

Validating Dynamic Digital Capability Measures in Creative Youth Communities: A Partial Least Squares Study

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Abstract

Digital technologies increasingly shape how creative youth communities coordinate activities, exchange knowledge, and pursue opportunities. However, Dynamic Digital Capability (DDC) measures have mainly been examined in formal organizational settings, leaving their applicability to community-based contexts uncertain. This study evaluates adapted measures of Digital Environment, Community-Based Entrepreneurial Orientation, Digital Learning Capability, Digital Literacy, and DDC and examines their proposed direct relationships. Data were collected from 170 individual representatives of 42 creative youth communities in Yogyakarta and analyzed using Partial Least Squares Structural Equation Modeling with 5,000 bootstrap subsamples. Internal consistency and convergent validity were satisfactory. However, the Heterotrait–Monotrait ratio between Digital Learning Capability and DDC was 0.903, indicating insufficient discriminant validity under the 0.90 criterion. Digital Learning Capability showed a significant large effect on DDC ($\beta = 0.585$, $p < 0.001$, $f^2 = 0.540$), while Digital Literacy showed a significant small effect ($\beta = 0.270$, $p < 0.001$, $f^2 = 0.108$). Digital Environment and Community-Based Entrepreneurial Orientation had no significant direct effects. The model explained 68.6% of DDC variance ($R^2 = 0.686$; SRMR = 0.080). The findings provide preliminary nomological evidence while indicating the need for further measurement refinement and community-level validation.

Keywords: *Community-Based Entrepreneurial Orientation, Digital Environment, Digital Learning Capability, Digital Literacy, Dynamic Digital Capability*

INTRODUCTION

Digital technologies have changed how organizations and communities communicate, exchange knowledge, coordinate activities, and create value. Rapid technological change also increases the need to renew resources and competences (Teece et al., 1997; Teece, 2007; Vial, 2019).

In Indonesia, digital access, literacy, platforms, and local capabilities are increasingly relevant to creative-economy development (Bangsawan, 2023; Wibowo et al., 2024; Maulana & Nisa, 2023). Research on Indonesian youth also indicates that social environments can support creativity, entrepreneurial intention, and informal learning (Suryani et al., 2022).

Creative youth communities provide a distinct context for studying digital capability. In this study, creative youth communities refer to voluntary groups of young people organized around creative activities and collective projects. The participating communities represented seven fields: visual arts and design, music, photography, film and video, performing arts, craft, and digital creative production.

Unlike conventional firms, these communities may rely on voluntary participation, peer interaction, distributed coordination, and collective learning. Members may use digital technologies to coordinate projects, share knowledge, promote creative outputs, and develop opportunities without conventional managerial structures.

These characteristics create a measurement challenge. Constructs developed for formal organizations may assume established authority, roles, routines, and organizational boundaries.

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These assumptions may not fully align with voluntary creative communities. Entrepreneurship in community settings can involve collective agency rather than an individual entrepreneurial actor (Ben-Hafaïedh et al., 2024), while collective entrepreneurship can involve collective ownership, processes, and goods (Cairns et al., 2024). Digital technologies can also support community organizing, knowledge exchange, and ongoing learning (Wilson et al., 2022; Schou et al., 2022).

Dynamic Capability Theory (DCT) explains organizational adaptation through integrating, building, and reconfiguring competences (Teece et al., 1997; Teece, 2007). Teece (2007) distinguishes sensing, seizing, and transforming. Dynamic Digital Capability (DDC) extends this logic to digitally enabled environments by emphasizing continuous digital sensing, seizing, and transformation (Warner & Wäger, 2019). Recent research further connects dynamic capabilities with learning, knowledge integration, and digital transformation (Ellström et al., 2022; Ghosh et al., 2022; Saeedikiya et al., 2024).

Existing DDC evidence remains concentrated in formal organizations. Studies of small firms and banking organizations provide evidence for relationships between digital capabilities and organizational outcomes (Emielu et al., 2021; Abdurrahman et al., 2024). Less is known about whether adapted DDC measures retain adequate measurement properties when applied to voluntary, collectively organized communities.

This study addresses both a measurement and contextual gap. First, it evaluates adapted measures of Digital Environment, Community-Based Entrepreneurial Orientation, Digital Learning Capability, Digital Literacy, and DDC. Second, it examines their proposed direct relationships with DDC as preliminary evidence of nomological validity. Individual responses are explicitly treated as perceptions of community practices rather than objective measures of aggregated community capability.

