Intelligence (SII), and Score of Orgaware Intelligence (SOI) were the results of an exhaustive evaluation based on the THIO framework that reflect the level of intelligence and capabilities associated with each component. Table 4 presents the complete results of expert interviews regarding THIO.

**Table 4. Findings from Expert Interviews Regarding THIO**

| Component | Kriteria | Nilai Kriteria | Skor |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| *Technoware* | Physical Infrastructure Manufacturing | Sufficiently Fulfilled | 5 |
| | Technology Digital Transformation | Partially Fulfilled | 4 |
| | Total Score | Partially Fulfilled | 4 |
| | Sti | | 13 |
| | | | 4,3 |
| *Humanware* | Workers | Sufficiently Fulfilled More | 6 |
| | Owner | Than Fulfilled | 9 |
| | Total Score | | 15 |
| | Shi | | 7,5 |
| *Infoware* | Market Information | Sufficiently Fulfilled More | 6 |
| | Community Network | Than Fulfilled Partially | 8 |
| | Business Development | Fulfilled | 3 |
| | Total Score | | 17 |
| | Sii | | 5,6 |
| *Orgaware* | Profit | Partially Fulfilled | 3 |
| | Capacity Utilization | Sufficiently Fulfilled | 5 |
| | Future Orientation | Partially Fulfilled | 3 |
| | Total Score | | 11 |
| | Soi | | 3,6 |

(Source: Researcher, 2024)

STI is defined as a measure of an individual's technical intelligence, encompassing an understanding of hardware and software as well as the ability to adapt and implement technology. SHI is defined as a measure of an individual's human intelligence, encompassing communication skills, teamwork skills, and the understanding and management of social and emotional relationships. SII is characterized as a metric of an individual's informational intelligence, including the capacity to gather, evaluate, manage, and use information proficiently and effectively. SOI is defined as a measure of an individual's organizational intelligence, including the capacity to strategize, coordinate, and direct inside an organizational framework to attain broader objectives, alongside the aptitude to adapt to alterations and obstacles.

To measure the extent to which each the component THIO plays a role in the performance metrics of a performing arts studio, utilizing upper limit (UL) and lower limit (LL) benchmarks for assessment. The UL denotes the optimal performance level or the maximum target achievable by the technology within that component, whereas the LL signifies the minimum performance threshold that is still considered to provide a meaningful contribution. The "state of the art" refers to the best practices currently employed in the field of performing arts.

This contribution calculation is important because it considers the existing level of technological development in comparison to both the optimal state (UL) and the cutting edge. Researchers will assess how well each component works in getting closer to the UL and the degree to which the current technological circumstances deviate from the LL, or state of the art. The contribution calculation results indicate that Technoware contributes 0.23, Humanware

contributes 0.41, Infoware contributes 0.36, and Orgaware contributes 0.25. A complete assessment of this calculation can be found in Table 5.

**Table 5. Determining the Contribution of Each Technology Component THIO is Crucial.**

| Technology | UL | LL | State of The Art | Contribution |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| *Technoware* | 1 | 3 | 0,43 | 0,23 |
| *Humanware* | 3 | 6 | 0,75 | 0,41 |
| *Infoware* | 2 | 5 | 0,56 | 0,36 |
| *Orgaware* | 1 | 3 | 0,36 | 0,25 |

(Source: Researcher, 2024)

