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Digital Literacy and Academic Productivity: A Human Capital Perspective in Higher Education

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CITATION

Iskandar I, Juliana J, Miftahuddin A, et al. (2026). Digital literacy and academic productivity: A human capital perspective in higher education. *Human Resources Management and Services*. 8(1): 5793. <https://doi.org/10.18282/hrms5793>

ARTICLE INFO

Received: 7 April 2026

Accepted: 18 May 2026

Available online: 28 May 2026

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Abstract: This study examines the influence of digital literacy on students' academic productivity in the era of Society 5.0, where digital transformation has reshaped learning environments and human capital development. Digital literacy is recognized as a critical competency that enables students to access, evaluate, and utilize information effectively. However, despite being digital natives, many students still face challenges in optimizing digital tools for academic purposes. This study aims to provide empirical evidence on the relationship between digital literacy and academic productivity using a robust measurement approach. A quantitative descriptive–associative design was employed, involving 90 undergraduate students in West Java, Indonesia. Data were collected through a structured questionnaire using a five-point Likert scale and analyzed using the Rasch Model to transform ordinal data into interval-level measures. This approach ensures higher validity, reliability, and measurement precision. The results indicate that the instrument demonstrates strong reliability and unidimensionality. The findings indicate that digital literacy is positively associated with students' academic productivity, particularly in managing academic tasks, engaging in online learning, and processing information effectively. However, variations in student abilities suggest the presence of a digital divide. This study contributes to the literature by applying the Rasch Model in digital literacy research and offers practical implications for higher education institutions in designing targeted digital literacy programs to enhance academic performance and institutional competitiveness.

Keywords: Digital competence; Academic performance; Rasch model; Society 5.0; Higher education

1. Introduction

The rapid advancement of digital technology has significantly transformed the education sector, particularly in the era of Society 5.0, which emphasizes the integration of physical and cyber spaces to create a human-centered society. Originating in Japan, the concept of Society 5.0 aims to enhance quality of life and social productivity by utilizing technology as a driver of innovation and efficiency (Fukuyama, 2018; Shiroishi et al., 2018; Marlina et al., 2026). In this context, digital literacy emerges as a key competency that enables students to adapt, remain competitive, and maintain academic productivity amidst digital transformation (Ruyadi et al., 2026).

Moreover, recent works emphasize the necessity of inclusive digital skills in higher education (UNESCO, 2019), where digital literacy has become a prerequisite for workforce readiness (Ng, 2022). Within the framework of human resource management (HRM) in universities, the development of students' digital competencies represents an essential investment in human capital. Higher education institutions function not only as centers of knowledge creation but also as strategic incubators for future professionals whose digital capabilities determine organizational competitiveness and employability outcomes. Therefore, strengthening digital literacy aligns with modern HRM strategies emphasizing talent development, lifelong learning, and digital agility in the workforce (Richardson & Sterrett, 2022; Voronchuk & Didenko, 2022). Accordingly, understanding how digital literacy is associated with students' academic productivity may provide important insights into the development of future workforce capabilities and sustainable human capital formation within higher education systems.

Digital literacy is not limited to technical skills in operating devices but also includes the ability to critically evaluate information, create digital content ethically, and apply knowledge responsibly (Reddy & Sharma, 2022; Spante et al., 2018; Suhud et al., 2024). As digital natives, students are expected to harness these competencies to support their academic productivity, including online learning, assignment management, and access to scientific information. However, studies show that not all students can optimize digital tools for academic purposes, which leads to a gap between digital potential and actual performance (Manca & Ranieri, 2021; Martin & Grudziecki, 2006). Recent evidence suggests that digital and financial literacy are associated with learning effectiveness, self-regulation, and academic productivity, although the underlying mechanisms remain insufficiently examined.

From the perspective of HRM and educational management, this gap indicates the need for targeted digital literacy training programs, mentoring systems, and continuous performance evaluation as part of institutional human capital development (Borovykov et al., 2025). Such initiatives can improve not only individual student outcomes but also enhance the overall quality of academic human resources, contributing to sustainable institutional performance and innovation capacity in higher education (Qureshi et al., 2022; Al-Kahtani, 2023; Kamarul Zaman et al., 2025).

Academic productivity in higher education is largely influenced by students' capacity to access, process, and utilize digital resources. In Society 5.0, learning is no longer limited by space and time but occurs dynamically across digital platforms (O'Connor & Robinson, 2022). Prior research indicates that digital literacy positively contributes to students' engagement, motivation, and academic outcomes (Fraillon et al., 2023; Juliana et al., 2024). Nevertheless, limited empirical studies specifically examine the direct influence of digital literacy on academic productivity using robust quantitative methods.

