Mapping the Path of Digital Transformation: The Role of Leadership in Building Adaptive Organizational Culture

Budi Haryanto[1*], Bambang Budi Wiyono[2], A Supriyanto[3]
Educational Management Department, Universitas Negeri Malang, Malang,
East Java, Indonesia
Email: budiharyanto@umsida.ac.id[1], bambang.budi.fip@um.ac.id[2], a.supriyanto.fip@um.ac.id[3]

Abstract:

The development movement continues towards the digital transformation era, marked by rapid advances in information and computer technology (ICT) and the emergence of social media platforms that change the order of life to be more practical and accessible and deny the geographical distance between people. These changes require universities to adapt to the demands of rapid development. This study aims to explore the strategies carried out by university leaders in facing the challenges of the digital era and map the extent to which the transformation of university organizational culture is operated in the face of digital technology pressure. The research used a qualitative approach with a multi-site format in three private universities. Data analysis applies constant comparative analysis, which ends with a simultaneous analysis step. The results showed that university leaders are ready to implement an open strategy in facing the challenges of the digital era by utilizing these technological advances. However, there are differences in the utilization of network assets owned by institutions and the knowledge and experience of leaders. Organizational culture transformation is operated to the extent that institutions can master digital technology to optimize the performance of institutional services. Universities' engagement with digital technology does not disrupt the resilience of their organizational culture because it only leads to an adaptive surface layer.

Keywords: *Digital Transformation, Leadership, Organizational Culture, Service Digitalization*

Abstrak:

Gerak perkembangan terus berlanjut menuju era transformasi digital yang ditandai oleh kemajuan pesat di bidang teknologi informasi dan komputer (TIK) dan munculnya platform-platform media sosial yang merubah tatanan kehidupan menjadi lebih praktis, mudah, dan menafikkan jarak geografis antar manusia. Perubahan ini mengharuskan perguruan tinggi beradaptasi dengan tuntutan perkembangan yang amat cepat. Penelitian ini bertujuan mengeksplorasi strategi yang dilakukan pemimpin perguruan tinggi dalam menghadapi tantangan era digital, serta memetakan sejauhmana transformasi budaya organsisasi perguruan tinggi dioperasikan dalam menghadapi tekanan teknologi digital. Penelitian dengan pendekatan kualitatif berformat multi-situs pada tiga perguruan tinggi swasta. Analisis data menerapkan constant comparative analysis yang diakhiri langkah analisis simultan. Hasil penelitian didapatkan bahwa para pemimpin perguruan tinggi memiliki kesiapan yaitu menerapkan strategi keterbukaan dalam menghadapi tantangan era digital dengan memanfaatkan kemajuan teknologi tersebut, walaupun ada perbdeaan dalam pemanfaatan asset jejaring yang dimiliki lembaga, pengetahuan, dan pengalaman pemimpin. Transformasi budaya organisasi

dioperasikan sejauh lembaga dapat menguasai pemanfaatan teknologi digital untuk mengoptimalkan kinerja pelayanan lembaga. Keaktifan perguruan tinggi pada teknologi digital tidak mengusik ketangguhan budaya organisasi mereka karena hanya mengarah pada lapisan permukaan yang bersifat adaptif.

Kata Kunci: *Transformasi Digital, Kepemimpinan, Budaya Organisasi, Digitalisasi Pelayanan*

INTRODUCTION

The pace of change has become one of the main characteristics of life in the digital age, characterized by the advances in information technology and the growth of sectors and cultures (Ivaldi, et al., 2022; Jin et al., 2023; Lazzeretti, 2023). The changes in the technological structure also reinforce these characteristics, the advances in industry and how people live, which require college managers to upgrade their development model (Gafurov et al., 2020; Tsaramirsis et al., 2022; Moscardini et al., 2022). Today's life, especially public service, is based on digital formats. The colleges and educational institutions underneath must undertake a significant digital transformation to meet the demands of the all-digital millennial society in which they will live (Akour & Alenezi, 2022). The digital age is changing the paradigm in managing institutions, including educational institutions (Núñez-Canal et al., 2022; Alenezi, 2023; Wahyudi et al., 2023). The main objective of university management is to prepare future managers to deal with problems and find solutions as a set of critical competencies (Akour & Alenezi, 2022; Goulart et al., 2022; Muzam, 2023). College institutions must be adaptable to the format of digitalization, even as a driving force to build competitive advantage (Hashim et al., 2022)

