

DYNAMIC EFFECT CAPABILITIES ON ORGANIZATION RESILIENCE WITH DIGITAL TRANSFORMATION AS A MEDIATION VARIABLE

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Abstract: *Whatever the organization, it is important to pay attention to dynamic capabilities . Even though there have been many studies related to dynamic capabilities, they are still relevant today. This research is a follow-up study of the same theme that the author has examined. The difference is in the research sample. This study tries to present the influence of dynamic capabilities on organizational resilience by mediating digital transformation from the point of view of school principals and their representatives. Data was taken by distributing questionnaires via Googleform as primary data. Data analysis was performed with smartPLS. From the two direct effect hypotheses, it was found that the two hypotheses proved to have a positive and significant relationship, namely, dynamic capabilities on organizational resilience and digital transformation towards organizational resilience. For an indirect relationship, significant results were also found, namely the relationship between dynamic capabilities and organizational resilience with digital transformation as a mediating variable.*

Keywords: *dynamic capabilities, organization resilience, digital transformation, schools*

1. Introduction

Education is a strategic factor which is the center of all areas of life (Makkawaru, 2019). Therefore, it should be implemented with a strategy (Kahuripan, 2020). After all, education is the center of life which is visited by thousands of children even their parents. Basic education has an important role for which all parties should be responsible, including universities (UNESCO, 2021). Basic education is the basis for all subsequent levels of education. in his speech at the United Nations (UN) at the 2022 Transforming Education Summit, the Indonesian Minister of Education voiced the transformation of education in our country. This was also conveyed in the framework of Indonesia's efforts to get used to returning online to offline patterns after Covid-19. It cannot be denied that Covid 19 poses a threat to all areas of life including school organizations (Gigauri, 2020) .

Who actually contributes to education is still a question (Raychaudhuri, 2020) . Education is a means of achieving national education goals, namely educating the nation's life, improving the quality of Indonesian people and implementing an advanced, just, prosperous and civilized Indonesian society (Salbiyah, Siti; Nuraini, Fitri & Rosmaniar, 2019) . Therefore, an appropriate curriculum and teacher professionalism are needed (Indy, 2019) . This is in order to be able to answer that schools must print generation 5.0 in an attractive, inclusive manner which at the same time must adopt technology and information digitally (UNESCO, 2021) , (Zhang et al., 2021) . But

in reality many schools are powerless. It will even be difficult for private schools which are not only having financial difficulties but also have a shortage of students (Usman, 2020) .

There is a discrepancy between the existing reality and the ideal situation that schools must have. For this reason, schools must overcome the problem, in particular the principal and his team must learn not only from within themselves but also from outside the organization so that schools can find competitive advantages with dynamic capabilities, namely organizational processes in using resources to integrate, rearrange, acquire and create changes in the market (Situmorang, 2018) . Including capturing digital transformation is an important opportunity in overcoming current problems (Zhang et al., 2021) . What needs further attention is the use of technology in education as a whole (Parker et al., 2022)so that it can overcome threats (Verhoef et al., 2021).

Based on the explanation above, it can be concluded that dynamic capability is a strategy to find competitive advantage. Therefore, this study tries to capture opportunities that dynamic abilities can be applied to education so that school organizations can maintain their existence. Therefore, the focus of this research is to explain the influence of dynamic capabilities on the organization resilience with the digital transformation variable as a mediating variable from the point of view of school leaders. This research is focused on the views or opinions of the principal and his representatives. Thus, the question of this research is whether the effect of dynamic capabilities on organizational resilience with digital transformation as a mediating variable ? The purpose of this study was to find positive or negative effects of dynamic capabilities on organizational resilience with digital transformation as a mediating variable.

The Covid-19 pandemic has encouraged schools to be creative in implementing online learning (Rapanta et al., 2021) . Following this opinion, the school has utilized the theory of dynamic capabilities. Therefore, this study is based on the theory of dynamic capabilities. The theory of dynamic capabilities explains the ability of an organization to take advantage of opportunities to overcome threats so that the organization survives as a real effort of the organization's ability to integrate, build, and rearrange its internal and external competencies in order to deal with rapidly changing environments (DJ Teece, 2007) . Dynamic capabilities integrate, build, and rearrange organizational internal and external capabilities in order to deal with environmental changes (Teece et al., 2009) .

