Assessing Digital Literacy Skills among Indonesian University Students in the Age of Society 5.0

Intan Islamia*
Universitas Islam Negeri Raden Intan Lampung, Indonesia
E-mail: intanislamia@radenintan.ac.id

Andry Rahman Arif
Universitas Tulang Bawang, Indonesia
E-mail: andry.rahman@utb.ac.id

DOI : 10.30983/educative.v9i2.8678

*Corresponding Author

Submission: October 24, 2024	Revised: November 4, 2024	Accepted : December 24, 2024	Published: December 30, 2024

Abstract

Students, as the younger generation, must have adequate digital literacy skills to adapt and develop in this era. This research aims to identify and analyze portraits of students' digital literacy skills in Indonesia in the 5.0 era. This research used quantitative methods involving 99 student respondents from various campuses throughout Indonesia. The instrument used in this research is a questionnaire developed by Nugroho (2020), which uses the digital literacy measurement component from Digital Digital Literacy Across the Curriculum (Hague & Payton, 2010) with a reliability score of α = 0.961. The research results showed that most (73%) respondents were in the medium digital literacy skills category. The results also show that stu3edents achieved high scores in the skills components of seeking and selecting information, communication, digital security, collaboration, and creativity. Mid-average scores were achieved for the functional skills component, critical thinking, and evaluation abilities. Meanwhile, the lowest score was in the social and cultural understanding component. The findings of this research can be used for various purposes, such as designing digital literacy education and training programs that are right on target, developing digital tools and platforms that are easy to use by people with various levels of digital literacy, and creating effective policies and regulations related to digital literacy.

Keywords*:* digital literacy, digital technology, higher education, era 5.0

Abstrak

Mahasiswa sebagai generasi muda dituntut untuk memiliki keterampilan literasi digital yang mumpuni agar dapat beradaptasi dan berkembang di era ini. Penelitian ini bertujuan untuk mengidentifikasi dan menganalisis potret keterampilan literasi digital mahasiswa di Indonesia di era 5.0. Penelitian ini menggunakan metode kuantitatif dengan melibatkan 99 responden dari mahasiswa yang berasal dari berbagai kampus yang tersebar di Indonesia. Instrumen yang digunakan dalam penelitian ini menggunakan kuesioner yang dikembangkan oleh Nugroho (2020) yang menggunakan komponen pengukuran literasi digital dari Digital Literacy Across the Curriculum (Hague & Payton, 2010) dengan skor reliabilitas a = 0.961. Hasil penelitian menunjukkan bahwa sebagian besar (73%) responden berada pada kategori keterampilan literasi digital sedang. Hasil juga menunjukkan bahwa mahasiswa mencapai skor yang tinggi dalam komponen keterampilan mencari dan memilih informasi, berkomunikasi, keamanan digital, kolaborasi, dan kreativitas. Skor menengah rata-rata dicapai untuk komponen keterampilan fungsional serta kemampuan berfikir kritis dan evaluasi. Sementara skor paling rendah berada pada komponen pemahaman sosial dan budaya. Temuan penelitian ini dapat digunakan untuk berbagai keperluan, seperti merancang program edukasi dan pelatihan literasi digital yang tepat sasaran, mengembangkan alat dan platform digital yang mudah digunakan oleh masyarakat dengan berbagai tingkat literasi digital, dan membuat kebijakan dan regulasi terkait literasi digital yang efektif.

Kata Kunci: *literasi digital, teknologi digital, pendidikan tinggi, era 5.0*

Introduction

The 5.0 era is an era in which technological transformation and innovation have brought major changes in various aspects of life[1], including in the world of education[2]. Students, as the younger

[1] Musarat et al., 2023; Tavares et al., 2022)

[2] Maya Escueta and others, 'Upgrading Education with Technology: Insights from Experimental Research', *Journal of Economic Literature* (American Economic Association, 2020), 897–996, doi:10.1257/JEL.20191507; Gopal Naik and others, 'Impact of Use of Technology on Student Learning Outcomes: Evidence from a Large-Scale Experiment in India', *World Development*, 127 (2020), p.

generation, are required to have adequate digital literacy skills in order to adapt and develop in this era.

Digital literacy is the ability to find, evaluate, utilize, share, and create ideas while paying attention to ethics and responsibility in using digital technology[3]. Literacy is defined as a set of fundamental skills in reading and writing. It includes the ability to solve problems at the level of expertise required in work, family, and society. Meanwhile, digital literacy is defined as `the practice of communicating, relating, thinking and relating to digital media[4].

Digital literacy is also defined as using various digital technologies in reading, writing, and multimodal interpretation[5]. Digital literacy skills in students help them improve communication, critical thinking skills, problem-solving, and managing interactions, especially in the online world, and increase their competitiveness in the world of work[6]. Previous research has also found that digital literacy skills positively impact outcomes during higher education, as well as when entering the world of work.[7]

The government has launched various programs to improve digital literacy in the community, including among students. Multiple parties, including the government, universities, and industry, have recognized the importance of digital literacy skills for students. Digital literacy education is considered essential to improve the quality of Indonesian human resources, leading to characteristics such as digital resilience and positive interactions. Those who have digital literacy competencies will be able to have digital resilience, become positive and productive individuals, and become part of the global community[8]. Improving students' digital literacy is essential for individual success and contributes to developing quality human resources. This study will analyze how digital literacy can support the development of 21st-century skills, such as critical thinking, creativity, and collaboration. The results of this study are expected to provide recommendations for developing higher education curricula that are more relevant to the needs of the future world of work.