Facing the wave of digital transformation requires institutional managers, including educational institutions, to manage change and adapt to development. Organizations may soon rediscover strategies to cope with rapid changes in the digital age (Wujarso et al., 2023). Change management is one of the ways in which institutions try to perform differently from the present or the past to move towards a better future (Rizal et al., 2023). Change management has become one of the strategies that leaders in this digital age must pursue. Today, college leaders must have a strategy to create digital-oriented leadership, transforming their subordinates digitally to remain qualified and superior (Sukisno & Anwar, 2023). However, the development of sustainable education is still relevant, and to maintain the existence of institutions must have three primary keys (Hidayat et al., 2022), namely guarantees of institutional existence, the level of quality of the institutions, and the sustainability of investment in resources. Organizational leaders in the digital age can monitor in real-time through digital platforms. The current leader can remotely direct subordinates to do their job; this is called a virtual leader. They use advanced technology to complete their work, innovate, and communicate with their subordinates (Permana, 2023).

On the other hand, transforming organizational culture in the digital age has become a must. A rigid, non-adaptive, and closed organizational culture will majorly hinder organizational growth and development (Wahyudi, 2023). The organizational culture of the digital age is no longer static but open to adaptation

to environmental conditions. Changing organizational culture has become an essential component in transforming the digital age. An organization must adopt a culture that supports innovation, collaboration, and sustainable learning. The recommended organizational culture is open, innovative and customer-oriented (Zabala et al., 2022; Borodako et al., 2022). So, the cultural flexibility of an organization that can adapt to the advances of digital technology determines its long-term success and sustainability. Even the cultural transformation of one of them can also deliver the institution's competitiveness by responding to market changes and quickly gaining an advantage to win the competition (Wahyudi, 2023). However, in seeking organizational transformation in the digital era, the competence of leaders who can control the digital transformation is still needed, so the approach is human-centred (Schiuma et al., 2024). Suggest transformative leadership to drive the organization's digital transformation.

In this digital age, the recommended colleges are the ones that are capable of using digital technology to improve their infrastructure. So, the current management model is a form of transition from a structural approach to an infrastructure approach, from infrastructure management to infrastructure logic management (Gafurov et al., 2020). Any agency that wants to maintain its current existence should do so. In the digital transformation era, leadership must transform into digital leadership in line with changing management environments, which is decisive for organizational performance (Shin et al., 2023). College management in the digital age is focused on optimally utilizing digital technology to follow the ways of working and doing business driven by artificial intelligence and data analytics from the Internet of Things. (IoT) (Wahyudi, 2023).

The above consideration becomes urgent to get attention because colleges have a very strategic role in the nation's progress. Colleges contribute to defining the pattern of the nation's future progress. In a rapidly changing digital age, every nation needs the best human resources to compete against the fierce competition that demands highly competitive individual abilities. Even in the digital era, Society 5.0 is directed at building human beings capable of innovating to advance technology. Wu and Fang's research results show that higher college education levels among executives further increase human capital investment (Wu & Fang, 2024). This means that university education contributes significantly to companies' human capital investment. The crucial role of higher education in maintaining its existence must be supported by the management of institutions that can adapt to rapid developments, agility, and transformation of organizational culture relevant to the demands of the digital era. College institutions are also under pressure due to rapid changes. That rapid change must be anticipated with improvements in service, agency management, and communication.