This research contributes to implementing dynamic capabilities theory in education. In dynamic capabilities (DC) theory, current resource-based DC processes have been applied, namely sensing, seizing, transformation (DJ Teece, 2007) . The DC processes that modify resources are sensing, seizing, transformation. Organizational capacity to spot market opportunities and threats, seize highly profitable opportunities and then capitalize on them (DJ Teece, 2007) . This study implements DC in education (Hitt et al., 2021) to develop the concept of DC, namely sensing, seizing, transformation as the main means of how schools take advantage of digital transformation.

Opinion of R. Sousa & Voss, (2008) as a reference for this study, namely DC to explain causal relationships that allow organizations to recover and adapt from post-Covid-19 so that organizations survive/ resilience . Judging from the origins of the word, the word resilience comes from the Latin "resilire" and "resilio" which means "to rise again" or "jump back" (Gruber et al., 2020) . Organizational resilience is a multidisciplinary concept with the ability to return to a pre-disruption state (Bhamra et al., 2011) . Organization resilience or organizational resilience is included in the field of organizational management research (Meyer & Rowan, 1977) . The

intended resilience is the ability to grow and develop in the future (Reich, 2006) . A resilient organization is one that is able to make and maintain positive adjustments under stressful conditions (Sutcliffe & Vogus, 2003) . Organizational resilience has two dimensions, namely adaptability and agility (Akpan et al., 2022) , which is related to an organization's ability to survive and its agility in dealing with rapid changes in the organizational environment.

Within companies, digital transformation involves integrating internal and external resources through information technology, computing, communication, and connectivity to rebuild the vision, strategy, organizational structure, processes, capabilities, and organizational culture in adapting to the ever-changing digital world (Vial , 2019) . Nwankpa & Roumani (2016) were among the first to develop digital transformation, such as big data, analytics, cloud, mobile and social media platforms, integrating digital technologies such as social media, big data, analytics, cloud and mobile technology to drive change. There are nine dimensions of digital transformation, namely structural, informational, environmental, security, quality, financial, cultural, innovation, and participatory (Zaoui et al., 2019) . The dimensions of information technology innovation consist of three constructs: technology design, process technology, and ICT management, which are the dimensions adapted for this study.

The conceptual framework of this research is to describe the thought process in analyzing research concepts from previous theories and research. Thus, exploring theory to direct the flow and thinking process of deductive writing. Following the opinion of Sekaran and Bougie (2016), deductive reasoning is testing theories that are universal towards specific analysis. Inductive reasoning (inductive reasoning), is a process in which certain phenomena are observed to have general conclusions (Sekaran & Bougie, 2016) . Empirical study is research which is a generalization process of something that is specific to be able to conclude in general, so that it can be implemented or used in other tests. Inductive reasoning tends to be used in empirical studies. Theoretical studies and empirical studies can provide a basis for determining indicators to assess the independent variables, dependent variables, and mediating variables as well as moderating variables used in this study. digital transformation offers useful information and resources to continue business and build resilience in disruptive situations.

The unpredictable future is a key DC process that identifies opportunities for organizational growth before the possibility becomes clear to all (D. Teece et al., 2016). Proactivity is the key in seizing opportunities. In this research, technology is a way out to do (D. J. Teece, 2018). Sensing for novelty is influenced by abilities such as sensing, rational thinking, and planning scenarios that proactively identify the implications of observed events and organizational trends (D. Teece et al., 2016). A strong sensory capacity is urgently needed to manage the post-Covid-19 situation because education has an extraordinary effect. Digital transformation is expected to be able to maintain the continuity of schools and in the Indonesian context, education can recover faster and rise stronger ((Astungkoro, 2022), (Swasty, 2022), (Rahmawati, 2022)).

In response to opportunities or challenges in overcoming organizational problems, organizations can appoint staff to build digital transformation within their organizations (Pool, 2020). The dynamic capabilities framework provides a powerful lens for studying strategic change in organizations (Schilke et al., 2018). DC describes an organization's capacity: “(a) to sense and use opportunities to overcome threats, (b) to seize opportunities, and (c) to maintain competitiveness through upgrades, acquisitions, mergers and when necessary then reconfiguring

tangible and intangible assets (Teece, 2007) . Associated with digital transformation then Sambamurthy et.al. (2003) proposed that organizations should use information technology infrastructure (Warner & Wäger, 2019). Information technology utilization competencies have been reported to enable a variety of agile responses, ranging from complex steps such as starting a new company venture for new product development to simple steps such as adjusting existing production processes and resource utilization (Rigby et.al., 2016) . Therefore, it is expected that hypothesis 1 (H1), is that the DC variable has a positive effect on the digital transformation variable .