LITERATURE REVIEW

Dynamic Capability Theory and Dynamic Digital Capability

Dynamic Capability Theory (DCT) is used as the overarching theoretical perspective because the central issue is organizational adaptation rather than resource possession or technology adoption. The Resource-Based View emphasizes valuable, hard-to-imitate resources (Barney, 1991), whereas DCT focuses on how organizations renew and reconfigure resources as environments change (Teece et al., 1997; Teece, 2007). The Technology–Organization–Environment framework explains conditions affecting technology adoption, but it is less direct in explaining subsequent organizational renewal (Tornatzky & Fleischer, 1990).

Dynamic Digital Capability (DDC) applies dynamic capability logic to digital transformation. Warner and Wäger (2019) conceptualize digital transformation as an ongoing process of strategic renewal involving digital sensing, seizing, and transforming.

Recent studies similarly emphasize organizational learning, knowledge transfer, and resource reconfiguration in digital transformation (Ellström et al., 2022; Ghosh et al., 2022; Xiong, 2024). However, DCT has also been criticized for broad conceptualizations and potential tautological reasoning (Arend & Bromiley, 2009; Schilke et al., 2018). This study therefore treats DDC as the focal adaptive construct and examines four conceptually distinct antecedents.

Collective Action and Digital Practices in Creative Communities

Creative communities differ from formal organizations because collective activities may emerge through voluntary participation, shared interests, peer interaction, and distributed coordination. Entrepreneurship can consequently be understood as collective action rather than solely as individual agency (Ben-Hafaïedh et al., 2024).

Collective entrepreneurship research similarly emphasizes collective processes and

collective goods in community contexts (Cairns et al., 2024). This provides a theoretical basis for adapting Entrepreneurial Orientation to a community context while avoiding the assumption that the construct operates the same way it does in firms.

Digital technologies may reinforce these collective processes. Research on virtual community organizing shows that digital technologies can support communication, learning, supportive relationships, and collective action (Wilson et al., 2022).

Entrepreneurial learning in online communities can occur through advice-seeking, experience sharing, reflection, and exchange of practical knowledge (Schou et al., 2022). Digital learning networks and virtual communities of practice likewise provide pathways for translating peer learning into action (Eller, 2025).

Commons-based perspectives provide an additional explanation. Commons organizing concerns how communities work collectively toward common goods through shared forms of production, distribution, management, and ownership (Albareda & Sison, 2020).

Digital platforms can also support commoning and collective forms of production (Ridley-Duff & Bull, 2021). These perspectives suggest that digital adaptation in creative communities is not determined solely by individual access to technology. It may emerge when members share knowledge, coordinate activities, solve problems collectively, and incorporate learning into community practices.

Theoretical Mapping and Hypotheses

Digital Environment → Sensing. Digital Environment represents access to digital infrastructure, platforms, information, and external technological resources. These conditions can expose communities to technological changes and opportunities but do not, by themselves, constitute adaptive capacity (Ellström et al., 2022; Saeedikiya et al., 2024).

H1: The digital environment positively influences DDC.

Community-Based Entrepreneurial Orientation → Seizing. Community-Based Entrepreneurial Orientation reflects innovativeness, proactiveness, and opportunity-oriented behavior adapted to voluntary collective settings. Such characteristics can support experimentation and collective opportunity development (Lumpkin & Dess, 1996; Nambisan et al., 2017).

H2: Community-Based Entrepreneurial Orientation positively influences DDC.

Digital Learning Capability → Transforming. Digital Learning Capability concerns acquiring, sharing, integrating, and applying digital knowledge. Learning can modify community practices as technologies change (Giannakos et al., 2022; Xiong, 2024).

H3: Digital Learning Capability positively influences DDC.

Digital Literacy → Transforming. Digital Literacy concerns the competencies needed to access, evaluate, communicate, and use digital information and technologies (Ng, 2012; van Laar et al., 2017). Individual competencies may become shared resources when applied to collective activities.

H4: Digital Literacy positively influences DDC.