Previous research findings indicate that digital literacy skills are in the excellent category (including operational skills, thinking, collaboration, and awareness)[9] and also moderate level[10]. Pala and Başıbüyük found that digital

104736, doi:https://doi.org/10.1016/j.worlddev.2019.104736; Esteban Vázquez-Cano and others, 'The Negative Effects of Technology on Education: A Bibliometric and Topic Modeling Mapping Analysis (2008-2019)', *International Journal of Instruction*, 15.2 (2022), pp. 37–60, doi:10.29333/iji.2022.1523a.

[3] Pritika Reddy, Bibhya Sharma, and Kaylash Chaudhary, 'Digital Literacy: A Review in the South Pacific', *Journal of Computing in Higher Education*, 34.1 (2022), pp. 83–108, doi:10.1007/s12528-021-09280-4.

[4] Rodney Jones and Christoph Hafner, *Understanding Digital Literacies: A Practical Introduction*, *Understanding Digital Literacies: A Practical Introduction*, 2012, doi:10.4324/9780203095317.

[5] Ria Mookerjee and others, 'Student Stress And Its Association With Student Performance And Psychological Well-Being: An Empirical Study On Higher Academic Education Students In And Around Hyderabad Metro', *International Journal of Professional Business Review*, 7.5 (2022), doi:10.26668/businessreview/2022.v7i5.753.

[6] Pedro García Guirao and others, *Digital Literacy in the University Setting: A Literature Review of Empirical Studies between 2010 and 2021*, 2022 <www.recursoscientificos.fecyt.es/.>; Ashlee Morgan, Ruth Sibson, and Denise Jackson, 'Digital Demand and Digital Deficit: Conceptualising Digital Literacy and Gauging Proficiency among Higher Education Students', *Journal of Higher Education Policy and Management*, 44.3 (2022), pp. 258–75, doi:10.1080/1360080X.2022.2030275; Burcu Umut Zan and others, 'A Study on Digital Literacy Skills of Faculty of Letters Students: Use of University Library', *International Journal of Emerging Technologies in Learning*, 16.1 (2020), pp. 152–71, doi:10.3991/IJET.V16I01.16567; Ana Iolanda Vodă and others, 'Exploring Digital Literacy Skills in Economics and Social Sciences and Humanities Students', *Sustainability (Switzerland)*, 14.5 (2022), doi:10.3390/su14052483; Gaung Perwira Yustika and Sri Iswati, 'Digital Literacy in Formal Online Education: A Short Review', *Dinamika Pendidikan*, 15.1 (2020), pp. 66–76, doi:10.15294/dp.v15i1.23779.

[7] (Mokhtari, 2023).

[8] (Harmoko, 2021; Dewi et al., 2024)

[9] Rembulan Catra Banyu Biru, Asep Saepudin, and Sardin, 'Analisis Literasi Digital Terhadap Pembelajaran Mandiri Di Masa Pandemi Covid-19', *Indonesian Journal Of Adult and Community Education*, 02.02 (2020), pp. 61–69.

[10] Mariyani and Triyani, 'Lisensi Internasional Creative Commons Attribution-ShareAlike 4.0 Profil Literasi

literacy and self-control can predict achievement motivation in science, technology, and society.[11] In addition, Purnama's research found that digital literacy, parental mediation, and self-control affect online risk. This study suggests that both digital literacy and parental mediation are needed to reduce the impact of online learning and teaching processes.[12] Zan's research found that the origin of the study program also influences the level of students' digital skills, and universities must facilitate efforts to improve these skills.[13] Penelitian ([14] menunjukkan bahwa rasa ingin tahu dan bagaimana menentukan pilihan hidup memengaruhi literasi digital secara signifikan.

Several studies have been conducted to measure digital literacy skills in Indonesia[15]. Other research found that the primary function of today's digital literacy is being able to use various things digitally, think creatively and innovatively, and socialize and collaborate wisely digitally.[16] Even so, one of the challenges must be faced is the importance of data security and confidentiality management in distinguishing between the private and public realms of digital socializing.[17]. Meanwhile, Ahmad's research found that several important components are involved in developing digital literacy, namely culture, cognitive, constructive, communication, self-confidence, creativity, critical thinking, and social responsibility.

Other research found that, in the context of psychology, students' abilities to communicate online, think critically, and ethically use technology are sufficient.[18] The study's results also showed that, on average, students understand and can consistently apply Information and Communication Technology (ICT) to achieve their goals.

In addition, based on the results of interviews conducted with several students, data was obtained that they were accustomed to using digital tools and devices commonly used in lecture activities. However, they also realized that with the rapid development of digital technology, more qualified learning abilities were needed to adapt to its development.