The emergence of Education 5.0 further emphasizes the need for flexible, inclusive, and technology-driven learning environments. Students are not only knowledge receivers but also creators and disseminators of digital information (Zawacki-Richter & Latchem, 2023; Kivunja, 2024). Measuring these competencies requires objective and precise methods. This study applies the Rasch Model, which transforms ordinal data into interval data, ensuring valid and reliable measurement and strengthening construct validity (Bond & Fox, 2015; Boone et al., 2014). From a human capital perspective, students can be viewed as developing human capital assets

whose digital competencies contribute to future workforce readiness and productivity

Digital literacy has been widely studied as a fundamental competency in education, particularly in the context of rapid digital transformation. Previous research has emphasized that digital literacy involves not only the technical ability to operate digital devices but also the capacity to critically assess information and create digital content responsibly (Tomczyk, 2020; Saykili, 2019). Several additional studies also support this argument by revealing the impact of lecturers' digital literacy (Kelder et al., 2025), students' academic self-efficacy (Zakir, 2025), and the role of digital skills in open and innovative learning environments (Holm, 2025). Furthermore, recent evidence shows that advanced measurement models such as Rasch analysis in education (Stolt et al., 2022; Planinić et al., 2019; Boone et al., 2016) are increasingly adopted to ensure validity and reliability.

Several studies highlight the positive relationship between digital literacy and students' academic outcomes. Rodríguez-Abitia et al. (2024) demonstrated that digital competencies significantly enhance students' engagement and learning performance. Similarly, Li et al. (2025), through a meta-analysis, confirmed a causal link between digital literacy and academic achievement. These findings underscore the importance of digital literacy as a determinant of student success in higher education. However, despite being digital natives, many students still face challenges in effectively using digital tools for academic purposes. Statti and Torres (2020) found that while students frequently use technology, their skills are often limited to basic tasks and less focused on academic productivity. Saykili (2019) also observed gaps in how students integrate technology into their studies, suggesting the need for structured digital literacy interventions.

The era of Society 5.0 and the concept of Education 5.0 have further intensified the demand for advanced digital skills. Álvarez-Cedillo et al. (2024) emphasized that universities must adopt flexible, inclusive, and technology-driven learning approaches to prepare students for future challenges. Within this framework, students are expected not only to consume but also to generate and share knowledge through digital platforms (Zawacki-Richter & Latchem, 2023). Despite the growing body of literature, few studies have employed robust measurement models to evaluate the influence of digital literacy on academic productivity. Traditional approaches often rely on descriptive statistics and correlations, which may overlook latent variables and endogeneity issues. The application of the Rasch Model, as suggested by Hermanto and Miftahuddin (2021), offers a more objective and precise measurement framework. By addressing these methodological limitations, this study seeks to provide novel insights into the relationship between digital literacy and students' academic productivity in the era of Society 5.0.

This research aims to empirically investigate the influence of digital literacy on students' academic productivity in the era of Society 5.0 using the Rasch Model. Furthermore, it explores the implications for human resource management in higher education, particularly in formulating digital competency frameworks that integrate academic development with employability readiness. The findings are expected to contribute to both academic literature and practical higher education policies, particularly in designing digital literacy interventions that enhance students' academic performance and strengthen institutional human capital.

2. Materials and methods

The application of the Rasch Model, as suggested by Hermanto and Miftahuddin

(2021), offers a more objective and precise measurement framework for examining digital literacy and academic productivity. By addressing methodological limitations commonly found in conventional descriptive approaches, the Rasch analysis enables more accurate evaluation of item functioning, response consistency, and construct validity. Accordingly, this study seeks to provide deeper insights into the relationship between digital literacy and students' academic productivity within the context of Society 5.0 and higher education development.

Based on this theoretical and methodological foundation, the study employed a quantitative descriptive–associative design to examine the relationship between digital literacy and students' academic productivity. This approach enables the analysis of both variable characteristics and their empirical relationships within a structured research framework. Data were collected using a structured questionnaire consisting of Likert-scale items with five response categories ranging from 1 (strongly disagree) to 5 (strongly agree), allowing respondents' perceptions to be measured systematically.

To enhance measurement precision and analytical robustness, the study applied the Rasch Model to transform ordinal responses into interval-level logits, enabling more objective interpretation of respondents' abilities and item difficulties. The Rasch analysis also supported the evaluation of measurement quality through assessments of rating scale functioning, reliability, unidimensionality, and response consistency. Overall, the methodological procedures included instrument development, sampling, data collection, and Rasch-based data analysis to ensure the validity and interpretability of the study findings.

The target population consisted of active undergraduate students in West Java, Indonesia, aged 17–25 years, who had prior experience in using digital technologies for academic activities. Purposive sampling was applied to ensure that respondents were actively engaged in online learning and digital-based coursework. A total of 90 respondents participated in the main survey, providing a relevant empirical basis for analyzing the relationship between digital literacy and academic productivity in the context of higher education.