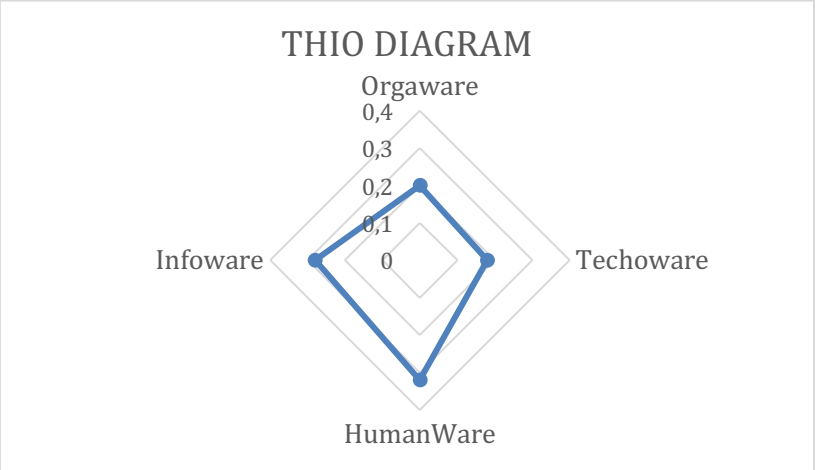
Subsequently, the contribution coefficient values are calculated based on the weight of each component $\beta t = 0.18, \beta h = 0.32, \beta i = 0{,}28, \beta o = 0.20$. The Technology Contribution Coefficient (TCC) is computed using these variables and is shown in Table 6.

**Table 6. The Results of The Technology Contribution Coefficient (TCC) Calculation**

| Technology | Contribution | Intensity | TCC |
|---|---|---|---|
| (1) | (2) | (3) | (4) |
| *Technoware* | 0,23 | 0,18 | 0,339 |
| *Humanware* | 0,41 | 0,32 | |
| *Infoware* | 0,36 | 0,28 | |
| *Orgaware* | 0,25 | 0,20 | |

(Source: Researcher, 2024)

The Technology Contribution Coefficient value obtained 0.339, denotes the degree of technology contribution in dance, music, and theater studios in Jakarta is currently at a moderate level. This value suggests that the adoption of technology among performing arts studio entrepreneurs is carried out in a typical manner using simple digital technology, likely because most are small businesses with limited resources. For future business development, performing arts studio entrepreneurs need to increase their attention to technological advancements. One aspect that needs improvement is orgaware, which is organizational awareness, currently lacking due to the absence of clear task divisions. Entrepreneurs are still handling all aspects of the business themselves. Collaboration and specialization, particularly in the field of digital technology, are essential for achieving progress and focusing business development. Meanwhile, humanware and infoware have become an integral part of the operation of the art studios. The THIO diagram illustrating this process can be seen in Figure 2.




(Source: Researcher, 2024)

**Figure 2. THIO Diagram Model for Performing Arts Studio**

The growth of performing arts studios in Indonesia is hampered by the lack of a clear roadmap about digital technology competencies customized to industry demands. This roadmap is crucial as a guide for performing arts studio entrepreneurs, enabling them to develop in a focused and sustainable manner and thereby survive in the digital age. We use technometric methods from UNESCAP to assess the technological capability level of performing arts studio entrepreneurs. According to UNESCAP, technology is key to enhancing a company's competitiveness in the long term. Therefore, the successful development of performing arts studios future endeavors need a well devised planning approach that utilizes technology.

Research results indicate the contribution of technology (technoware, humanware, infoware, and orgaware) to dance, music, and theater studios in DKI Jakarta is still low, with a Technology Contribution Coefficient (TCC) value of 0.339. The two weakest parts are the Technoware and Orgaware adaptations. Meanwhile, Infoware and Humanware are stronger components that currently serve as the main foundation of art studio businesses. Successful businesspeople in the performing arts must continuously these two components to ensure the long-term sustainability of their businesses. Given the high failure rate of performing arts studio businesses, we need to prioritize the development of Orgaware and Technoware. Innovations in Orgaware and Technoware are essential to face the era of digitalization.

The evolution of informatics has led to the fast development of digital technologies, but not always in harmony with the preservation of traditional arts. The changes in interaction and culture due to digital technology pose challenges. Indonesia plays the role of a consumer, not a developer of technology. Performing arts studio entrepreneurs often lack the knowledge to utilize it effectively. Efforts to increase knowledge are still limited and not proportional to technological developments. Education focuses on use, not innovation. There is no policy regulating the national utilization of digital technology.

Modernization is unavoidable, but society needs the ability to choose modern elements to contribute to culture. Access to traditional knowledge is limited, and many traditions are in danger of extinction. Documentation efforts are minimal. The integration of tradition and modernization is important. Digital technology can help preserve performing arts studios and manage intellectual property. The study based on Lev Manovich's theory (2002) about numbers, parts, changes, automation, and variety reveals different ways to use digital technology, but it also highlights a gap in access to it. Numerical data facilitates objective analysis. The THIO structure reflects modularity. The ability to manipulate makes it easier to change content, and automation increases promotional efficiency. Variability enables adaptation.