Although many previous studies have discussed digital literacy, this variable is still interesting to study because digital development is also getting faster. The research that is quite close and a reference in this study is from Nugroho and Nasionalita, which measures the digital literacy index of the millennial generation in Bandung Regency.[19] The difference with the current study is the sample used, where this study focuses on students (Gen Z) and is spread throughout Indonesia. By measuring on a broader scale, this study aims to identify and analyze the portrait of digital literacy skills of students in Indonesia in the 5.0 era. Thus, this study is expected to provide a more comprehensive understanding of the development of students' digital literacy skills in Indonesia. The results of this study are expected to be one of the foundations for developing a program to improve students' digital literacy skills.

Research Method

This study uses a quantitative method involving a population of students from all over Indonesia, who were determined using the random

Digital Mahasiswa Di Era Digitalisasi', 10.1 (2023), pp. 50–57.

[11] Şenol Mail Pala and Adem Başıbüyük, 'The Predictive Effect of Digital Literacy, Self-Control and Motivation on the Academic Achievement in the Science, Technology and Society Learning Area', *Technology, Knowledge and Learning*, 2021, doi:10.1007/s10758-021-09538-x.

[12] Purnama et al., (2021)

[13] Umut Zan et al., (2020

[14] Rini et al., (2022)

[15] Sarma Panggabean and others, *Student Digital Literacy Competence Study Language and Literature Education Program Indonesia*, *Edumaspul-Journal of Education*, 2023, VII.

[16] Anisah Muliani and others, 'Pentingnya Peran Literasi Digital Bagi Mahasiswa Di Era Revolusi Industri 4.0 Untuk Kemajuan Indonesia', *Journal of Education and Technology*, 1.2 (2021), pp. 87–2 <http://jurnalilmiah.org/journal/index.php/jet>.

[17] Robertus Koesmaryanto Oetomo, Petrus Dwi Ananto Pamungkas, and Nithania Septianingsih, 'Literasi Digital Mahasiswa Menggunakan Kerangka Pengukuran Digital Kominfo', *Jurnal Mentari: Manajemen Pendidikan Dan Teknologi Informasi*, 2.1 (2023), pp. 73–83 <https://journal.pandawan.id/mentari/article/view/356>.

[18] Deci Ririen and Febblina Daryanes, 'Analisis Literasi Digital Mahasiswa', *Research and Development Journal of Education*, 8.1 (2022), p. 210, doi:10.30998/rdje.v8i1.11738.

[19] Catur Nugroho and Kharisma Nasionalita, 'Digital Literacy Index of Teenagers in Indonesia', *Journal Pekommas*, 5.2 (2020), p. 215, doi:10.30818/jpkm.2020.2050210.

sampling method. A total of 99 respondents filled out the research questionnaire collected through online distribution. The researcher informed the respondents about informed consent, including guaranteeing the confidentiality of the data provided.

The instrument used in this study was a questionnaire developed by Nugroho and Nasionalita which used the digital literacy measurement components of Digital Digital Literacy Across the Curriculum (Hague & Payton, 2010) with a reliability score of $\alpha = 0.961$. There are eight components of digital literacy measured: Functional Skill and Beyond, Creativity, Collaboration, Communication, The Ability to find and select Information, Critical Thinking and Evaluation, Cultural and Social Understanding, and E-Safety.

The data analysis technique was carried out by measuring the Digital Literacy Index level score seen from the calculation of a scale of 1-6 Level 1 = in the questionnaire answered, Do not Know, Level 2 = in the questionnaire answered Strongly Disagree, Level 3 = in the questionnaire answered Disagree, Level 4 = in the questionnaire answered Less. Agree, Level 5 = in the questionnaire answered Agree; and Level 6 = answered Strongly Agree. The data was also analyzed using descriptive analysis by grouping the mean value (average) into three categories: low, medium, and high.

Finding and Discussion

Finding

Ninety-nine students were involved in this study, with most respondents are female (Table 1).

Table 1. Distribution of Respondents' Gender

Gender	Total (n)	Percentage (%)
Male	22	22
Female	77	78
	99	**100**

Meanwhile, based on residential area, more than half (62%) of respondents live in rural areas, and only 3% live in metropolitan cities (Table 2). This finding is interesting because students generally live in rural areas but migrate to the city to get an education. Thus, this is also expected to bring changes after they graduate and return to their residential areas

Table 2. Distribution of Respondents' Residential Areas

Areas	Total (n)	Percentage (%)
Rural	61	62
Urban	35	35
Metropolitan City	3	3
	99	**100**

The results of this study also show that the most frequently used applications in the learning process by participants are web conferencing applications (such as ZOOM, G-meet, and others). Furthermore, applications such as video sharing applications (such as YouTube), social media applications (Instagram, TikTok, X), and word processing software (Ms. Word) (Figure 1). Meanwhile, the application that respondents least frequently use is spreadsheet software (14.9%). This is possible because the application is used only in certain learning conditions and classes compared to entertaining applications.