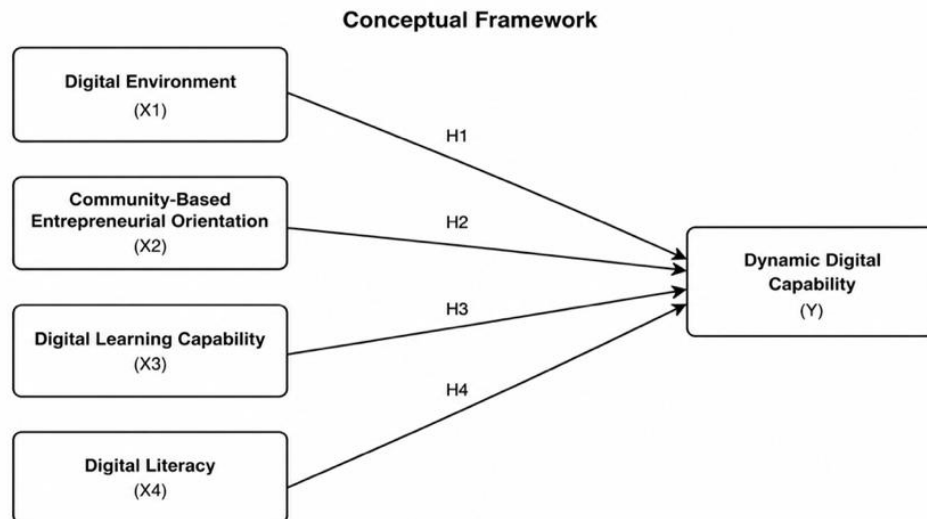


Figure 1. Conceptual framework linking four proposed antecedents to Dynamic Digital Capability

Source: Developed by the authors based on Dynamic Capability Theory (Teece et al., 1997; Teece, 2007)

RESEARCH METHOD

Research Design, Population, and Sample

This quantitative cross-sectional study used PLS-SEM to assess adapted measurement properties and examine proposed nomological relationships (Hair et al., 2022). The target population comprised active members of creative youth communities in Yogyakarta who used digital technologies for communication, collaboration, knowledge sharing, promotion, creative production, or related community activities. The study involved 42 creative youth communities representing seven creative fields: visual arts and design, music, photography, film and video, performing arts, craft, and digital creative production.

Communities were recruited through researcher networks and coordination with community coordinators. Approximately three to four organizational representatives were invited from each community, including chairpersons, vice chairpersons, and heads of divisions. Four communities contributed three respondents, while some communities contributed more than four respondents. This resulted in 170 usable individual responses.

The selection of organizational representatives was intended to obtain respondents with direct knowledge of community activities, coordination, knowledge sharing, and digital practices. However, the response unit remained the individual respondent. Therefore, responses represent individual perceptions of community practices rather than objectively aggregated community-level capabilities. Responses were not aggregated, and no multilevel model was estimated.

Purposive sampling required active community membership and involvement in digital activities. All 170 usable respondents were aged 18 to 45 years. The sample comprised 85 male and 85 female respondents. Mean age was 27.32 years (SD = 7.28; median = 26). Community participation was less than one year for 23 respondents (13.5%), one to three years for 93 (54.7%), and more than three years for 54 (31.8%).

No a priori power analysis was conducted before data collection. As a post hoc sensitivity assessment, $N = 170$ with four predictors, $\alpha = .05$, and 80% power corresponds to an approximate minimum detectable effect size of $f^2 = 0.072$. This value is used only to contextualize the observed effects and is not presented as an a priori sample-size determination.

Measurement Development and Adaptation

The questionnaire contained 21 reflective indicators across five constructs. DDC indicators

were based on [Warner and Wäger \(2019\)](#); Digital Environment was informed by [Vial \(2019\)](#); Community-Based Entrepreneurial Orientation by [Lumpkin and Dess \(1996\)](#) and [Nambisan et al. \(2017\)](#); Digital Learning Capability by [Teece \(2007\)](#) and [Warner and Wäger \(2019\)](#); and Digital Literacy by [Ng \(2012\)](#), [van Laar et al. \(2017\)](#), and [UNESCO Institute for Statistics \(2018\)](#).

The questionnaire underwent academic expert review, review by 10 community members for clarity, and a pilot test with 30 participants. Three ambiguous items were revised. Responses used a five-point Likert scale.