Discussions about the strategy of an institution or company in the face of digital transformation can be found in some articles. As written by Hashim et al. (2022), universities must, firstly, be ready to adapt to the impactful changes caused by the macro environment, secondly, adapt to change, and thirdly, integrate digital technology into the management system. For Avita et al. (2023), digital transformation is not only a challenge for business operators to adapt but also an opportunity to take advantage of the advances of digital technology as a stepping stone to transform business. In line with the above opinion, Gafurov et al. (2020)

state that the university management paradigm should shift from a structural approach to an infrastructure approach, from infrastructure management to infrastructure logic management.

On the other hand, organizational culture must also be transformed in the digital age. Even organizational cultural change is a critical factor that enables companies to face dynamic challenges. The relevant organizational cultures in this digital age support innovation and collaboration and are responsive to market conditions (Wahyudi, 2023). The research aims to explore the anticipation efforts of private college institutions amid digital transformation conditions, how college leaders' strategies anticipate the digital age, and to what extent the cultural transformation of organizations operates colleges in the face of the pressure of the digital era.

RESEARCH METHODS

This research applies a qualitative approach because the problem explored describes a series of interactions between people in their activities and actions that have meaning from the situation they build. (Ulfatin, 2014) The research design is multi-site in three private universities, with an interpretive paradigm. The selection of data sources was purposive to suit the researcher's needs. The selected data sources have a position in the institution. The informants were selected because they were considered to have in-depth knowledge of information relevant to the issues raised in this study.

Data were collected using observation techniques, in-depth interviews, and additional documentation. The subjects at the research site did not relayed to be the presence of researchers in the field. Data analysis techniques refer to constant comparative analysis (Glaser, 1965), which includes four steps: (1) comparing the events in each category, (2) integrating the categories and their properties, (3) theorizing, and (4) theorizing. Concretely, however, this study undertook two main steps: (1) collecting data from each case, which is analyzed conceptually inductively, and (2) conducting simultaneous analysis to reconstruct and develop conceptions that apply across the three sites.

This study was conducted in three developing private universities in Surabaya and Sidoarjo. The three research sites are unique in that two are faith-based universities (Catholic and Islamic), while the other institution is not faith-based or categorized as nationalist. There are two reasons for researching the three sites: (1) Private universities display a unique style because they are influenced by the level of public trust and are vulnerable to government regulations and policies; (2) Religion is one of the elements of the deepest layer of organizational culture that most determines the identity of the institution.

RESULTS AND DISCUSSIONS

The strategy shows the process of determining the significant steps of an institution towards the future triggered by a leader who considers the long-term goals of the organization, the pressing challenges of the current environment, and the strength of the resources it has to run the wheel of the organization in order to its goals. The strategy is defined by answering the question, "what will our institutions look like in the future?" The strategies are established by designing the

organization in the relevant direction to achieve success. The leaders' selected ideas and the subordinates' best proposals formed the strategy. However, the strategy taken can be based on pragmatic considerations, as Avita et al. (2023) suggested. Institutional leaders must set steps to adapt and strategically utilize technology to survive and meet the constantly changing market demands. Leaders and institutions under their leadership must leverage technological advances and digital transformation to excellence.

From the data obtained from the interviews, today's college leaders are well aware that college management is not much different from business management, getting the same pressure, the pressures felt by the fast-changing environment, the advances of digital technology, the pressure of the market, which requires the management model is no different from the business companies. Must move fast and respond to changing circumstances. The attitude of the college leaders is to respond to the possibilities that happen out there that will affect the existence of the university. The visible difference is what the institutions must do in the face of this rapid change.

The rector of College I has a pattern of action that is always aligned with the changing circumstances. The university's leaders continue to monitor and reflect on current developments in regional and international communities through networking with colleges in East Asian countries. The rector of College II set a measure of the institution's readiness to cope with the pressure of rapid change with the improvement in quality demonstrated by the competitiveness and accreditation rankings of national bodies. The rector of College III is different; he set the norm of college success in the face of various external pressures from the client; the college considered the winner is the institution capable of providing the best service to its clients. Thus, third university leaders consider customers to be motivators, drivers, and motivators for higher education institution managers. The differences in the orientation of college leaders in anticipating external pressure can be seen in Table 1.