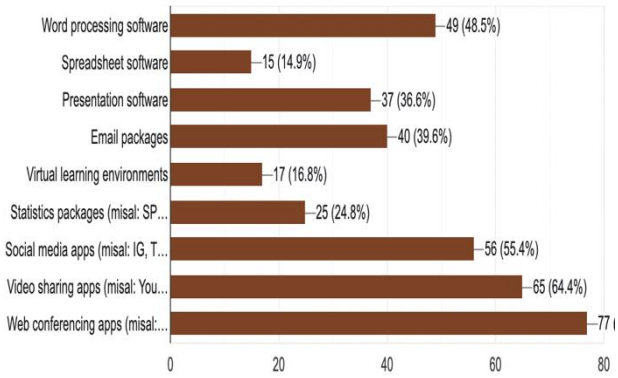


Figure 1. Description of digital application usage

This result may be influenced because since the Covid-19 outbreak, where there has been a policy of restricting direct social interaction, the learning process has been encouraged to be carried out online, usually through online conference applications such as those above. Research shows that students can conduct lectures online, and web conference applications, especially ZOOM

Meetings and Google Meet, are becoming more widely used. However, several studies have found that lectures with web conferences have been ineffective, especially in some areas, due to the lack of facilities and infrastructure.

In addition, video sharing and social media applications are also included in the applications that students demand significantly. According to Al-Kahlan, this phenomenon comes from their need to fulfill a sense of community and facilitate effective communication. Social media applications have been widely used in formal and informal learning.

Other results (Table 3) show that, in general, most students' digital literacy skills are in the moderate category (73%). This data was obtained by grouping based on the mean value into three categories, namely: low, moderate, and high.

Table 3. Distribution of Digital Literacy Skills Categories

Categories	Norms	Total (n)	Percentage (%)
High	X > 106	16	16
Moderate	71-106	72	73
Low	X < 71	11	11
Total		**99**	**100%**

These results indicate that most students have good digital literacy skills in understanding and using digital information. This finding is in accordance with several previous research findings[20]. The results of this study are also supported by the fact that the level of student literacy is in the moderate category, showing good scores on the internet searching and knowledge assembly components and sufficient and lacking on the content evaluation and hypertextual navigation components.[21] In addition, other findings show that respondents are generally in the good category, where the highest achievement is in functional skills and beyond. In general, students already have relatively good digital literacy skills.[22]

However, 11 percent of people are still categorized as having low digital literacy skills. This pretty good category is obtained in several dimensions: the ability to choose and select information, communicate, digital security, creativity, and collaboration skills. Several factors, including limited access to technology, minimal educational infrastructure, socioeconomic status, parental education level, critical understanding, and sociocultural factors, can cause low digital literacy.[23]

The results of other studies in more detail per dimension (Figure 2) show that based on the digital literacy components measured using a questionnaire[24] developed by using 8 (eight) dimensions of digital literacy measurement from Digital Literacy Across the Curriculum (Hague & Payton, 2010), namely Functional Skill and Beyond (functional and related skills), Creativity (creativity), Collaboration (collaboration), Communication (communication), The Ability to find and select Information (ability to find and select information), Critical Thinking and Evaluation (critical thinking and evaluation), Cultural and Social Understanding (cultural and social understanding), and E-Safety (digital security).

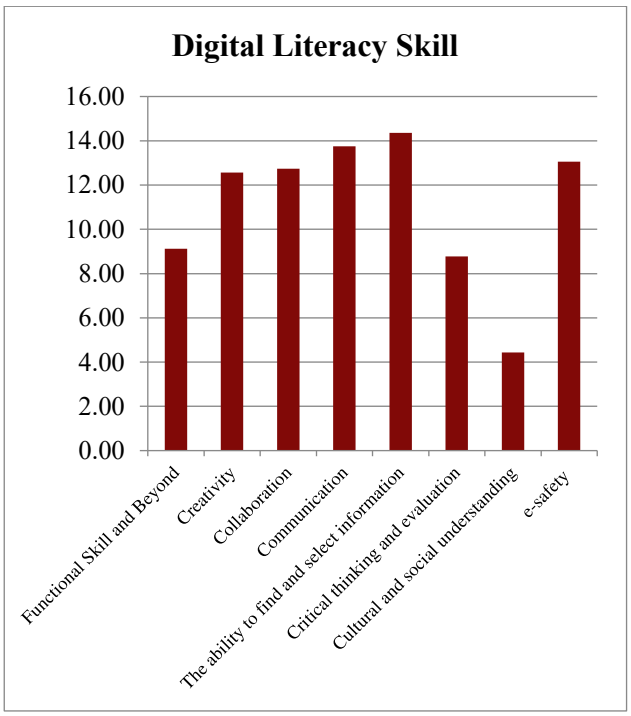
[20] (Sánchez-Caballé et al., 2020; Sumadi et al., n.d.; Yoleri & Nur Anadolu, 2022)

[21] Dhelia Endah Pratiwi and others, 'Tingkat Literasi Digital Mahasiswa Jurusan Matematika Universitas Negeri Semarang Pada Pembelajaran Daring', *Journal of Education and Technology*, 1.1 (2021), pp. 30–36 <http://jurnalilmiah.org/journal/index.php/jet>.

[22] Karsoni Berta Dinata, 'Analisis Kemampuan Literasi Digital Mahasiswa', *Edukasi: Jurnal Pendidikan*, 19.1 (2021), p. 105, doi:10.31571/edukasi.v19i1.2499.