In Rasch measurement, sample size plays an important role in ensuring the stability of item calibration. Previous studies suggest that a sample size ranging from 50 to 100 respondents is sufficient to produce stable estimates for most survey instruments, particularly when the data fit the model adequately (Linacre, 1994; Bond & Fox, 2015). Therefore, the sample size of 90 respondents in this study is considered acceptable for Rasch analysis and meets the minimum requirements for reliable parameter estimation.

The focus of the Rasch analysis in this study was strictly on measurement quality rather than causal inference. Therefore, the model was used to evaluate item functioning, response consistency, and construct validity

A. Instrument Development

The questionnaire was developed by adapting indicators from prior research on digital literacy (Tomczyk, 2020; Saykili, 2019) and academic productivity (Hermanto & Miftahuddin, 2021; Álvarez-Cedillo et al., 2024). The instrument comprised two main constructs:

- 1) Digital Literacy: skills in accessing, evaluating, and creating digital content responsibly.
- 2) Academic Productivity: ability to manage academic tasks, engage in online learning, and utilize digital resources effectively.

Prior to distribution, the questionnaire was pilot-tested on 30 students to assess clarity, validity, and reliability. Items with poor performance were revised or removed before the main data collection.

B. Data Collection

The final survey was conducted in May 2025 via Google Forms. Respondents provided informed consent, and their participation was voluntary. The online format was chosen to ensure accessibility and efficiency during the data collection phase.

C. Data Analysis Procedure

Data were analyzed using the Rasch Model with Winsteps software version 3.7. The Rasch approach provided several advantages:

- 1) Transformation of Data: Converting ordinal Likert-scale scores into interval-level logits.
- 2) Instrument Reliability: Evaluating person reliability, item reliability, and Cronbach's Alpha.
- 3) Unidimensionality Testing: Using Principal Component Analysis (PCA) of residuals to ensure that items measured a single construct.
- 4) Fit Statistics: Checking infit and outfit mean-square (MNSQ) values for each item and respondent, acceptable between 0.5 and 1.5 logits (Andrich, 2004).
- 5) Rating Scale Analysis: Assessing category functioning through Andrich Thresholds and outfit values.
- 6) Person–Item Map (Wright Map): Comparing respondent abilities and item difficulties on a single logit scale.

The Rasch Model was applied to enhance measurement precision, evaluate item functioning, and assess the validity and reliability of the measurement instrument. By transforming ordinal responses into interval-level logits, the Rasch analysis enabled a more objective interpretation of respondents' abilities and item difficulties. Furthermore, the model facilitated the evaluation of rating scale functioning, response consistency, unidimensionality, and construct validity, thereby strengthening the robustness and interpretability of the study findings. To further ensure the quality of the measurement process, person fit statistics were examined to evaluate response consistency across participants, minimizing potential measurement bias and improving the overall robustness of the analysis. The detailed results of the person fit analysis are presented in Appendix B.

The overall methodological framework is summarized in **Fig. 1**.

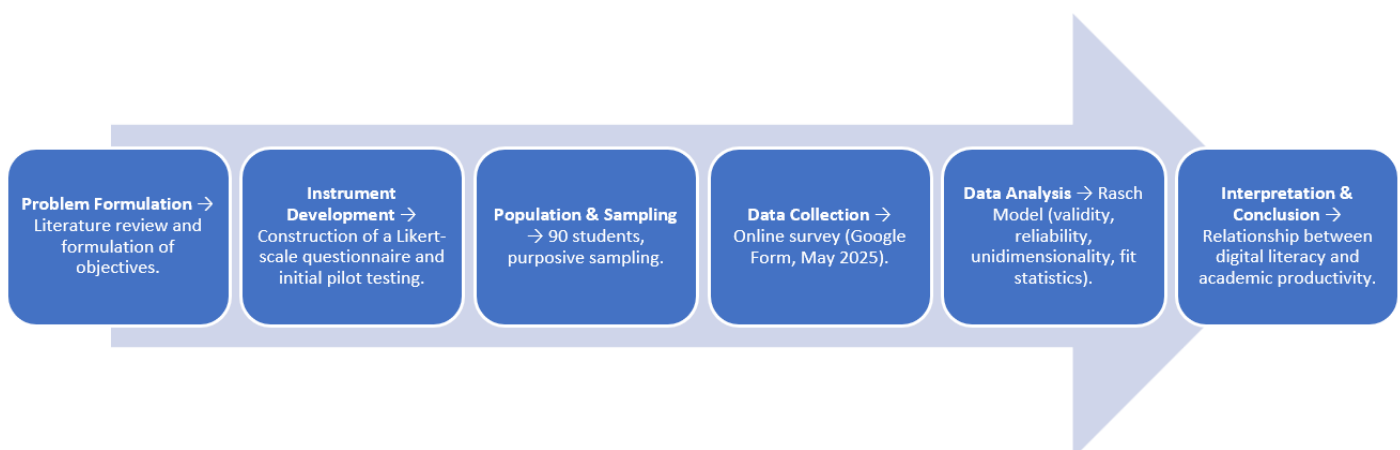


Fig. 1. Research Methodology Flowchart

3. Results and discussion

This section presents the Rasch Model results in detail, covering respondent characteristics, instrument reliability and validity, rating scale functioning, unidimensionality, and person–item distribution. Each result is followed by a discussion in relation to previous studies and theoretical implications.