Digital transformation has become an important area for organizations to increase their resilience. It is of great practical significance to effectively carry out digital transformation to achieve organizational resilience (Zhang et al., 2021) . Technology investments help organizations to develop systematic control, in times of crisis and actively seek resources, and quickly develop adaptive solutions. Digital transformation prepares for organizational survival and success when facing unexpected crises (He et al., 2022). Thus, the expectation is H2: Digital transformation variables have a positive effect on Organizational Resilience.

DC describes organizational capacity in terms of “(a) perceives and find opportunities and threats, (b) seize opportunities, and (c) maintain competitiveness through upgrades, acquisitions, mergers, and reconfiguration of visible and invisible assets” (D. J. Teece, 2007). Related to digital transformation, Sambamurthy et.al. (2003) suggest that organizations should use information technology infrastructure (Warner & Wäger, 2019). The use of informatics technology enables the ability to respond agilely, ranging from complex steps for new product development to simple steps for adjusting production processes according to resources (Rigby, D., Sutherland, J, and Takeuchi, 2016). Thus H3: DC variable has a positive effect on organizational resilience through digital transformation as a mediating variable.

2. Methodology

This research is a quantitative research so that the quantitative method approach. Researchers describe the problem and then identified it into the hypothesis. The population of this study refers to all groups of people, events, or interesting things to be investigated (Sekaran & Bougie, 2016, p. 236) . A group of people are school principals and four of their deputies in St. Dominic Foundation schools. The sample was determined based on the opinion of Hair et al. (2018) , namely $(\text{Number of indicators} + \text{number of latent variables}) \times (5 \text{ to } 10 \text{ times})$. Based on these guidelines, the minimum sample size for this study = $(17 + 3) \times 5 = 100$ respondents. The sample for this research was taken from school principals and their representatives at schools at the Santo Dominic Foundation located on the island of Java, Indonesia. Precisely the Santo Dominikus Foundation schools in the city of Yogyakarta, Purwokerto, Cirebon and Cimahi as many as 120 respondents.

The research instrument used in this study was a questionnaire with five Likert scales to measure respondents' perceptions of this research phenomenon. The Likert scale measures how much the respondent agrees or disagrees with the given statement (Sekaran & Bougie, 2016). Giving a score is strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

Data were analyzed by descriptive statistical analysis and Partial Least SEM Square . The analysis is used to develop or estimate an existing theory (Sarwono, J dan Narimawati, 2015). The

use of the PLS structural model is assisted by the SmartPLS 3.0 software. Based on the explanation above, the research model is as follows.



Figure 1. Research Model

Thus the hypothesis is as follows.

H1: Dynamic Capabilities has a positive effect on Organizational Resilience.

H2: Digital Transformation has a positive effect on Organizational Resilience.

H3: Dynamic capabilities have a positive effect on Organizational Resilience with Digital Transformation as variable mediation.

Table 1 below is the evaluation criteria for evaluating the reflective measurement model.

Table 1. Reliability and Validity Test of Reflective Measurement Models

Reliability Test	Parameter	Rule of Thumbs
Internal consistency	Composite reliability	Equal to and greater than 0.7.
Validity test	Parameter	Rule of Thumbs
Convergent	Reliability indicator (outer loading)	Greater than 0.708.
	Average variance extracted (AVE)	More than 0.5.
Discriminant	AVE root and correlation of latent variables (Fornell-Larcker Criterion)	Root AVE > Correlation of latent variables.

Source: (Sekaran & Bougie, 2016); (Hair et al., 2018)

3. Results

The data used in this study are valid and reliable data with the results of the validity and reliability tests which can be seen in Table 6 in the attachment to this study. Table 3 below is the result of path coefficient analysis and hypothesis testing.

Table 3. Path Coefficient Results and Hypothesis Testing

hypothesis	Track	Path Coefficient	T- Statistics	P- Values	Information
1	Dynamic Capabilities → Digital Transformation	0.756	13,387	0.000	significant
2	Digital Transformation → Organizational Resilience	0.814	10.017	0.000	significant

This study uses a margin of error of 5% or confidence level 95%. Therefore, the hypothesis is accepted if the p-value < 0.05. Based on Table 1, the results show that

- 1) Dynamic Capabilities → Digital Transformation path has p-values = 0.000 < 0.05, so H1 is supported. The direct effect of Dynamic Capabilities on Digital Transformation has a path coefficient value of 0.756 which means it shows a positive relationship. With p-values > 0.05,

the results can be interpreted as Dynamic Capabilities have a significant direct influence on Digital Transformation. Thus the increase or decrease in Dynamic Capabilities affects the increase or decrease in Digital Transformation.