[23] (Xu et al., 2023).

[24] Nugroho and Nasionalita, 'Digital Literacy Index of Teenagers in Indonesia'.



Gambar 2. Indeks Keterampilan Digital Literacy

The results of the study (Figure 2) show that the most mastered dimension of digital literacy is the ability to search for and select information. At the same time, the lowest is cultural and social understanding. This result differs from previous findings, where the highest score was for the communication component, and the lowest was for e-safety. The results also show differences with Dinata's findings, where the highest score was for functional skills and beyond components.[25]

Discussion

The study results showed that students achieved high scores in information-seeking and selecting skills, communication, digital security, collaboration, and creativity. Average middle scores were achieved for the functional skills component, critical thinking, and evaluation skills. The lowest score was for the social and cultural understanding component. More details per component are discussed in the following review:

Functional Skill and Beyond – related to students' ability to use digital tools and various technologies. The results show that this ability was not scored too high among the participants studied. The question asked to access this skill is how the skills are in using digital tools and technology. The results of this skill are still classified as medium compared to other skills. This result raises the question of why, at the student level, they are still not proficient in using digital tools, which was discussed in previous research, which found that Gen Z uses 2.0 tools to communicate with lecturers and is at an intermediate level in using digital tools. The study also explained that many students are unaware of digital tools and rarely use them. [26]

Meanwhile, a study by Dabbagh found that students use many digital tools but have not fully integrated them. This is possible because digital literacy skills and awareness can be influenced by their choice of major or faculty and their technology usage habits.[27] In addition, it is also influenced by whether they get IT-related courses and reliable lecturers in digital literacy.[28]

Creativity – is the ability to create various products by utilizing digital technology while thinking creatively and imaginatively. The results show that achievements in this field are high. The skills accessed from this component are the ability to create products in various formats and models through digital technology and the ability to think creatively and imaginatively. This is supported by the many creative digital products circulating, especially on social media. In accordance with previous research, this is also supported by the awareness and habit of using digital tools that contribute to students' digital skills.[29] Students who are accustomed to project-based learning can also impact the development of their creativity.[30] Digital technology can be an important means of enhancing creativity through its role as a tool for media that builds a supportive environment for developing student

[25] Nasionalita and Nugroho, 'Indeks Literasi Digital Generasi Milenial Di Kabupaten Bandung'.

[26] Noelia Araújo-Vila and others, 'Digital Competence in Spanish University Education and Its Use by Students', *Publications*, 8.4 (2020), pp. 1–15, doi:10.3390/publications8040047.

[27] Umut Zan and others, 'A Study on Digital Literacy Skills of Faculty of Letters Students: Use of University Library'.

[28] (Coşkunserçe & Aydoğdu, 2022).

[29] Araújo-Vila and others, 'Digital Competence in Spanish University Education and Its Use by Students'.

[30] (Sari et al., 2021)

creativity.[31] For example, research has found that students' creative ideas can be expressed through the creation of videos or content that they publish on digital media.[32]

Collaboration – is related to the ability to participate in digital spaces and work together in groups. Skills in this area are also high, including the ability to explain and negotiate ideas with others in a group in a digital space. These results show how students have the skills to use digital tools to collaborate well with colleagues at the same university and even at a global level. Previous findings explain that group-based collaborative learning is effective and supports their involvement in the learning process.[33] Effective collaboration strategies make it easier for students to get information quickly and develop better collaboration networks.[34] Social media as a medium for collaborative learning and student engagement is positively related to student attitudes and increased academic performance.[35] Other findings found that some media that can be used to improve collaboration skills are gamification, mixed reality, and social media.[36]

Communication – related to communication skills. This skill is demonstrated by the ability to communicate through digital technology media and understand the audience in the digital space. One of the things that can be seen is the large number of social media users in Indonesia, some of whom are dominated by young people. The study's results showed that the students' skills in this study were relatively high. In accordance with the findings of the study that in general, communication skills at the student level are good.[37][38] Communication skills are important so students can overcome the gap between knowledge and understanding and apply their knowledge in various cultural and societal context. [39] However, improving communication skills is still very much needed for students [40] Reflecting on the conditions during the last pandemic, a study shows that digital communication has become commonplace in the world of education, with the note that teachers must increase creativity so that students can participate more actively in lectures. Furthermore, efforts to improve digital systems and develop account personalization are still needed to increase student satisfaction and involvement.[41]

The Ability to Find and Select Information - is related to the ability to search for and select information. The results show that this skill is the highest. This result supports the research findings that digital literacy skills also affect the information search process in students.[42] This result is also related to the digital literacy skills needed to combat the spread of hoax news on social media.[43] This skill is also influenced by several conditions of the existing information, namely credibility, ease of use, usefulness of the information, and recommendations for the location of the

[31] David Aguilar and Manoli Pifarre Turmo, 'Promoting Social Creativity in Science Education with Digital Technology to Overcome Inequalities: A Scoping Review', *Frontiers in Psychology* (Frontiers Media S.A., 2019), doi:10.3389/fpsyg.2019.01474; Moisés Selfa-Sastre and others, 'The Role of Digital Technologies to Promote Collaborative Creativity in Language Education', *Frontiers in Psychology*, 13 (2022), doi:10.3389/fpsyg.2022.828981.