Beyond these findings, other studies have reinforced that digital literacy influences broader outcomes, including digital productivity in higher education (Dong et al., 2025), student achievement in different contexts (Chen et al., 2025), and the importance of frameworks such as DigCompEdu (Haleem et al., 2022). Research also indicates that AI literacy (Sumintono, 2018), the mediating role of self-efficacy (Zakir, 2025), and institutional digital transformation (Redecker & Punie, 2017; Ghomi & Redecker, 2020) are crucial dimensions for future exploration.

A. Respondent Characteristics

A total of 90 respondents participated in the survey. The majority were female (82.2%), and within the 17–20 age group (62.2%), while most were in semesters 3–4 (58.9%). This demographic profile suggests that digital literacy and academic productivity were predominantly measured among early undergraduate students.

Table1. Respondent Characteristics

Category	Subgroup	Frequency	Percentage
Gender	Female	74	82.2%
	Male	16	17.8%
Age	17–20 years	56	62.2%
	21–25 years	34	37.8%
	1–2	1	1.1%
Semester	3–4	53	58.9%
	5–6	35	38.9%
	≥7	1	1.1%

This distribution reflects a sample of students who are “digital natives,” but still at varying stages of academic development, which makes them an appropriate population for studying digital literacy impacts.

B. Reliability and Separation

Rasch analysis revealed robust reliability values: Person Reliability = 0.83, Item Reliability = 0.86, and Cronbach’s Alpha = 0.87. The Person Separation Index was 2.46, indicating that the instrument could distinguish respondents into at least three distinct strata of digital literacy ability.

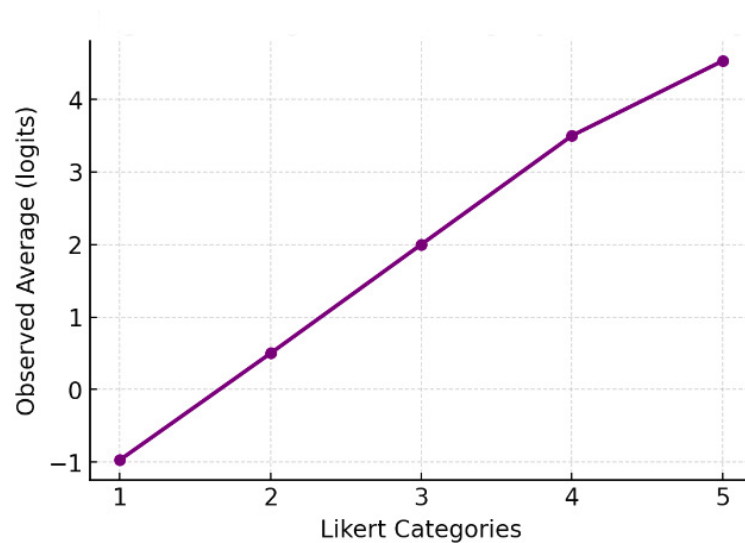
Table 2. Reliability and Separation Statistics

Indicator	Value	Interpretation
Person Reliability	0.83	Consistent student responses
Item Reliability	0.86	Stable item performance
Cronbach’s Alpha	0.87	Strong internal consistency
Person Separation	2.46	≥3 distinct ability groups

These findings are consistent with Bond and Fox (2020), who argued that person separation above 2.0 reflects meaningful differentiation in abilities. The results confirm that the questionnaire is not only reliable but also sensitive enough to detect variation among students with different levels of digital literacy.

C. Rating Scale Analysis

The five-point Likert scale demonstrated proper category functioning. The observed averages increased monotonically from -0.97 in category 1 to $+4.53$ in category 5, while the Andrich thresholds were ordered logically (-4.03 to $+5.37$ logits).



Although category 1 showed a slightly high outfit MNSQ (2.18), its low selection frequency (1.1%) mitigated concerns. This suggests that respondents were able to discriminate effectively between response categories, confirming findings by Linacre (2002) that ordered thresholds are a strong indicator of rating scale validity.

D. Unidimensionality

Principal Component Analysis (PCA) of residuals showed that raw variance explained by measures was 43.7%, well above the 20% threshold. The unexplained variance in the first contrast was 1.8 eigenvalue units (9.2%), below the critical values of 2.0.