Table 1. University Leaders' Orientation in Responding to External Pressures

University I	University II	University III
Anticipate and monitor every step of technological and social development at the regional and international levels through networking with the University of East Asian countries. Universities must transform themselves to be adaptable to the dynamics of society.	Improving the quality of institutions to be competitive, the measure of success is the supreme predicate of the national body.	The customer is everything, the measure of success in the face of the pressure of competition is if it is able to provide the best service to the customer.

The university must transform itself and improve its structure without limits because there can be no competitors on the local scale. However, it must compete with the graduates of a foreign college, according to the statement of the rector of the university I. This was expressed by the persistence of the orientation of his graduation to be accepted to work in foreign capital companies, while the leaders of the universities II and III did not offend that.

One of the technologies applied to the teaching aspects of digital transformation is the Massive Open Online Course (MOOC). This online lesson allows lecturers to take courses from different locations and distances. The MOOC allows students from one college to take one lesson required from another college to complete the final assignment. Students at university can take specific courses online from other universities in other countries because I have engaged in networking with those colleges. This phenomenon was realized in college long before the 19th Covid pandemic. Universities II and III used blended learning technology that began when covid 19 hit. No forms of cooperation, such as MOOCs, have been found in the latter two institutions, but they are still in the form of exchanges of fellow college students with one association in the country.

The MOOC facility at the College accommodates the acquisition of knowledge by students outside of their master's programmes and universities. Online learning platforms have become one of the characteristics of modern education. Based on the research of Liu et al. (2020), online teaching platforms help students make education more accessible and convenient. The differences in the use of online lecturing platforms in colleges can be seen in Table 2.

Table 2. Reasons for Using Online Lesson Platform

University I	University II	University III
To facilitate students who need to take other science courses from other colleges as supporters of theories relevant to their final assignment.	Initially as an alternative to face-to-face lectures because of the time limitation of the Covid 19 pandemic.	Initially as an alternative to face-to-face classes because there was a ban on activities during the Covid 19 pandemic.
A form of anticipation of the knowledge and competence that students need to face the world of work.	Then went on to facilitate the lectures of students from outside the city and the island.	Then went on to facilitate the lectures of students from outside the city and the island.

These universities use digital technology as a form of online learning for different backgrounds and reasons. In theory, the purpose of exploiting technological advances by an institution, as described by Sani & Wiliani (Rizal et al., 2023), is grouped into three categories: efficiency improvement, effectiveness improvement, and strategic improvement. Examinations at universities take advantage of digitalized formats and, in some cases, still apply old formats face-to-face. Considerations of energy, material, and time efficiency are why digital technology is a new format for holding the final exam. Using the old exam format is still necessary if the courses students take have hands-on experience so more is needed to have a remote test online. Students in end-to-end consultancy activities can find lecturers face-to-face or online; the institution facilitates a consulting services platform developed as an application system to record the activities in the consultation phase process. With that system, the authorities can monitor the consultation process as a form of monitoring.

Administrative services are gradually leaving the old platform and replacing it with digitized formats. Office activity gradually changed the format to a paperless office by switching to digital documents. The form of interline

communication in the university uses an integrated network of information systems and a single door. The phenomenon represents the determination of higher education institutions to adapt to digitalization. Such rapid technological development has led many institutions to rearrange the roadmap of strategic management development to adapt to the format of digitalization.

In human resource development, universities are now inclined to recruit young people skilled in digital technology to support the format of office activity that uses digital documents. The underlying reason is that the characteristics of young workers have identities that refer to the ability of computer systems to process information like humans, including natural language understanding, decision-making, and machine learning. Workers in the digital age adapt very quickly to algorithm languages. Therefore, young people cancan work with intelligent computer systems and develop their ability to cope with complex tasks requiring high-level thinking (Wahyudi et al., 2023).