[32] Susanti Faipri Selegi and Kiki Aryaningrum, 'Literasi Digital Untuk Meningkatkan Kreativitas Mahasiswa Melalui Pembuatan Video Tutorial Alat Peraga Edukasi', *Jurnal Sinestesia*, 12.1 (2022), pp. 77–89 <https://sinestesia.pustaka.my.id/journal/article/view/144>; Adam Suhardiman and Muhammad Kamaluddin, *LITERASI DIGITAL MAHASISWA PENGGUNA TIKTOK DI UNIVERSITAS MUHAMMADIYAH CIREBON*, *Jurnal Komunikasi Pemberdayaan*, 2022, I.

[33] (Lee & Yang, 2020).

[34] Santiago Mendo-Lázaro and others, 'The Impact of Cooperative Learning on University Students' Academic Goals', *Frontiers in Psychology*, 12 (2022), p., doi:10.3389/fpsyg.2021.787210.

[35] (Alismaiel et al., 2022

[36] (Martínez-Cerdá et al., 2018).

[37] López-Meneses et al., 2022.)

[38] Guevara-Otero et al., 2023)

[39] (Maheswari et al., 2024).

[40] J Gao and others, 'The Influence Mechanism of Environmental Anxiety on Pro-Environmental Behaviour: The Role of Self-Discrepancy', *International Journal of Consumer Studies*, 45.1 (2021), pp. 54–64, doi:10.1111/ijcs.12604.

[41] I Belonovskaya and others, 'Digital Communication in Educational Process: Development Trends and New Opportunities', *Online Journal of Communication and Media Technologies*, 2020, p., doi:10.29333/ojcmt/7928.

[42] Vike Aprilianin Saputri and Rina Manggalani, 'Pengaruh Literasi Digital Terhadap Perilaku Pencarian Informasi Di Kalangan Mahasiswa', *PAEDAGOGY : Jurnal Ilmu Pendidikan Dan Psikologi*, 3.4 (2023), pp. 229–36.

[43] (Lubis et al., 2023)

information.[44] The ability of students to search for and select information is also supported by their ability to use various digital tools and resources.[45] Previous research has found that this ability is also high in students with visual impairments.[46]

Critical Thinking and Evaluation – related to thinking critically and evaluating information obtained digitally. This skill is measured by the ability to analyze, think critically, and contribute when dealing with information in the digital space. This ability is included in the three abilities with the lowest scores in this study. In fact, this ability is essential for academic success in college and is a student asset for choosing and continuing a future career[47]. Several factors, including the learning methods used, can cause the lower level of this skill.[48] Furthermore, research shows that using various digital tools positively relates to critical thinking skills. Digital literacy skills are also positively related to critical thinking skills.[49]

Cultural and Social Understanding – related to the ability to practice digital literacy skills in line with social and cultural understanding. The study results showed that this aspect of digital skills had the lowest score. This result can be associated with previous research findings that difficulties in cross-cultural communication can be due to an inability to understand social norms.[50] In fact, research shows that students who study on campuses that explicitly include cultural education find it easier to adapt to lectures.[51] Participation in cultural activities also significantly influences students' academic achievement.[52] Therefore, universities are expected to be facilitators that become open places for students from various regions or countries, or so-called intercultural spaces.[53]

E-safety – is related to the ability to understand and ensure personal safety when exploring digital technology. This skill includes ensuring safety when exploring, creating, and collaborating with digital technology. The results of the study showed that students scored high in this aspect. Several previous studies support this finding.[54] The e-safety aspect is one sign that students can safely express themselves in the digital world. This is supported by Bottyan's findings, stating that, in general, students feel safe doing online activities, although some of them have experienced incidents related to data security. Furthermore, previous studies have found that positive attitudes and good digital skills impact students' ability to manage interactions in cyberspace.[55] In addition, universities also need to equip students with good internet

[44] L Sbaffi and Chen Zhao, 'Modeling the Online Health Information Seeking Process: Information Channel Selection among University Students', *Journal of the Association for Information Science and Technology*, 71 (2019), p., doi:10.1002/asi.24230.

[45] (Bhat, 2023)

[46] (Arslantas & Gul, 2022).

[47] Daniel Lincoln and Mary-Louise Kearney, 'Promoting Critical Thinking in Higher Education', *Studies in Higher Education*, 44.5 (2019), pp. 799–800, doi:10.1080/03075079.2019.1586322; Silvia F. Rivas, Carlos Saiz, and Leandro S. Almeida, 'The Role of Critical Thinking in Predicting and Improving Academic Performance', *Sustainability (Switzerland)* , 15.2 (2023), doi:10.3390/su15021527.

[48] (Campo et al., 2023).

[49] (Kesici, 2022; Rudyanto et al., 2023).

[50] Nguyen Thi Nam Chi, Trinh Thi Thuy, and Nguyễn Thị Thanh Hương, 'Student Perception towards the Importance of Cultural Knowledge in Intercultural Communication', *INTERNATIONAL JOURNAL OF SOCIAL SCIENCE AND EDUCATION RESEARCH STUDIES*, 03.11 (2023), doi:10.55677/ijssers/V03I11Y2023-09.