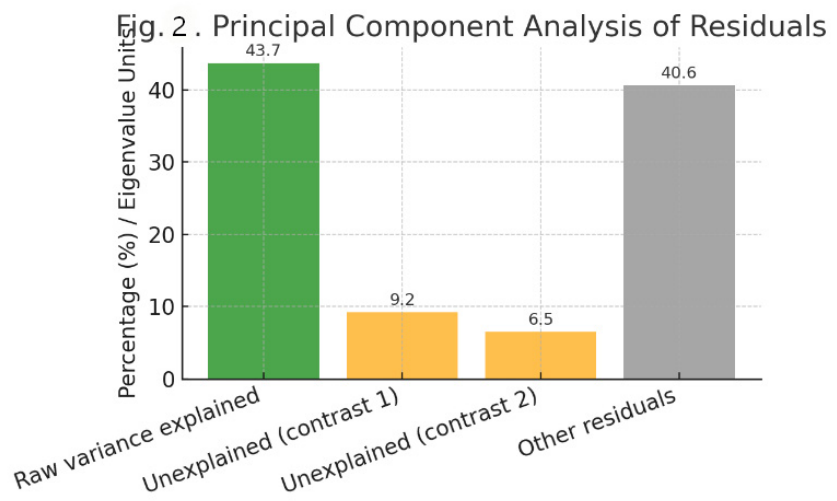


Fig. 2. Principal Component Analysis of Residuals

These results support the unidimensionality assumption, meaning that the instrument consistently measured one primary construct—digital literacy in relation to academic productivity. This confirms recommendations by Andrich (2004) and Thoemmes (2015) that unidimensionality is essential for unbiased latent trait measurement.

E. Person–Item Distribution

The Person–Item Map indicated that most students’ abilities were positioned between +1 and +4 logits, while item difficulties were clustered between 0 and +1 logits.

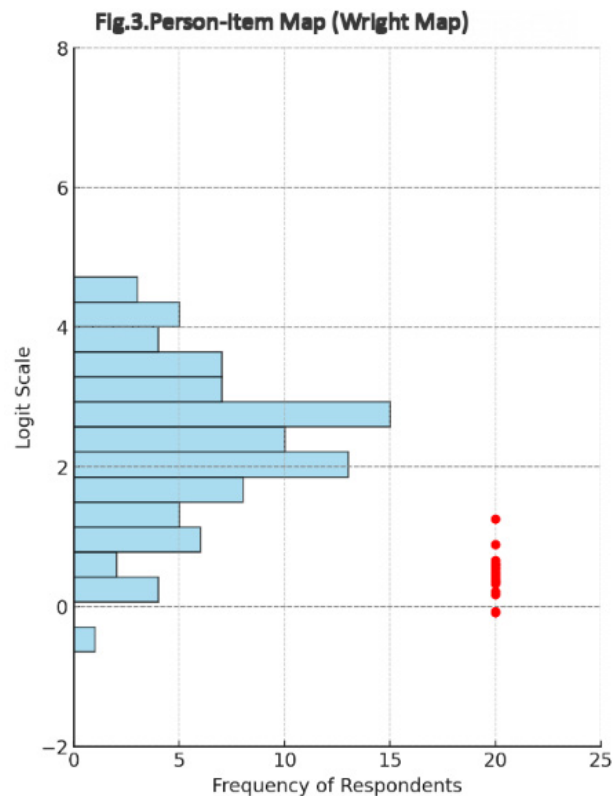


Fig. 3. Person–Item Map (Wright Map)

This finding suggests that the items were relatively easy for the respondents, who already demonstrated above-average digital literacy. While this indicates that students are generally well-prepared for digital learning, it also reveals that the instrument may need additional high-difficulty items to better differentiate advanced learners.

4. Discussion

The results collectively indicate that higher levels of digital literacy are positively associated with students’ academic productivity. Students with higher literacy levels showed improved abilities in managing assignments, engaging in online learning, and processing information effectively. This aligns with Rodríguez-Abitia et al. (2024), who emphasized the positive role of digital literacy in student engagement, and Li et al. (2025), who confirmed its causal relationship with academic achievement.

Nevertheless, the variation in ability levels reflects a persistent digital divide, consistent with the observations of Statti and Torres (2020). Despite overall high

literacy levels, a subset of students still struggled to optimize digital tools, indicating the need for targeted training and support.

The variation in students' ability levels identified through the Rasch analysis suggests that digital literacy competencies remain unevenly distributed among university students, even within relatively technology-oriented learning environments. While some students demonstrated strong capabilities in utilizing digital resources for academic purposes, others appeared to experience difficulties in effectively integrating digital technologies into their learning processes. These findings indicate that access to digital technologies alone may not automatically translate into productive academic utilization, as differences in digital readiness, self-regulation, learning support, and technological confidence may also influence students' academic engagement and performance.