- 2) Digital Transformation → Organizational Resilience (H2) path has a p-value = 0.00 < 0.05, so the second hypothesis is supported. The direct effect of Digital Transformation on Organizational Resilience has a path coefficient value of 0.814 and is positive, which means that Digital Transformation has a significant positive influence on Organizational Resilience. Therefore, every time there is an increase in the level of Digital Transformation, the Organizational Resilience of the school will also increase and vice versa if Digital Transformation decreases, the Organizational Resilience of the school will also decrease.

Table 4. Mediation Test

hypothesis	Track	Path Coefficient	T-Statistics	P-Values	Information
3	Dynamic Capabilities → Digital Transformation → Organizational Resilience	0.616	7,029	0.000	Significant

Indirect influence between Dynamic Capabilities towards Organizational Resilience through Digital Transformation as a mediating variable has a coefficient value of 0.616 and the p-value of the Sobel test is 0.000. Because the p-value < 0.05, the result is that the Digital Transformation variable is able to mediate the effect of Dynamic Capabilities on Organizational Resilience. The higher Dynamic Capabilities results in higher Organizational Resilience, if Digital Transformation is also higher. That means H3 is accepted.

Examination of the goodness of fit model in PLS can be seen from the predictive-relevance value (Q²). The Q² value is calculated based on the R² value of each endogenous variable as follows.

Table 5. R Test Results ²

	R Square
Organizational Resilience	0.675
Digital Transformation	0.572

The predictive relevance value (Q²) is obtained from:

$$Q^2 = 1 - (1 - R_1^2)(1 - R_2^2)$$

$$Q^2 = 1 - (1 - 0.572)(1 - 0.675)$$

$$Q^2 = 0.861$$

predictive-relevance value of 0.861 or 86.4% is very high so that the model can be said to have relevant predictive value. The predictive relevance value of 86.1% indicates that the diversity of the data that can be explained by the PLS model built is 86.1% or in other words the information contained in the data is 86.1% that can be explained by the model. The remaining 13.6% is explained by other variables (which are not included in the model) and errors.

Discussion

This study includes three variables, namely Dynamic Capabilities, Digital Transformation, and Organizational Resilience. This discussion is to achieve the research objectives and interpret the level of significance of the hypotheses and the findings of this study. The indicators of all the research variables are valid and reliable. This shows that all indicators are in accordance with the

conditions that occur in schools at the Santo Dominic Foundation. Of the three hypotheses, namely H1, H2, H3, all are significant.

1) The Effect of Dynamic Capabilities on Digital Transformation

Previous research on the effect of Dynamic Capabilities on Digital Transformation is significant (Marx et al., 2021), (Ellström et al., 2022). This finding is also supported in terms of digital dynamic capabilities which have a direct influence on strategic renewal (Lukito et al., 2021). The research results have the same results as the results of these previous studies, namely the effect of Dynamic Capabilities on Digital Transformation is significant.

It proves that demonstrates the relationship between dynamic capabilities (also digital ones) and successful strategic renewal. It was further confirmed that digital dynamic capability is a process, which must be built or used linearly from time to time for strategic updates (Lukito et al., 2021). Furthermore, Lukito et al. (2021) explained that the essence of this digital transformation lies in the capabilities of the organization. Digital dynamic capabilities highlight what capabilities an organization needs for that organizational change. Dynamic capabilities understand how Digital Transformation is used in organizations. Digital Transformation is great for the organization. Which in use requires preparations and well communicated with all members of the company (Ellström et al., 2022). He further explained that digital transformation is not as simple as it seems. Digital transformational requires the interconnection of things, people, and data within the organization. A widely accessible and unified digital infrastructure will most likely facilitate mutual understanding and collaboration between business units and departments. Digital infrastructure functionality enables communication and provides the foundation for realizing digital transformation (Ellström et al., 2022).

Thus, after it has been proven that Dynamic Capabilities on Digital Transformation has a significant influence, the next step for the organization or in this case the schools at the Santo Dominican Foundation must prepare other things. The things that need to be prepared are the awareness of all human resources on the importance of digital transformation, funds, facilities that are connected between departments. The mindset of the organization must change so that it can be ready to use digital transformation as a means of change in the organization.