Table 1. Constructs, Number of Indicators, and Primary Sources for Measurement Adaptation

Construct	Code	Indicators	Main sources
Digital Environment	X1	4	Vial (2019)
Community-Based Entrepreneurial Orientation	X2	5	Lumpkin & Dess (1996); Nambisan et al. (2017)
Digital Learning Capability	X3	4	Teece (2007); Warner & Wäger (2019)
Digital Literacy	X4	3	Ng (2012); van Laar et al. (2017); UNESCO Institute for Statistics (2018)
Dynamic Digital Capability	Y	5	Warner & Wäger (2019)
Total		21	

Data Collection, Ethics, and Common Method Bias

Data were collected from May to July 2026 through online and face-to-face questionnaire administration with approval from participating communities. Participation was voluntary, and respondents were informed about the study before completing the questionnaire.

Of 210 questionnaires distributed, 187 were returned, producing an 89.05% response rate. After screening for eligibility, completeness, duplicates, and consistency, 17 responses were excluded, leaving 170 usable responses.

Because the study used cross-sectional self-report data, common method bias (CMB) was considered. Harman's single-factor test showed that the first factor accounted for 45.477% of total variance.

Full-collinearity VIF values were 1.732 for Community-Based Entrepreneurial Orientation, 1.996 for Digital Environment, 2.016 for Digital Learning Capability, and 2.159 for Digital Literacy. These values are below 3.3, reducing concern about severe common method bias and collinearity. However, neither diagnostic eliminates possible residual method or social desirability bias.

Data Analysis

SmartPLS 4 was used. The measurement model was assessed through outer loadings, Cronbach's alpha, rho_A, composite reliability, AVE, Fornell-Larcker criterion, and HTMT. The structural model was assessed using path coefficients, t-values, p-values, R^2 , f^2 , and SRMR. Significance was evaluated using 5,000 bootstrap subsamples ([Hair et al., 2022](#)).

FINDINGS AND DISCUSSION

Respondent Profile

Of the 170 respondents, 85 were male, and 85 were female. Mean age was 27.32 years (SD = 7.28; median = 26; range = 18–45). Community participation was less than one year for 23 respondents (13.5%), one to three years for 93 (54.7%), and more than three years for 54 (31.8%). Respondents reported low digital technology use (4, 2.4%), moderate use (60, 35.3%), and high use (106, 62.4%).

Table 2. Respondent Characteristics by Gender, Age, Community Membership, and Digital Technology Use

Characteristic	Category	Frequency	Percentage (%)
Gender	Male	85	50.0
	Female	85	50.0
Age	Mean = 27.32; SD = 7.28; Median = 26; Min = 18; Max = 45	170	100.0
Community membership	< 1 year	23	13.5
	1-3 years	93	54.7
	> 3 years	54	31.8
Digital technology usage	Low	4	2.4
	Moderate	60	35.3
	High	106	62.4

Measurement Model

Eighteen of the 21 indicators had loadings above 0.70. Three indicators—X1.3 (.695), X2.4 (.682), and X2.5 (.692)—were retained because construct reliability and AVE remained satisfactory, and the indicators contributed to conceptual coverage.

Table 3. Outer Loadings and Indicator Retention Decisions for the Reflective Measurement Model

Construct	Indicator	Loading	Decision
Digital Environment	X1.1	0.796	Retained
	X1.2	0.819	Retained
	X1.3	0.695	Retained*
	X1.4	0.833	Retained
Community-Based Entrepreneurial Orientation	X2.1	0.812	Retained
	X2.2	0.796	Retained
	X2.3	0.761	Retained
	X2.4	0.682	Retained*
	X2.5	0.692	Retained*
Digital Learning Capability	X3.1	0.772	Retained
	X3.2	0.856	Retained
	X3.3	0.835	Retained
	X3.4	0.825	Retained
Digital Literacy	X4.1	0.846	Retained
	X4.2	0.902	Retained
	X4.3	0.833	Retained
Dynamic Digital Capability	Y1.1	0.832	Retained
	Y1.2	0.864	Retained
	Y1.3	0.851	Retained
	Y1.4	0.858	Retained
	Y1.5	0.812	Retained

Table 4. Internal Consistency Reliability and Convergent Validity of the Reflective Constructs

Construct	Cronbach's α	rho_A	CR	AVE
Digital Environment	0.794	0.794	0.867	0.620
Community-Based Entrepreneurial Orientation	0.807	0.818	0.865	0.563
Digital Learning Capability	0.841	0.847	0.893	0.676
Digital Literacy	0.853	0.871	0.910	0.772
Dynamic Digital Capability	0.898	0.899	0.925	0.711

All constructs showed satisfactory internal consistency and convergent validity. Cronbach's alpha ranged from .794 to .898, composite reliability from .865 to .925, and AVE from .563 to .772.