From the perspective of higher education management, these findings highlight the continuing relevance of the digital divide in shaping academic productivity and human capital development. The digital divide should not only be understood in terms of access to technology, but also in relation to differences in digital competencies, critical information processing, and the ability to apply digital tools effectively within academic contexts. Consequently, universities may need to adopt more inclusive and differentiated digital literacy strategies that accommodate students with varying levels of digital readiness and learning capabilities.

From a human resource management (HRM) perspective, these findings highlight the strategic role of digital literacy development as part of human capital formation within higher education institutions. Universities should adopt HRM-based frameworks that integrate digital competency enhancement into broader talent development and performance management systems. Strengthening digital capabilities among students and academic staff contributes not only to individual productivity but also to institutional competitiveness in the knowledge economy and Society 5.0 era (Richardson & Sterrett, 2022; Voronchuk & Didenko, 2022; Manimala & Kurian, 2024; Yang & Zhang, 2025).

The findings also suggest that digital literacy should be viewed as a strategic human capital asset within higher education institutions. In the context of Society 5.0, universities are increasingly expected to prepare students not only with academic knowledge but also with transferable digital competencies that support employability readiness, adaptability, and long-term workforce competitiveness. Consequently, the development of digital literacy may contribute to the formation of future professionals who are capable of responding to technological change, innovation demands, and evolving labor market expectations. From an institutional perspective, strengthening students' digital competencies may also enhance universities' competitiveness, academic quality, and capacity to support sustainable human resource development in the digital era.

From a practical standpoint, universities should design tiered and evidence-based digital literacy interventions that address differences in students' digital competencies and learning needs. Such interventions may include digital mentoring programs, technology-integrated learning workshops, critical information evaluation training, and competency-based digital learning assessments. In addition, universities may strengthen academic support systems by integrating digital literacy development into broader human capital and talent development strategies aimed at improving students' employability readiness, adaptability, and long-term workforce competitiveness in the Society 5.0 era.

Methodologically, the application of the Rasch Model strengthened the measurement quality of this study by providing evidence regarding item functioning, rating scale performance, reliability, and unidimensionality. Unlike conventional descriptive approaches, the Rasch analysis transformed ordinal responses into interval-level measures, allowing for a more precise interpretation of respondents' digital literacy levels and academic productivity. This approach also enhanced construct validity and reduced potential measurement bias, thereby improving the robustness and interpretability of the findings within the context of Society 5.0 and higher education research. Furthermore, the use of the Rasch Model supports HRM-oriented data-driven decision-making practices by enabling more objective and evidence-based assessment of students' competencies, digital skills, and learning outcomes, which are essential components of human capital development in higher education institutions (Bond & Fox, 2015; Boone et al., 2014).

5. Conclusion

This study examined the influence of digital literacy on students' academic productivity in the era of Society 5.0 using the Rasch Model. The results confirmed that the instrument was valid and reliable, with high person and item reliability values and evidence of unidimensionality. The Person–Item Map indicated that students generally possessed high levels of digital literacy, while the items were relatively easy, suggesting that more advanced measures may be needed in future studies.