[51] Bedelia Nicola Richards, 'Help-Seeking Behaviors as Cultural Capital: Cultural Guides and the Transition from High School to College among Low-Income First Generation Students', *Social Problems*, 69.1 (2022), pp. 241–60, doi:10.1093/socpro/spaa023.

[52] (Vaughan, 2020.)

[53] Fiona Price, 'Exploring the Implications of University Campuses as Intercultural Spaces through the Lens of Social Justice', *London Review of Education*, 2024, p., doi:10.14324/lre.22.1.01.

[54] Hafizha Kurnia Indahsari and others, 'Analysis of the Use of Android-Based Edusan Learning Media on Students' ICT Literacy Skills', *Jurnal Penelitian Pendidikan IPA*, 9.5 (2023), pp. 2312–18, doi:10.29303/jppipa.v9i5.2808; Wiwin Saputra, 'Digital Literacy Unveiled: An Evaluation of English Department Students in the EFL Context', in *Prosiding Seminar Nasional Pemanfaatan Sains Dan Teknologi Informasi*, 2023, 1, 165–70; Frengky Neolaka, Erlin Fatima Halek, and Lusia Naimnule, 'Kemampuan Literasi Digital Mahasiswa Calon Guru Pendidikan Biologi FKIP Universitas Timor Sebagai Penunjang Praktek Pengalaman Lapangan', *INNOVATIVE: Journal of Social Science Research*, 4.5 (2024), pp. 8990–9002.

[55] Halil Kayaduman, Ali Battal, and Hamza Polat, 'The Relationship between Undergraduate Students' Digital Literacy and Self-Regulation in Online Interaction', *Innovations in Education and Teaching International*, 60.6 (2023), pp. 894–905, doi:10.1080/14703297.2022.2113113.

awareness to reduce risks that are not good for student development.

Conclusion

This study found that the digital literacy skills of students in Indonesia are pretty good. However, some components still need to be improved, especially regarding social and cultural understanding. The highest scores were achieved in literacy: seeking information, communication, digital security, collaboration, and creativity. The findings of this study can be used to design targeted digital literacy education and training programs, develop easy-to-use digital tools and platforms, and create compelling digital literacy policies at the university level.

This study is important for understanding the portrait of students' digital literacy in the 5.0 era and is an initial step to improving it. However, there are limitations in this study, including the number of samples that still need to be increased, and the questionnaire is self-reported. In the future, further research needs to be conducted to identify factors that influence and develop strategies for improving students' digital literacy, such as university support, interaction between lecturers and students, and differences in majors or study programs in relation to students' digital literacy levels.

Acknowledgments

This research was funded by Litapdimas Kemenag RI through the 2022 Capacity Development Research Scheme.

References

Journal

Aguilar, David, and Manoli Pifarre Turmo, 'Promoting Social Creativity in Science Education with Digital Technology to Overcome Inequalities: A Scoping Review', *Frontiers in Psychology* (Frontiers Media S.A., 2019), doi:10.3389/fpsyg.2019.01474

Alismaiel, Omar A., Javier Cifuentes-Faura, and Waleed Mugahed Al-Rahmi, 'Social Media Technologies Used for Education: An Empirical Study on TAM Model During the COVID-19 Pandemic', *Frontiers in Education*, 7 (2022), doi:10.3389/feduc.2022.882831

Al-Kahlan, Thabet Bin Saeed, and Mohamad Ahmad Saleem Khasawneh, 'Motivations for Using Social Media Among University Students', *Kurdish Studies*, 12.1 (2024), pp. 2051–4883, doi:10.58262/ks.v12i1.153

Araújo-Vila, Noelia, Lucília Cardoso, Diego R. Toubes, and Jose Antonio Fraiz-Brea, 'Digital Competence in Spanish University Education and Its Use by Students', *Publications*, 8.4 (2020), pp. 1–15, doi:10.3390/publications8040047

Arslantas, Tugba Kamali, and Abdulmenaf Gul, 'Digital Literacy Skills of University Students with Visual Impairment: A Mixed-Methods Analysis', *Education and Information Technologies*, 27.4 (2022), pp. 5605–25, doi:10.1007/s10639-021-10860-1

Belonovskaya, I, E Matvievskaya, E Saitbaeva, Alla Ksenofontova, S Usmanov, M Zatsepina, and others, 'Digital Communication in Educational Process: Development Trends and New Opportunities', *Online Journal of Communication and Media Technologies*, 2020, p., doi:10.29333/ojcmt/7928

Bhat, Reyaz Ahmad, Digital Literacy Development: Assessing The Efficacy Of Online Learning Platforms In Enhancing Students' Information Fluency, *International Journal of Social Science*

Biru, Rembulan Catra Banyu, Asep Saepudin, and Sardin, 'Analisis Literasi Digital Terhadap Pembelajaran Mandiri Di Masa Pandemi Covid-19', *Indonesian Journal Of Adult and Community Education*, 02.02 (2020), pp. 61–69

Campo, Lucía, Héctor Galindo-Domínguez, María José Bezanilla, Donna Fernández-Nogueira, and Manuel Poblete, 'Methodologies for Fostering Critical Thinking Skills from University Students' Points of View', *Education Sciences*, 13.2 (2023), doi:10.3390/educsci13020132