2) The Effect of Digital Transformation on Organizational Resilience

The results of this study indicate that digital transformation has a significant positive effect on organizational resilience, so H2 is accepted. The findings confirm that the more advanced digital transformation, the more advanced organizational resilience will be. Thus answering H2, namely digital transformation is significant and has a positive effect on organizational resilience in schools at the Santo Dominican Foundation. This finding is consistent with the results of existing research, namely Digital transformation has a positive effect on organizational resilience (Li et al., 2022), it also has a positive effect on small and medium enterprises (Syed et al., 2020). In addition, digital transformation is also a key factor in organizations to create organizational resilience (Zhang et al., 2021).

Digital technology can better maintain an organization's existence in times of crisis because it has the potential to assist organizations in building infrastructure with support systems to increase systematic control (He et al., 2022). In fact, it was concluded that digital transformation has a positive correlation with operational performance so that digital transformation is the only way to realize sustainable development (Teng et al., 2022). This proves that the effective use of digital

elements is increasingly becoming an important component of resilience (Aksay & Şendoğdu, 2022).

The use of digital transformation supports resilience both for companies (Li et al., 2022), small and medium enterprises (Syed et al., 2020) and finally also schools, namely schools at the Santo Dominican Foundation as proven by this research. Digital transformation is the key to building organizational resilience and using digital transformation can overcome organizational crises so that organizations can survive.

3) Digital Transformation Mediation on the Effect of Dynamic Capabilities on Organizational Resilience

The results of this study indicate that the influence of Dynamic Capabilities on Organizational Resilience through digital transformational mediation variables is significant or acceptable. Thus H3 is accepted. Dynamic capabilities through digital transformation have a significant and positive effect on organizational resilience or being supported. Data analysis shows that the effect of dynamic capabilities on digital transformation is significant and the effect of dynamic capabilities on organizational resilience is also significant. Thus, it is found that full mediation occurs because dynamic capabilities have a significant direct effect on digital transformational and digital transformational has a significant direct effect on organizational reliability. This means that digital transformation plays a role as a bridge between dynamic capabilities and organizational resilience in schools at the Santo Dominican Foundation.

The findings of this study are in line with previous research that digital transformational has an effect between dynamic capabilities and organizational resilience, especially for small and medium enterprises (Marx et al., 2021) , (Solheim & Rasmussen, 2021) , (Girardi, 2023) , (Putritamara et al. , 2023) . The development of digital capabilities is very important for generating innovation and taking advantage of the mediating effects of technological capabilities to improve company performance (Heredia, Castillo-Vergara, et al., 2022) . In reality on the ground, the use of technology will indeed cost a lot of money (Heredia, Rubiños, et al., 2022) , so a clear explanation is needed to all parties within the organization (Alkhamery, Nabil; Zainol, Fakhrol Anwar; Al-Nashmi, 2021) so that digital transformational use must be studied more broadly (Hussain & Malik, 2022) .

4. Conclusion

The results of this study are digital transformation supports organizational resilience. Digital transformational becomes the mediation between dynamic capabilities and organizational resilience. Digital transformational provides opportunities as an effort to maintain the organization. Even in its use, for digital transformation itself, a lot of preparations are needed. This is because the use of digital transformational will lead to the unpreparedness of human resources because they have to make adjustments. The implementation of digital transformational will also have an effect on costs, so all stakeholders, especially management, must know this. Of course, patience is needed for all parties because the use of digital transformation also requires trials to find the right formula.

This also applies in the context of schools, even though there are not a few differences between schools and companies. Especially for private schools, everything must be done carefully so as not to cause shock to various parties in the school itself. Therefore, management must always be open and always learn from the current situation. This research can be expanded by adding other

variables, such as the influence of leadership, organizational culture, or organizational commitment. In addition, future research can also link the performance of teachers and employees, for example, to prove whether the higher the performance, the higher the loyalty (Alhendi, 2019). The higher employee commitment will have an impact on loyalty and ultimately the resilience of the organization itself.