Table 5. Fornell–Larcker Assessment of Discriminant Validity

Construct	X2	X1	X3	X4	Y
Community-Based Entrepreneurial Orientation (X2)	0.751				
Digital Environment (X1)	0.584	0.788			
Digital Learning Capability (X3)	0.511	0.604	0.822		
Digital Literacy (X4)	0.572	0.610	0.658	0.879	
Dynamic Digital Capability (Y)	0.501	0.568	0.797	0.691	0.843

The Fornell–Larcker criterion showed that the square root of AVE exceeded the inter-construct correlations ([Fornell & Larcker, 1981](#)).

Table 6. Heterotrait–Monotrait Ratios for Discriminant Validity Assessment

Construct	X2	X1	X3	X4	Y
Digital Environment (X1)	0.720				
Digital Learning Capability (X3)	0.601	0.732			
Digital Literacy (X4)	0.685	0.732	0.770		
Dynamic Digital Capability (Y)	0.572	0.662	0.903	0.778	

HTMT = 0.903 for Digital Learning Capability–Dynamic Digital Capability. ([Henseler et al., 2015](#)).

This result is particularly relevant because the current indicators' wording creates semantic proximity. Digital Learning Capability includes the item “We quickly adapt to new digital technologies.” In contrast, DDC includes “My community quickly responds to digital changes” and “My community can adapt to new technologies.”

Thus, the high HTMT may reflect both a substantive theoretical association and overlap in operationalization. The current indicators are retained for transparency in this validation stage, while future research should establish a clearer boundary between learning processes and broader digital adaptation.

Structural Model

Table 7. Standardized Root Mean Square Residual (SRMR) for the Saturated and Estimated Models

Model	SRMR	Reference	Interpretation
Saturated model	0.080	≤ 0.080	Acceptable but borderline

Estimated model	0.080	≤ 0.080	Acceptable but borderline
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Table 8. Explained Variance in Dynamic Digital Capability (R^2 and Adjusted R^2)

Endogenous construct	R^2	Adjusted R^2
Dynamic Digital Capability	0.686	0.679

The model explained 68.6% of the variance in DDC ($R^2 = .686$; adjusted $R^2 = .679$). SRMR was .080 for both the saturated and estimated models. SRMR summarizes the average standardized discrepancy between observed and model-implied correlations; .080 is at the commonly applied threshold and should therefore be interpreted as acceptable but borderline approximate fit. The SRMR interpretation follows the commonly applied PLS-SEM guideline (Hair et al., 2022).

Table 9. Structural Path Coefficients, Significance Tests, and f^2 Effect Sizes

Hypothesis	Path	β	t	p	f^2	Decision
H1	Digital Environment $\rightarrow$ DDC	0.035	0.579	0.563	0.002	Not supported
H2	Community-Based Entrepreneurial Orientation $\rightarrow$ DDC	0.027	0.425	0.671	0.001	Not supported
H3	Digital Learning Capability $\rightarrow$ DDC	0.585	10.236	<0.001	0.540	Supported
H4	Digital Literacy $\rightarrow$ DDC	0.270	4.735	<0.001	0.108	Supported

Effect-size interpretation follows Cohen (1988): approximately 0.02 = small, 0.15 = medium, and 0.35 = large.

Digital Environment had no significant direct effect on DDC ($\beta = .035$, $t = .579$, $p = .563$, $f^2 = .002$). Community-Based Entrepreneurial Orientation also had no significant direct effect ($\beta = .027$, $t = .425$, $p = .671$, $f^2 = .001$).

Digital Learning Capability had a significant positive relationship with DDC ($\beta = .585$, $t = 10.236$, $p < .001$, $f^2 = .540$), while Digital Literacy had a significant positive relationship ($\beta = .270$, $t = 4.735$, $p < .001$, $f^2 = .108$).

The f^2 of .540 indicates a large effect for Digital Learning Capability, whereas .108 represents a small effect for Digital Literacy using conventional thresholds (Cohen, 1988).