The above exposures show that university leaders are accepting the pressure of the macro environment and using digital platforms to support the institutional management system. University leaders have strategies in the face of rapid change amidst the onslaught of digital transformation. Some have anticipative attitudes in various aspects of comprehensive insight, including a tendency to shift the behaviour of generation Z toward practicality that will threaten the college's existence, and some are preparing with one aspect of the measure of success in the management of higher education institutions.

The change resulting from digital transformation entails the need for organizational transformation, which includes changes in organizational structure and organizational culture (Wicaksono, 2023). The transformation of organizational culture in a rapidly changing era is a must. Changing organizational culture is at the heart of transformation in the digital age (Wahyudi et al., 2023). The transformation of organizational culture in the digital age is a critical factor in the success of organizations. The organizational culture that supports today's organizational dynamics is an open, innovative, customer-oriented, and fast-adapting culture (Wicaksono, 2023).

The statement of the rector of the university 1 reads: "… If there were no other college, he would have to keep trying to transform himself.". This statement means that an institution should not be static, staying at the same point; the college must process moving to thrive, following the dynamics in the macro environment, to not fall behind. This understanding shows the openness of the college institution. Even in his subsequent statement, he was concerned about the shift in the Z-generation's orientation not to choose academic colleges but to diploma programs. It is a threat to be anticipated with the addition of a new major (for example) that corresponds to the practical interests of generation Z. Another with the rector of university II the open nature he demonstrated by actively opening himself up in collaboration with other colleges both at home and abroad and listening to improvement advice from colleagues. The open culture at the university III is demonstrated with a complete client orientation. He calls his higher education institution a driver company driven by customer demands and

must follow their wishes to be satisfied. The differences in the open properties can be seen in Table 3.

Table 3. Forms of Institution Openness to the External Environment

University I	University II	University III
The openness lies in the self-will of the institution to be willing to metamorphose and sensitive to the environmental conditions.	Increased networking with more advanced colleges (best practice institution)	Positioning customers as determinants of the development of the agency. Customer demands as drivers and directors of development.

The illustration above shows each institution's unique form of openness. The common spirit of the three colleges is the consciousness that what they passed was a consciousness to improve the institutions of the past.

The innovative nature of the institution is demonstrated by finding new ways that are more effective and efficient for the desired results. The observed colleges needed to find units dealing with the field of work and designed plans for the future of education, considering measurable forecasting. Innovations at the institutional level exist in the new student recruitment units, which is an effective way to attract as many potential students as possible amidst intense competition among institutions but an increasingly limited market segment. So, the innovations are related to the new student networking model and the development of a digital system to handle the work process between units in the institutions because there are ideas to simplify the work system.

Adaptive educational institutions are shown to adapt effectively and quickly to internal and external pressures for change. The practical measure, in this case, is to meet stakeholder expectations. Also submitted by (Suti et al., 2020), good governance colleges can adapt to the dynamics of change. Setiawan's (2020) opinion stresses that digital transformation is a means of driving colleges to adapt to change to remain able to add value from their best services to stakeholders. So, the process of college adaptation to the digital age is done with the use of digital technology or the digitization of academic and administrative service systems. At the university, I utilize an online lecture platform for the MOOC program, online lectures during the COVID-19 pandemic, and administrative and academic services with networked technology. The same applies to universities II and III that use digital technology on the platform of online lectures during COVID and post-pandemic pandemics, as well as student academic services for consultations and final exams in the form of paperless exams.

The transformation of organizational culture in the context of the evolution of the digital age is seen as a crucial need to sustain the existence of institutions or companies amid a stream of rapid change. The decision to follow the evolution of digital transformation in the institutional management system does not mean that college institutions lose their identity. The ability to adapt to the evolution of digital transformation strengthens institutions' existence in the midst of fierce competition. The identity of the institution or company is preserved due to adaptation because, according to Schein, the organizational culture consists of

three layers of hierarchical elements. The level of organizational culture includes (1) artefacts, (2) beliefs and values, and (3) the basic assumptions underlying the organization.