Digital technology impacts production, consumption, and cultural understanding. The reach of the audience expands, interaction is dynamic, and access is diverse. Cultural understanding is more measurable. However, the adoption of digital technology faces challenges (digital divide, lack of understanding, bureaucracy). We need government support in the form of training, funding, and the simplification of bureaucracy. Integration of digital technology and traditional elements results in innovative, sustainable, and relevant works.

**THIO Model and Creative Economy: Synergy of Pillars for the Sustainability of Performing Arts Studios in Digital Technology.**

We can align the THIO model with Richard Florida's creative economy theory to obtain a more comprehensive analysis. This theory highlights three main components: talent, tolerance, and technology. The aim of this research is to understand how these three pillars interact in ensuring the sustainability of performing arts studios' businesses within the digital technology context. Performing arts studios, as creativity-based business units, are an integral part of the creative economy. Their success relies on their ability to utilize resources, create added value, and compete in a competitive market. Digital transformation has reshaped the landscape of the creative economy, presenting new opportunities as well as challenges for performing arts studios.

Technoware represents the technological aspect, Humanware reflects talent through human skills, Infoware relates to access to information and knowledge that link to tolerance and a supportive environment, and orgaware focuses on organizational efficiency and effectiveness vital for fostering a conducive environment for innovation and creativity. Performing arts studios that adopt more advanced THIO tend to achieve greater success, supporting (Florida, 2012) assertion that technology plays a significant role in the creative economy. However, talent and tolerance factors also significantly influence success. Studios managed by skilled administrators and artists, with strong community networks, are better positioned to adopt and optimize technology.

In the talent (Humanware) aspect, expertise and skills are crucial factors. The level of Humanware sophistication varies among studios; some can leverage digital platforms for marketing and product development, while others are still limited in knowledge. This feature underscores the need of funding capacity-building initiatives via official channels and associated organizations particularly in digital marketing, social media management, and data analysis.

A supportive and inclusive environment fosters tolerance (Infoware and Orgaware). Availability of information access, well-structured organizations, and strong community networks play significant roles in creating a tolerant and innovative environment. Building active online communities can enhance customer loyalty and promote word-of-mouth marketing. Governments and related institutions should facilitate collaboration among studios to strengthen the ecosystem. A conducive environment will attract and retain creative talents and is a key factor in the prosperity of the creative economy.

The persistently low level of technology (technoware) signifies a significant digital divide. Many studios continue to use basic equipment and have yet to fully leverage digital technologies. Limited access and insufficient training are the main barriers. Support from the government and relevant agencies is crucial, including providing training and programs tailored to each studio's needs.

Limited access to technology, lack of training, and minimal institutional support pose significant challenges for the success of performing arts studios. Policies that improve technology access, offer training, and create a more supportive environment are essential for optimal growth. This approach is relevant for analyzing the role that digital technology plays in promoting business of performing arts studios in Jakarta, reiterating that the integration of talent, tolerance, and technology is fundamental to sustainable survival and growth.

## CONCLUSION

This research reveals that digital technology significantly contributes to the activities of arts studios in Jakarta. The results show that technology's role in dance, music, and theater studios in DKI Jakarta is moderate, with a Technology Contribution Coefficient (TCC) value of 0.339. Technoware and Orgaware adaptability is shown to be the least effective element. Meanwhile, Humanware and Infoware show the highest levels of contribution, whereas Technoware and Orgaware contribute less in ensuring the sustainability of arts studio businesses. The primary priority is to enhance Technoware through investments in equipment and technology infrastructure tailored to the needs of the studios. Additionally, developing Orgaware by restructuring organizational frameworks, implementing effective management systems, and clarifying task divisions is also crucial. Consequently, we can maximize the potential of Humanware and Infoware to enhance competitiveness and secure the sustainability of arts studio businesses in the digital era.

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