Discussion

Digital Learning Capability showed a substantial observed relationship with DDC. This finding is consistent with DCT because adaptation requires continuous acquisition, integration, and application of knowledge (Teece, 2007). It is also consistent with research emphasizing learning, knowledge transfer, and digital transformation (Ellström et al., 2022; Giannakos et al., 2022; Xiong, 2024). In voluntary communities, peer learning and experimentation can substitute for formal training structures and turn individual experience into shared practice.

However, the magnitude of this relationship requires caution because HTMT = .903 indicates insufficient discriminant validity between Digital Learning Capability and DDC. The strong coefficient may therefore reflect both a substantive theoretical relationship and semantic proximity between the constructs. Future measurement development should distinguish learning processes from the broader ability to adapt and reconfigure digital practices.

Digital Literacy was positively related to DDC, but its f^2 of .108 was small. Digital literacy provides competencies for accessing, evaluating, communicating, and using digital technologies,

whereas learning processes involve continuing knowledge development and application. The results suggest that existing digital skills alone may be insufficient to explain perceived digital adaptation unless accompanied by learning processes.

Digital Environment did not have a significant direct relationship with DDC. The sample characteristics provide one possible contextual explanation. High digital technology use was common: 62.4% of respondents reported high use and 35.3% moderate use, while only 2.4% reported low use.

Thus, 97.6% of respondents were in the moderate-to-high digital-use categories. This concentration may have limited variation in perceived digital exposure. However, restriction of range was not formally tested and should therefore be treated as a possible explanation rather than an established statistical mechanism.

The result also reinforces the distinction between environmental exposure and dynamic capability. Access to platforms, infrastructure, and information may expose communities to opportunities, but exposure does not necessarily lead to sensing, seizing, and transforming. Communities must interpret and mobilize digital resources through their own processes. A possible indirect pathway through Digital Learning Capability is therefore a proposition for future research, not a finding of the present model.

Community-Based Entrepreneurial Orientation likewise showed a negligible direct effect. This does not imply that entrepreneurial behavior is irrelevant to creative communities. Rather, entrepreneurial initiative may require collective learning, coordination, and knowledge integration before it becomes embedded in community practices. This interpretation aligns with research that views entrepreneurship as collective action and emphasizes collective processes and collective goods in community contexts ([Ben-Hafaïedh et al., 2024](#); [Cairns et al., 2024](#)).

The relatively established membership profile provides additional context. More than half of respondents (54.7%) had been community members for one to three years, while 31.8% had participated for more than three years. Consequently, 86.5% had at least one year of community experience. In such settings, opportunity-oriented behavior may be distributed across collective routines rather than expressed through an individual-level entrepreneurial orientation. Its contribution to digital adaptation may therefore operate through intervening processes such as learning, knowledge sharing, or collective coordination.

The very small f^2 values for Digital Environment (.002) and Community-Based Entrepreneurial Orientation (.001) should also be interpreted against the sensitivity assessment. The approximate detectable f^2 of .072 is substantially larger than both observed effects.

The present sample therefore provides limited sensitivity to very small effects. The findings indicate that these constructs did not demonstrate meaningful direct effects under the present model and sample conditions. However, they should not be interpreted as evidence that such effects cannot occur in other community settings.

The findings differ from DDC studies conducted in formal organizations. [Emielu et al. \(2021\)](#) and [Abdurrahman et al. \(2024\)](#) report relationships involving digital capabilities in organizational settings, while [Karadağ et al. \(2026\)](#) demonstrate different configurations involving DDC, digital transformation, and performance in SMEs.

These studies should not be treated as direct effect-size benchmarks because their constructs, samples, organizational structures, and model specifications differ. The present findings instead suggest that relationships established in formal organizations may not transfer unchanged to voluntary creative communities.

Finally, interpret all structural results at the individual-response level. Respondents evaluated practices occurring within their communities, but no aggregation was performed. The coefficients therefore represent relationships among individual perceptions of community

practices rather than objectively measured differences in community-level digital adaptation.

CONCLUSIONS

This study evaluated adapted measures of Digital Environment, Community-Based Entrepreneurial Orientation, Digital Learning Capability, Digital Literacy, and DDC among 170 representatives of 42 creative youth communities. Internal consistency and convergent validity were satisfactory, but HTMT = .903 between Digital Learning Capability and DDC indicates insufficient discriminant validity and prevents the measures from being treated as conclusively validated.