The surface layer is an artifact, which encompasses all phenomena that can be seen, heard, and felt. Artefacts include things that are visible, such as the architecture of the physical environment, languages, technologies and products, artistic creations, clothing styles, make-up patterns, emotional appearances, and myths, as well as stories told about organizations, lists of norms published, and observable rituals and ceremonies.

The second layer is beliefs and values adopted; this layer covers what should not be what it is, beliefs about right and wrong, and which is recommended and which is not. Persons who stand out can influence people in groups about the values they believe, usually present in the leader or founder of the organization.

The third layer is the basic assumption underlying the organization; this layer represents assumptions that are unconscious because of being a habit but ensure how each member observes, thinks, feels, and acts (Schein, 2004).

The transformation of the college's organizational culture in the digital age to survive in a rapidly changing macro environment by adapting to the advances of technology does not affect the identity of the institution because the change, shift, or improvement of technology exists in the layer of the artefact, that is, in the area of the most superficial layer, and does not influence the belief of the organization. In this field of artefacts, organizations or institutions can be open and ready to adapt to the advances of digital technology that are the demands of the macro environment. This layer of artefacts is an institution's organizational culture that is flexible and non-rigid and accommodates the challenges of the ever-changing environment. That is why organizational culture transformation is not a significant obstacle to institutions in the digital age. Digital tools with multiple platforms enable cultural change more efficiently. By leveraging technology, organizations can operate faster, longer-term, and design more innovative and adaptive problem-solving solutions (Simeone et al., 2022; Tal et al., 2024). Digital transformation is a must for higher education amid a fast-changing environment, and even developing technology is one of the mechanisms universities must use to survive amid rapid change (Antonopoulou et al., 2023).

CONCLUSION

At the end of this presentation, university leaders have the same attitude in facing the development of the digital era, which must be anticipated with careful thinking to determine the proper steps for the institution's sustainability. Higher education leaders implement an open and adaptive strategy to the demands of digital technology. The strategy does not destroy institutional identity because the transformation is only on the surface layer of institutional culture. The difference in openness strategy steps to the demands of the situation is caused by the utilization of each institution's network assets, alertness, background experience, and philosophical principles believed by leaders, such as those with humanistic or behavioristic patterns. The commonality of leaders in facing the challenges of this macro environment is to create improvements for the universities they lead.

Universities carry out organizational cultural transformation to the extent that the institution can overcome the challenges of the challenges of change to survive and maintain the continued development of the institution. Higher education institutions prioritize adapting digital technology to maximize the performance of institutional services to stakeholders, especially in the academic and administrative fields.

The results of this study cannot be used as generalization and predictive material that will occur in every private university because it applies a qualitative approach. Qualitative studies rely on inductive reasoning based on specific circumstances in each research subject. With the interpretive paradigm, researchers assume that symptoms are unique or specific, uncommon in different places. The conclusion of this research will be more robust if it is supported by other studies that show the same phenomena in different universities. Alternatively, The following research will be more interesting if the object of observation is extended to higher education institutions with a quantitative approach. Quantitative research will produce a broader picture of the organizational culture transformation trend under the pressure of the digital era.

ACKNOWLEDGEMENT

REFERENCES

Akour, M., & Alenezi, M. (2022). Higher Education Future in the Era of Digital Transformation. *Education Sciences*, *12*(11). https://doi.org/10.3390/educsci12110784

Alenezi, M. (2023). Digital Learning and Digital Institution in Higher Education. *Education Sciences*, *13*(1), 88. https://doi.org/10.3390/educsci13010088

Antonopoulou, K., Begkos, C., & Zhu, Z. (2023). Staying Afloat Amidst Extreme Uncertainty: A Case Study of Digital Transformation in Higher Education. *Technological Forecasting and Social Change*, *192*. https://doi.org/10.1016/j.techfore.2023.122603

Avita, D. N., Aditya, R., Fakhrudin, A., Tohir, N. I., & Anshori, M. I. (2023). Maximizing Strategies for Developing Business In The Digital Transformation Era. *Gudang Jurnal Multidisiplin Ilmu*, *1*(4), 56–61.