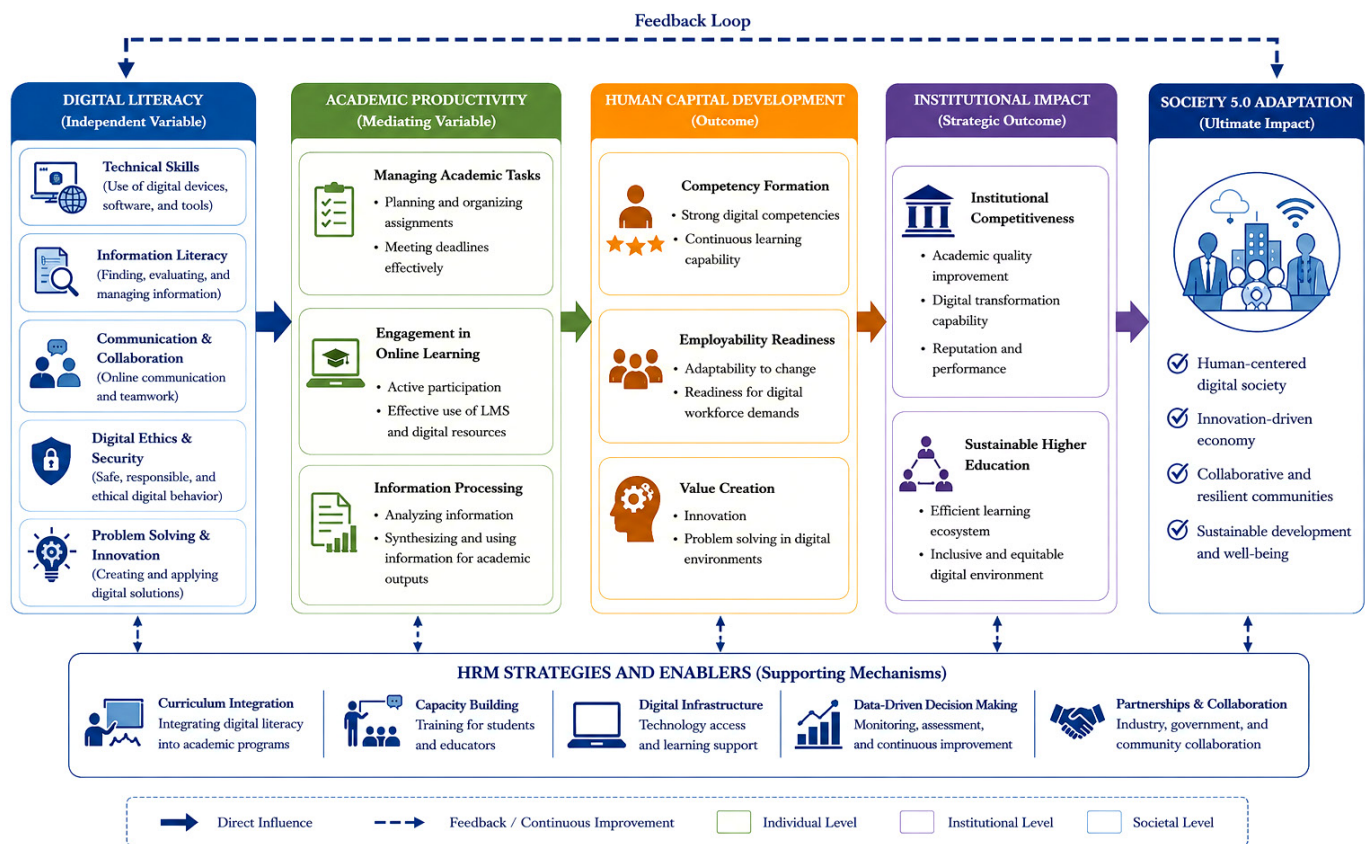
The findings revealed that digital literacy is positively associated with students' academic productivity. Students with higher digital literacy levels demonstrated greater ability to manage academic tasks, engage in online learning, and process digital information effectively. These results align with prior studies emphasizing the role of digital competencies in enhancing student performance and motivation. However, the variation in student ability levels suggests that a digital divide persists, highlighting the importance of targeted institutional support.

From a theoretical perspective, this study contributes to the literature on Society 5.0, digital literacy, and higher education human capital development by demonstrating how digital competencies are associated with students' academic productivity within technology-driven learning environments. The study also extends previous research by applying the Rasch Model to provide more rigorous measurement evidence regarding students' digital literacy and academic productivity. In addition, the findings highlight the strategic relevance of digital literacy not only as an educational competency but also as a human capital resource associated with workforce readiness, employability development, and institutional competitiveness in higher education.

Practically, higher education institutions are encouraged to design comprehensive digital literacy programs that go beyond technical skills, incorporating critical thinking, ethical digital behavior, and creative content development. Such initiatives will not only enhance students' academic productivity but also prepare them to thrive in a digitally driven society. These findings further highlight the importance of integrating digital literacy development into broader human capital and talent development strategies within higher education institutions to support students' employability readiness and institutional competitiveness in the Society 5.0 era.

Based on the findings of this study, a conceptual pathway is proposed to illustrate how digital literacy may contribute to academic productivity and broader human capital development within higher education institutions. The framework highlights

the potential relationship between digital competency development, employability readiness, institutional competitiveness, and adaptation to the demands of Society 5.0.



Note: The framework illustrates the proposed pathway in which digital literacy contributes to academic productivity, which in turn strengthens human capital outcomes, institutional competitiveness, and adaptation to Society 5.0.

Fig. 4. Conceptual Pathway of Digital Literacy, Academic Productivity, and Human Capital Development in Society 5.0

The proposed conceptual pathway emphasizes that digital literacy should not be viewed solely as a technical competency, but also as a strategic component of human capital development within higher education. The framework may serve as a reference for future studies examining the broader implications of digital competencies on workforce readiness, institutional performance, and sustainable educational transformation in the digital era.

Limitation and Recommendation Future Research

Despite the contributions of this study, several limitations should be acknowledged when interpreting the findings. First, the study employed a cross-sectional design, which limits the ability to draw causal conclusions regarding the relationship between digital literacy and academic productivity. Second, the sample was limited to university students in West Java, Indonesia, which may restrict the generalizability of the findings to other regions, educational systems, or socio-cultural contexts. In addition, the study focused primarily on students within higher education settings and therefore may not fully represent broader population groups with different educational, technological, or socio-economic backgrounds. Furthermore, although the Rasch Model strengthened the measurement quality and reduced potential response bias, the use of self-reported questionnaire data may still be influenced by subjective perceptions and individual response tendencies. Accordingly,

the findings should be interpreted within the contextual scope of the study and not generalized beyond the characteristics of the investigated population.