The structural results provide preliminary nomological evidence. Digital Learning Capability showed a large relationship with DDC, while Digital Literacy showed a small relationship. Digital Environment and Community-Based Entrepreneurial Orientation showed no significant direct effects.

The results indicate that community digital adaptation may be more closely associated with processes of acquiring, sharing, and applying digital knowledge than with digital exposure or entrepreneurial orientation alone. This interpretation remains subject to the measurement overlap between Digital Learning Capability and DDC.

For community organizers, the findings suggest focusing on routines that facilitate peer learning, knowledge sharing, experimentation, and the application of digital knowledge.

LIMITATIONS & FURTHER RESEARCH

This study has five main limitations: First, the sample was restricted to 170 respondents from 42 creative youth communities in Yogyakarta, limiting generalizability to other regions and community types. Second, although multiple representatives were obtained from participating communities, the analysis treated individuals as the unit of analysis and did not estimate a multilevel model. The findings should therefore not be interpreted as aggregated community-level effects.

Third, the cross-sectional self-report design limits causal inference and leaves room for common method and social desirability bias. Harman's test and full-collinearity VIF reduce concern about severe method bias but cannot eliminate it. Fourth, no a priori power analysis was conducted; the sensitivity assessment should therefore be regarded only as a post hoc contextual analysis.

Fifth, HTMT = .903 indicates insufficient discriminant validity between Digital Learning Capability and DDC under the .90 criterion. Future validation should refine item wording, test alternative specifications, and examine measurement invariance across community types.

Future research should refine the overlapping indicators, test mediation mechanisms, examine measurement invariance, and use community-level or multilevel designs with multiple respondents per community. Replication across regions and creative fields is also needed before the adapted measures can be considered broadly validated.

REFERENCES

- Abdurrahman, A., Gustomo, A., & Prasetyo, E. A. (2024). Enhancing banking performance through dynamic digital transformation capabilities and governance, risk management, and compliance: Insights from the Indonesian context. *Electronic Journal of Information Systems in Developing Countries*, 90(2), e12299. <https://doi.org/10.1002/isd2.12299>
- Albareda, L., & Sison, A. J. G. (2020). Commons organizing: Embedding common good and institutions for collective action: Insights from ethics and economics. *Journal of Business Ethics*, 166, 727–743. <https://doi.org/10.1007/s10551-020-04580-8>
- Arend, R. J., & Bromiley, P. (2009). Assessing the dynamic capabilities view: Spare change,

- everyone? *Strategic Organization*, 7(1), 75–90.
<https://doi.org/10.1177/1476127008100132>
- Bangsawan, G. (2023). Policy for accelerating digital transformation in Indonesia: The prospects and challenges of developing the creative economy. *Jurnal Studi Kebijakan Publik*, 2(1), 27–40. <https://doi.org/10.21787/jskp.2.2023.27-40>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. <https://doi.org/10.1177/014920639101700108>
- Ben-Hafaïedh, C., Champenois, C., Cooney, T. M., & Schjoedt, L. (2024). Entrepreneurship as collective action: The next frontier. *International Small Business Journal: Researching Entrepreneurship*, 42(1), 3–13. <https://doi.org/10.1177/02662426231208369>
- Cairns, I., Southern, A., & Whittam, G. (2024). Collective entrepreneurship in low-income communities: The importance of collective ownership, collective processes and collective goods. *International Small Business Journal: Researching Entrepreneurship*, 42(3), 335–364. <https://doi.org/10.1177/02662426231197939>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Eller, K. F. (2025). Brackish connections: (Digital) learning networks, (virtual) communities of practice, and the rich learning-to-action pathways of their combined and intersecting existence. *Advances in Developing Human Resources*, 27(1), 27–36. <https://doi.org/10.1177/15234223241299704>
- 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>
- Emielu, E. T., Worlu, R. E., Moses, C. L., & Okoh, E. E. (2021). Dynamic digital capabilities and competitiveness of small firms in Nigeria. *Academy of Strategic Management Journal*, 20(6), 1–11.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.2307/3151312>
- Ghosh, S., Hughes, M., Hodgkinson, I., & Hughes, P. (2022). Digital transformation of industrial businesses: A dynamic capability approach. *Technovation*, 113, 102414. <https://doi.org/10.1016/j.technovation.2021.102414>
- Giannakos, M. N., Mikalef, P., & Pappas, I. O. (2022). Systematic literature review of e-learning capabilities to enhance organizational learning. *Information Systems Frontiers*, 24(2), 619–635. <https://doi.org/10.1007/s10796-020-10097-2>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)* (3rd ed.). SAGE Publications.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Karadağ, H., Şahin, F., Karamollaoğlu, N., & Saunila, M. (2026). Disentangling the dynamic digital capability, digital transformation, and organizational performance relationships in SMEs: A configurational analysis based on fsQCA. *Information Technology and Management*, 27(2), 141–157. <https://doi.org/10.1007/s10799-024-00437-y>
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135–172. <https://doi.org/10.5465/AMR.1996.9602161568>
- Maulana, M. F., & Nisa, F. L. (2023). Peningkatan akses pasar bagi pelaku industri kreatif melalui