Borodako, K., Berbeka, J., & Kapera, K. (2022). Market Orientation and Technological Orientation in Business Services: The Moderating Role of Organizational Culture and Human Resources on Performance. *Plos one*, *17*(6), e0270737. https://doi.org/10.1371/journal.pone.0270737

Gafurov, I. R., Safiullin, M. R., Akhmetshin, E. M., Gapsalamov, A. R., & Vasilev, V. L. (2020). Change of The Higher Education Paradigm in The Context of Digital Transformation: From Resource Management to Access Control. *International Journal of Higher Education*, *9*(3), 71–85. https://doi.org/10.5430/ijhe.v9n3p71

Goulart, V. G., Liboni, L. B., & Cezarino, L. O. (2022). Balancing Skills in The Digital Transformation Era: The Future of Jobs and The Role of Higher Education. *Industry and Higher Education*, *36*(2), 118-127. https://doi.org/10.1177/09504222211029796

Hidayat, A., Fatimah, S., & Rosidin, D. N. (2022). Challenges and Prospects of Islamic Education Institutions and Sustainability in The Digital Era. *Nazhruna: Jurnal Pendidikan Islam*, *5*(2), 351–366. https://doi.org/10.31538/nzh.v5i2.2106

Ivaldi, S., Scaratti, G., & Fregnan, E. (2022). Dwelling within the Fourth Industrial Revolution: Organizational Learning for New Competences, Processes and Work Cultures. *Journal of Workplace Learning*, *34*(1), 1-26.

Jin, C., Xu, A., Zhu, Y., & Li, J. (2023). Technology Growth in The Digital Age: Evidence from China. *Technological Forecasting and Social Change*, *187*, 122221. https://doi.org/10.1016/j.techfore.2022.122221

Lazzeretti, L. (2023). What is The Role of Culture Facing the Digital Revolution Challenge? Some Reflections or A Research Agenda. *Rethinking Culture and Creativity in the Digital Transformation*, 10-30. https://doi.org/10.4324/9781003332374-2

Liu, Z. Y., Lomovtseva, N., & Korobeynikova, E. (2020). Online Learning Platforms: Reconstructing Modern Higher Education. *International Journal of Emerging Technologies in Learning*, *15*(13), 4–21. https://doi.org/10.3991/ijet.v15i13.14645

Mohamed Hashim, M. A., Tlemsani, I., & Matthews, R. (2022). Higher Education Strategy in Digital Transformation. *Education and Information Technologies*, *27*(June 2021), 3171–3195. https://doi.org/10.1007/s10639-021-10739-1

Moscardini, A. O., Strachan, R., & Vlasova, T. (2022). The Role of Universities in Modern Society. *Studies in Higher Education*, *47*(4), 812-830. https://doi.org/10.1080/03075079.2020.1807493

Muzam, J. (2023). The Challenges of Modern Economy on The Competencies of Knowledge Workers. *Journal of the Knowledge Economy*, *14*(2), 1635-1671. https://doi.org/10.1007/s13132-022-00979-y

Núñez-Canal, M., de Obesso, M. D. L. M., & Pérez-Rivero, C. A. (2022). New Challenges in Higher Education: A Study of The Digital Competence of Educators in Covid Times. *Technological Forecasting and Social Change*, *174*, 121270. https://doi.org/10.1016/j.techfore.2021.121270

Permana, I. (2023). Manajemen Kepemimpinan Era Digital: Konsep, Gaya dan Pengembangan Kepemimpinan pada Generasi Milenial dan Z. *Jurnal Multidisiplin Ilmu*, *2*(3), 673–680.

Rizal, A., Kahfi, S. N., Abdurrahman, Wulandono, & Tono. (2023). Manajemen Perubahan di Era Digital: Tantangan dan Peluang bagi Adaptasi Organisasi. *Bullet: Jurnal Multidisiplin Ilmu*, *2*(4), 933–941.