Future research is encouraged to employ longitudinal, comparative, or mixed-method approaches involving broader geographical regions and more diverse participant groups to provide a more comprehensive understanding of digital literacy and academic productivity across different higher education environments. Expanding the sample to include students from various academic disciplines, institutional types, and socio-cultural contexts may further enhance the generalizability and contextual relevance of future findings.

In addition, future studies may broaden the conceptual scope of digital literacy by incorporating additional constructs such as digital ethics, social media literacy, critical information evaluation, and digital well-being to better capture the multidimensional nature of digital competencies in the Society 5.0 era. Examining these dimensions may provide deeper insights into how students engage with digital technologies within academic and professional contexts.

From a methodological perspective, future research may also integrate advanced analytical techniques, such as Structural Equation Modeling (SEM), longitudinal modeling, or machine learning approaches, to complement the Rasch Model and provide a more comprehensive understanding of the complex relationships among digital literacy, academic productivity, motivation, self-efficacy, and other latent variables. Such approaches may contribute to the development of more robust evidence regarding digital competency formation and human capital development in higher education.

Finally, longitudinal research is particularly recommended to examine how students' digital literacy competencies evolve over time and how educational interventions, institutional support systems, and technology-integrated learning strategies contribute to sustainable improvements in academic productivity, employability readiness, and workforce adaptability in the context of Society 5.0.

Author contributions: Conceptualization, Iskandar Iskandar and Juliana Juliana; methodology, Asep Miftahuddin and Lina Marlina; software, Asep Miftahuddin; validation, Juliana Juliana, Ahmad Ajib Ridlwan, and Qudratov Inomjon; formal analysis, Asep Miftahuddin; investigation, Iskandar Iskandar and Lina Marlina; resources, Ahmad Ajib Ridlwan and Ropi Marlina; data curation, Lina Marlina and Ropi Marlina; writing—original draft preparation, Iskandar Iskandar; writing—review and editing, Juliana Juliana and Qudratov Inomjon; visualization, Asep Miftahuddin; supervision, Juliana Juliana; project administration, Juliana Juliana; funding acquisition, Iskandar Iskandar. All authors have read and agreed to the published version of the manuscript.

Acknowledgment: The authors would like to express their gratitude to Universitas Kuningan and Universitas Pendidikan Indonesia (UPI) for the academic and institutional support provided throughout this research. Special thanks are also extended to the participating students who generously contributed their time and insights to the study. The constructive feedback from colleagues and anonymous reviewers is gratefully acknowledged, as it has significantly improved the quality of this paper.

Conflict of interest: Declare conflicts of interest or state “The authors declare no conflict of interest.” Authors must identify and declare any personal circumstances or interest that may be perceived as inappropriately influencing the representation or interpretation of reported research results.

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Appendix B. Person Fit Statistics Based on Rasch Analysis

No	Person ID	Measure (Logit)	Model S.E.	Infit MNSQ	Infit ZSTD	Outfit MNSQ	Outfit ZSTD	Status
1	P001 (F)	4.12	0.25	0.95	-0.2	0.92	-0.3	Fit
2	P015 (F)	3.85	0.22	1.05	0.4	1.02	0.2	Fit
3	P042 (M)	3.50	0.20	0.88	-0.6	0.85	-0.7	Fit
4	P009 (F)	3.10	0.18	1.12	0.8	1.15	1.1	Fit
5	P067 (F)	2.95	0.18	1.00	0.1	0.98	-0.1	Fit
6	P022 (F)	2.80	0.17	1.25	1.4	1.30	1.5	Fit
7	P055 (M)	2.65	0.17	0.92	-0.4	0.90	-0.6	Fit
8	P011 (F)	2.50	0.17	1.08	0.6	1.05	0.4	Fit
...	...	...	...	...	...	...	...	...
45	P033 (F)	1.85	0.16	1.02	0.2	1.01	0.1	Fit
46	P078 (M)	1.82	0.16	0.98	-0.1	0.99	-0.1	Fit
...	...	...	...	...	...	...	...	...
85	P019 (F)	0.75	0.15	1.42	1.9	1.48	2.0	Marginal
86	P088 (F)	0.60	0.15	0.75	-1.8	0.70	-1.9	Fit
87	P004 (M)	0.45	0.16	1.35	1.7	1.40	1.8	Fit
88	P050 (F)	0.32	0.16	0.60	-1.9	0.55	-2.0	Fit
89	P012 (F)	0.20	0.17	1.15	1.1	2.10	2.5	Misfit
90	P090 (F)	0.10	0.18	1.20	1.3	1.18	1.3	Fit
Mean		2.28	0.18	1.05	0.2	1.11	0.4	