References

- Akpan, E. E., Johnny, E., & Sylva, W. (2022). Dynamic Capabilities and Organizational Resilience of Manufacturing Firms in Nigeria. *Vision*, 26(1), 48–64. <https://doi.org/10.1177/0972262920984545>
- Aksay, K., & Şendoğdu, A. (2022). Improving Organizational Resilience in Businesses: A Qualitative Study on the Effect of COVID-19. *Journal of Economy Culture and Society*, 0(0), 0–0. <https://doi.org/10.26650/jecs2021-1040786>
- Alhendi, O. (2019). Personality Traits and Their Validity in Predicting Job Performance at Recruitment: a Review. *International Journal of Engineering and Management Sciences*, 4(3), 222–231. <https://doi.org/10.21791/ijems.2019.3.21>.
- Alkhamery, Nabil; Zainol, Fakhrul Anwar; Al-Nashmi, M. (2021). The Role of Dynamic Capabilities in Improving Readiness for Digital Business Transformation. *The Journal of Management Theory and Practice (JMTP)*, 2(1), 1–8. <https://doi.org/10.37231/jmtp.2021.2.1.59> <https://journal.unisza.edu.my/jmtp> The
- Astungkoro, R. (2022). Pendidikan Indonesia Pulih dan Bangkit Lebih Kuat dengan Dukungan Teknologi. *Www.Republika.Co.Id*. <https://www.republika.co.id/berita/rgi7ck423/pendidikan-indonesia-pulih-dan-bangkit-lebih-kuat-dengan-dukungan-teknologi>
- Bhamra, R., Dani, S., & Burnard, K. (2011). Resilience: The concept, a literature review and future directions. *International Journal of Production Research*, 49(18), 5375–5393. <https://doi.org/10.1080/00207543.2011.563826>
- Ellström, D., Holtström, J., Berg, E., & Josefsson, C. (2022). Dynamic capabilities for digital transformation. *Journal of Strategy and Management*, 15(2), 272–286. <https://doi.org/10.1108/JSMA-04-2021-0089>
- Gigauri, I. (2020). Implications of COVID-19 for Human Resource Management. *International Journal of Economics and Management Studies*, 7(11), 25–33. <https://doi.org/10.14445/23939125/ijems-v7i11p104>
- Girardi, G. (2023). *Dynamic capabilities based on knowledge and transformation in business models in the industry 4 . 0 scenario*. 1–14.
- Gruber, R., Saha, S., Somerville, G., Boursier, J., & Wise, M. S. (2020). The impact of COVID-19

- related school shutdown on sleep in adolescents: a natural experiment. *Sleep Medicine*, 76, 33–35. <https://doi.org/10.1016/j.sleep.2020.09.015>
- Hair, J. J. F., Black, W. C., Babin, B. J., Anderson, R. E., Black, W. C., & Anderson, R. E. (2018). *Multivariate Data Analysis*. <https://doi.org/10.1002/9781119409137.ch4>
- He, Z., Huang, H., Choi, H., & Bilgihan, A. (2022). Building organizational resilience with digital transformation. *Journal of Service Management*, May 2022. <https://doi.org/10.1108/JOSM-06-2021-0216>
- Heredia, J., Castillo-Vergara, M., Geldes, C., Carbajal Gamarra, F. M., Flores, A., & Heredia, W. (2022). How do digital capabilities affect firm performance? The mediating role of technological capabilities in the “new normal.” *Journal of Innovation and Knowledge*, 7(2). <https://doi.org/10.1016/j.jik.2022.100171>
- Heredia, J., Rubiños, C., Vega, W., Heredia, W., & Flores, A. (2022). New Strategies to Explain Organizational Resilience on the Firms: A Cross-Countries Configurations Approach. *Sustainability (Switzerland)*, 14(3). <https://doi.org/10.3390/su14031612>
- Hitt, M. A., Arregle, J. L., & Holmes, R. M. (2021). Strategic Management Theory in a Post-Pandemic and Non-Ergodic World. *Journal of Management Studies*, 58(1), 257–262. <https://doi.org/10.1111/joms.12646>
- Hussain, M., & Malik, M. (2022). How do dynamic capabilities enable hotels to be agile and resilient? A mediation and moderation analysis. *International Journal of Hospitality Management*, 106(December 2021), 103266. <https://doi.org/10.1016/j.ijhm.2022.103266>
- Indy, R. (2019). Peran Pendidikan Dalam Proses Perubahan Sosial Di Desa Tumulung Kecamatan Kauditan Kabupaten Minahasa Utara. *HOLISTIK, Journal Of Social and Culture*, 12(4), 1–18. <https://ejournal.unsrat.ac.id/index.php/holistik/article/view/25466>
- Joseph, N., & Roumani, Y. (2016). IT capability and digital transformation: A firm performance perspective. *2016 International Conference on Information Systems, ICIS 2016*, 1–16.
- Kahuripan, O. M. A. B. P. M. I. N. P. (2020). *Sekolah Masa Depan* (U. W. W. A. D. Pangarso (ed.)). https://sma.kemdikbud.go.id/data/files/buku/Sekolah_Masa_Depan.pdf
- Li, L., Wang, Z., Ye, F., Chen, L., & Zhan, Y. (2022). Digital technology deployment and firm resilience: Evidence from the COVID-19 pandemic. *Industrial Marketing Management*, 105(January), 190–199.
- Lukito, D., Suharnomo, S., PERDHANA, M. S., Qvarfordt, O., & Aadan, L. (2021). Digital dynamic capabilities for digital transformation in SMEs. *IT-Management*, 2022, 1–22.