Schein, E. H. (2004). *Organizational Culture and Leadership* (3rd Editio). San Fransisco: Jossey-Bass A Wiley Imprint.

Schiuma, G., Santarsiero, F., Carlucci, D., & Jarrar, Y. (2024). Transformative Leadership Competencies for Organizational Digital Transformation. *Business Horizons*, *67*(4), 425–437. https://doi.org/10.1016/j.bushor.2024.04.004

Setiawan, D., & Lenawati, M. (2020). Peran dan Strategi Perguruan Tinggi dalam Menghadapi Era Society 5 . 0. *Journal of Computer, Information System & Technology Management*, *3*(1), 1–7. https://doi.org/10.25273/research.v3i1.4728

Shin, J., Mollah, A., & Choi, J. (2023). Sustainability and Organizational Performance in South Korea: The Effect of Digital Leadership on Digital Culture and Employees' Digital Capabilities. *Sustainability*, *15*(3). https://doi.org/10.3390/su15032027

Simeone, L., & D'Ippolito, B. (2022). The potential of Design-Driven Foresight to Support Strategy Articulation through Experiential Learning. *Long Range Planning*, *55*(6), 102181. https://doi.org/10.1016/j.lrp.2021.102181

Sukisno, S., & Anwar, S. (2023). Konsep Kepemimpinan Digital Menghadapi Persaingan Global di Perguruan Tinggi. *The 4th International Conference of the Postgraduate Students and Academics in Syariah and Law 2023*, *1*(Inpac), 182–189.

Suti, M., Syahdi, M. Z., & Didiharyono, D. (2020). *Tata Kelola Perguruan Tinggi dalam Era Teknologi Informasi dan Digitalisasi*. *3*(September), 203–214. https://doi.org/10.35914/jemma.v3i2.635

Tal, K. N., Eitan, N., & Noa, E. Z. (2024). Lean Management and Innovation–a Paradox? Reinventing the Role of Problem-Solving within Organizations. *IEEE Transactions on Engineering Management*.

Tsaramirsis, G., Kantaros, A., Al-Darraji, I., Piromalis, D., Apostolopoulos, C., Pavlopoulou, A., ... & Khan, F. Q. (2022). A Modern Approach Towards an Industry 4.0 Model: From Driving Technologies to Management. *Journal of Sensors*, *2022*(1), 5023011. https://doi.org/10.1155/2022/5023011

Wahyudi, A., Bhismi, M., Assyamiri, T., Al Aluf, W., Fadhillah, M. R., Yolanda, S., & Anshori, M. I. (2023). Dampak Transformasi Era Digital Terhadap Manajemen Sumber Daya Manusia. *Jurnal Bintang Manajemen (JUBIMA)*, *1*(4), 99–111.

Wahyudi. (2023). *Budaya Organisasi di Era Digital Membangun Keunggulan Bersaing dan Meraih Kesuksesan*. Bekasi: PT Dewangga Energi Internasional.

Wicaksono, S. R. (2023). *Transformasi Digital Sudut Pandang Analisis Swot*. Malang: CV Seribu Bintang. https://doi.org/10.5281/zenodo.7703463

Wu, L., & Fang, J. (2024). How Higher Education Affects Corporate Human Capital Investment: Based on Upper Echelons Theory. *Finance Research Letters*. https://doi.org/10.1016/j.frl.2024.106019

Wujarso, R., Seno Pitoyo, B., Prakoso, R. (2023). Peran Kepemimpinan Digital dalam Era Digital. *Journal of Information System, Applied, Management, Accounting and Research*, *7*(1), 1–9. https://doi.org/10.52362/jisamar.v7i1.722

Zabala, K., Campos, J. A., & Narvaiza, L. (2022). Moving from A Goods to A Service-Oriented Organization: A Perspective on The Role of Corporate Culture and Human Resource Management. *Journal of Business & Industrial Marketing, 37*(6), 1197-1207. https://doi.org/10.1108/JBIM-11-2020-0497