- pemanfaatan platform digital. *JDEP (Jurnal Dinamika Ekonomi Pembangunan)*, 6(2), 71–80. <https://doi.org/10.33005/jdep.v6i2.473>
- Nambisan, S., Lyytinen, K., Majchrzak, A., & Song, M. (2017). Digital innovation management: Reinventing innovation management research in a digital world. *MIS Quarterly*, 41(1), 223–238. <https://doi.org/10.25300/MISQ/2017/41:1.03>
- Ng, W. (2012). Can we teach digital natives digital literacy? *Computers & Education*, 59(3), 1065–1078. <https://doi.org/10.1016/j.compedu.2012.04.016>
- Ridley-Duff, R., & Bull, M. (2021). Common pool resource institutions: The rise of internet platforms in the social solidarity economy. *Business Strategy and the Environment*, 30(3), 1436–1453. <https://doi.org/10.1002/bse.2707>
- Saeedikiya, M., Salunke, S., & Kowalkiewicz, M. (2024). Toward a dynamic capability perspective of digital transformation in SMEs: A study of the mobility sector. *Journal of Cleaner Production*, 439, 140718. <https://doi.org/10.1016/j.jclepro.2024.140718>
- 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>
- Schou, P. K., Bucher, E., & Waldkirch, M. (2022). Entrepreneurial learning in online communities. *Small Business Economics*, 58(4), 2087–2108. <https://doi.org/10.1007/s11187-021-00502-8>
- Suryani, A., Soedarso, S., Windiani, W., Hanoraga, T., Harmadi, S. H. B., & Setyaningsih, Y. (2022). Youth as creative development resource: How does social environment unlock youth's creativity and creativepreneurial intention? *Indonesian Journal of Development Studies*, 2(1), 33–43. <https://doi.org/10.12962/j29649714.v1i2.15328>
- Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. *Strategic Management Journal*, 28(13), 1319–1350. <https://doi.org/10.1002/smj.640>
- Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. [https://doi.org/10.1002/\(SICI\)1097-0266\(199708\)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z](https://doi.org/10.1002/(SICI)1097-0266(199708)18:7%3C509::AID-SMJ882%3E3.0.CO;2-Z)
- Tornatzky, L. G., & Fleischer, M. (1990). *The processes of technological innovation*. Lexington Books.
- UNESCO Institute for Statistics. (2018). *A global framework of reference on digital literacy skills for indicator 4.4.2*. UNESCO.
- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in Human Behavior*, 72, 577–588. <https://doi.org/10.1016/j.chb.2017.03.010>
- Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *The 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>
- Wibowo, N. A., Wahyudi, E. J., Ismawati, L., Hermawan, A., & Wardana, L. W. (2024). Opportunities and challenges of digital transformation for creative economy development: Study literature review. *International Journal of Business, Law, and Education*, 5(1), 1369–1380. <https://doi.org/10.56442/ijble.v5i1.569>
- Wilson, K. R., Roskill, O. M., & Mahr, J. (2022). Mutual aid using digital technology: A case study of virtual community organizing during the COVID-19 pandemic. *Journal of Community Practice*, 30(3), 255–278. <https://doi.org/10.1080/10705422.2022.2102101>

Xiong, X. (2024). Examining the influence of knowledge transfer and dynamic capabilities on enterprise digital transformation. *PLOS ONE*, 19(12), e0311176.
<https://doi.org/10.1371/journal.pone.0311176>