- Makkawaru, M. (2019). Pentingnya Pendidikan Bagi Kehidupan dan Pendidikan Karakter dalam Dunia Pendidikan. *Jurnal Konsepsi*, 8(3), 116–119. MaspaMakkawaru@gmail.com
- Marx, C., de Paula, D., & Uebernickel, F. (2021). Dynamic Capabilities & Digital Transformation: A quantitative study on how to gain a Competitive Advantage in the Digital Age. *European Conference on Information Systems (ECIS)*, October. https://aisel.aisnet.org/ecis2021_rp/58
- Meyer, J. W., & Rowan, B. (1977). Institutionalized Organizations: Formal Structure as Myth and Ceremony. *American Journal of Sociology*, 83(2), 340–363. <https://doi.org/10.1086/226550>
- Parker, R., Thomsen, B. S., & Berry, A. (2022). Learning Through Play at School – A Framework for Policy and Practice. *Frontiers in Education*, 7(February), 1–12. <https://doi.org/10.3389/feduc.2022.751801>
- Pool, H. (2020). The chief digital officer: building dynamic capabilities for digital transformation. *Gordon Institute of Business Science University of Pretoria*, 2507(1), 1–9. <https://doi.org/10.1016/j.solener.2019.02.027><https://www.golder.com/insights/block-caving-a-viable-alternative/>
- Putritamara, J. A., Hartono, B., Toiba, H., Utami, H. N., Rahman, M. S., & Masyithoh, D. (2023). Do Dynamic Capabilities and Digital Transformation Improve Business Resilience during the COVID-19 Pandemic? Insights from Beekeeping MSMEs in Indonesia. *Sustainability (Switzerland)*, 15(3). <https://doi.org/10.3390/su15031760>
- Rahmawati, F. (2022). Transformasi Sektor Pendidikan , Aptika Sasar SMA dan SMK untuk Adopsi Teknologi Digital. *Aptika.Kominfo.Go.Id*, May. <https://aptika.kominfo.go.id/2022/05/transformasi-sektor-pendidikan-aptika-sasar-sma-dan-smk-untuk-adopsi-teknologi-digital/>
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2021). Balancing Technology, Pedagogy and the New Normal: Post-pandemic Challenges for Higher Education. *Postdigital Science and Education*, 3(3), 715–742. <https://doi.org/10.1007/s42438-021-00249-1>
- Raychaudhuri, A. (2020). Role of Private School in Primary Education in India. *International Journal of Advanced Research*, 8(9), 539–546. <https://doi.org/10.21474/ijar01/11689>
- Reich, J. W. (2006). Three psychological principles of resilience in natural disasters. *Disaster Prevention and Management: An International Journal*, 15(5), 793–798. <https://doi.org/10.1108/09653560610712739>
- Rigby, D., Sutherland, J., and Takeuchi, H. (2016). Embracing Agili. *Harvard Business Review*. <https://hbr.org/2016/05/embracing-agile>
- Salbiyah, Siti; Nuraini, Fitri & Rosmaniar, A. (2019). Motivation And Its Effect On Women's Lecturer Performance In University of Muhammadiyah Surabaya. *SSRG International Journal*

of Economics and Management Studies (SSRG-IJEMS), 6(9), 48–55.

Sarwono, J dan Narimawati, U. (2015). *Membuat Skripsi, Tesis dan Desertasi dengan Partial Least Square SEM (PLS-SEM)*. ANDI.

Schilke, O., Hu, S., & Helfat, C. E. (2018). Quo vadis, dynamic capabilities? A content-analytic review of the current state of knowledge and recommendations for future research. *Academy of Management Annals*, 12(1), 390–439. <https://doi.org/10.5465/annals.2016.0014>

Sekaran, U., & Bougie, R. (2016). Research Methods For Business A Skill-Building Approach. In *Angewandte Chemie International Edition*, 6(11), 951–952. (7th ed.). John Wiley & Sons Ltd.

Situmorang, J. R. (2018). Mengenal Lebih Dalam Apa Itu Kapabilitas Dinamik. *Jurnal Administrasi Bisnis*, 14(1), 20–27. <https://journal.unpar.ac.id/index.php/JurnalAdministrasiBisnis/article/view/3846>

Solheim, K., & Rasmussen, O. (2021). How dynamic capabilities have helped firms seize digital. *Inland School of Business and Social Sciences*, 2–65.

Sousa, R., & Voss, C. A. (2008). Contingency research in operations management practices. *Journal of Operations Management*, 26(6), 697–713. <https://doi.org/10.1016/j.jom.2008.06.001>

Sutcliffe, K. ., & Vogus, T. J. (2003). Organizing for Resilience. *Organizing for Resilience*, 94–110.

Swasty, R. (2022). Pendidikan Indonesia Pulih Lebih Cepat Bangkit Lebih Kuat dengan Dukungan Teknologi. *Medcom.Id*. <https://www.medcom.id/pendidikan/news-pendidikan/gNQjx2ob-pendidikan-indonesia-pulih-lebih-cepat-bangkit-lebih-kuat-dengan-dukungan-teknologi>

Syed, H. A., Schorch, M., Hassan, S. S., Skudelny, S., Grinko, M., & Pipek, V. (2020). From Technology Adoption to Organizational Resilience: A Current Research Perspective. *New Perspectives on Digitalization: Local Issues and Global Impact*, 84–92. <https://doi.org/10.25819/ubsi/2778>

Teece, D. J. (2007). EXPLICATING DYNAMIC CAPABILITIES: THE NATURE AND MICROFOUNDATIONS OF (SUSTAINABLE) ENTERPRISE PERFORMANCE. *Strategic Management Journal*, 28, 1319–1350. <https://doi.org/10.1002/smj>

Teece, D. J. (2018). Dynamic capabilities as (workable) management systems theory. *Journal of Management and Organization*, 24(3), 359–368. <https://doi.org/10.1017/jmo.2017.75>

Teece, D. J., Pisano, G., & Shuen, A. (2009). Dynamic capabilities and strategic management. *Knowledge and Strategy*, 18(April 1991), 77–116. <https://doi.org/10.1093/0199248540.003.0013>

- Teece, D., Peteraf, M., & Leih, S. (2016). Dynamic Capabilities and Organizational Agility. *California Management Review*, 58(4), 13–35.
- Teng, X., Wu, Z., & Yang, F. (2022). Impact of the Digital Transformation of Small- and Medium-Sized Listed Companies on Performance: Based on a Cost-Benefit Analysis Framework. *Journal of Mathematics*, 2022. <https://doi.org/10.1155/2022/1504499>
- UNESCO. (2021). *REIMAGINING OUR FUTURES TOGETHER A new social contract for education: REPORT FROM THE INTERNATIONAL COMMISSION ON THE FUTURES OF EDUCATION* (M. de Sousa (ed.)). the United Nations Educational, Scientific and Cultural Organization.
- Usman, I. (2020). Peningkatan Rombel Sekolah Negeri Gerus Kelangsungan Swasta. *Bekesah.Co*, February 2020, 1. <https://bekesah.co/peningkatan-rombel-sekolah-negeri-gerus-kelangsungan-swasta/>
- Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Qi Dong, J., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122(November 2019), 889–901. <https://doi.org/10.1016/j.jbusres.2019.09.022>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems*, 28(2), 118–144. <https://doi.org/10.1016/j.jsis.2019.01.003>
- Warner, K. S. R., & Wäger, M. (2019). Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal. *Long Range Planning*, 52(3), 326–349. <https://doi.org/10.1016/j.lrp.2018.12.001>
- Zaoui, F., Assoul, S., & Souissi, N. (2019). What Are the Main Dimensions of Digital Transformation? Case of an Industry. *International Journal of Recent Technology and Engineering (IJRTE)*, 8(4), 9962–9970. <https://doi.org/10.35940/ijrte.d4418.118419>
- Zhang, J., Long, J., & von Schaewen, A. M. E. (2021). How does digital transformation improve organizational resilience?—findings from pls-sem and fsqca. *Sustainability (Switzerland)*, 13(20), 1–22. <https://doi.org/10.3390/su132011487>