Coşkunserçe, Ozan, and Şeyhmus Aydoğdu, 'Investigating the Digital Skills of Undergraduate Students in Terms of Various Variables', *Journal of Educational Technology and Online Learning*, 5 (2022), doi:10.31681/jetol.1151461

Dinata, Karsoni Berta, 'Analisis Kemampuan Literasi Digital Mahasiswa', *Edukasi: Jurnal Pendidikan*, 19.1 (2021), p. 105, doi:10.31571/edukasi.v19i1.2499

Escueta, Maya, Andre Joshua Nickow, Philip Oreopoulos, and Vincent Quan, 'Upgrading Education with Technology: Insights from Experimental Research', *Journal of Economic Literature* (American Economic Association, 2020), 897–996, doi:10.1257/JEL.20191507

Far-far, Gazali, 'Efektifitas Penggunaan Aplikasi Zoom Meeting Dalam Pembelajaran Di Masa Pandemi

Covid-19', *ISTORIA: Jurnal Pendidikan Dan Sejarah*, 17.1 (2021), pp. 1–15

Feni Haryati, Linda, *Konferensi Video Sebagai Alternatif Media Pembelajaran Pada Masa Pandemi Covid-19*, 2021, III

Gao, J, J Zhao, J Wang, and J Wang, 'The Influence Mechanism of Environmental Anxiety on Pro-Environmental Behaviour: The Role of Self-Discrepancy', *International Journal of Consumer Studies*, 45.1 (2021), pp. 54–64, doi:10.1111/ijcs.12604

Guevara-Otero, Niurka, Elena Cuevas-Molano, Esteban Vázquez-Cano, and Eloy López-Meneses, 'Analysis of Predisposition in Levels of Individual Digital Competence among Spanish University Students', *Contemporary Educational Technology*, 15.4 (2023), doi:10.30935/cedtech/13420

Guirao, Pedro García, Fabián Román, Malissa Maria Mahmud, Nieves Gutiérrez-Ángel, and Ngaaaa@ual Es Jesús-Nicasio Sánchez-García, *Digital Literacy in the University Setting: A Literature Review of Empirical Studies between 2010 and 2021*, 2022 <www.recursoscientificos.fecyt.es/.>

Harmoko, Danang Dwi, 'Digital Literacy As A Solution To Improve The Quality Of Indonesia's Human Resources', *Research and Development Journal of Education*, 7.2 (2021), p. 413, doi:10.30998/rdje.v7i2.10569

Indahsari, Hafizha Kurnia, Suyanta Suyanta, Hilman Yusri, Nina Khaerunnisa, and Sri Rejeki Dwi Astuti, 'Analysis of the Use of Android-Based Edusan Learning Media on Students' ICT Literacy Skills', *Jurnal Penelitian Pendidikan IPA*, 9.5 (2023), pp. 2312–18, doi:10.29303/jppipa.v9i5.2808

Jones, Rodney, and Christoph Hafner, *Understanding Digital Literacies: A Practical Introduction*, *Understanding Digital Literacies: A Practical Introduction*, 2012, doi:10.4324/9780203095317

Kayaduman, Halil, Ali Battal, and Hamza Polat, 'The Relationship between Undergraduate Students' Digital Literacy and Self-Regulation in Online Interaction', *Innovations in Education and Teaching International*, 60.6 (2023), pp. 894–905, doi:10.1080/14703297.2022.2113113

Kesici, Ahmet, 'The Effect of Digital Literacy on Creative Thinking Disposition: The Mediating Role of Lifelong Learning Disposition', *Journal of Learning and Teaching in Digital Age*, 7.2 (2022), pp. 260–73, doi:10.53850/joltida.1063509

Komala Dewi, Ratih, Oria Lasmana, and Skunda Diliarosta, 'How to Cite: Nadhila, A et al (2024). The Influence of Overconfidence and Risk Perception on Investment Decisions: The Moderating Effect of Financial Literacy on Individual Millennial Implications and Impact of Digital Literacy on Higher Education: Systematic Literature Review', *Generation Investors. Journal Eduvest*, 4.6 (2024), pp. 5300–5312 <http://eduvest.greenvest.co.id>

Kumar, Vikas, and Pooja Nanda, 'Social Media as a Learning Tool: A Perspective on Formal and Informal Learning', *International Journal of Educational Reform*, 33.2 (2022), pp. 157–82, doi:10.1177/10567879221094303

Lee, Wincy, and Min Yang, 'Effective Collaborative Learning from Chinese Students' Perspective: A Qualitative Study in a Teacher-Training Course', *Teaching in Higher Education*, 28 (2020), pp. 1–17, doi:10.1080/13562517.2020.1790517

Lincoln, Daniel, and Mary-Louise Kearney, 'Promoting Critical Thinking in Higher Education', *Studies in Higher Education*, 44.5 (2019), pp. 799–800, doi:10.1080/03075079.2019.1586322

López-Meneses, Eloy, Fabrizio Manuel Sirignano, Esteban Vázquez-Cano, and José M Ramírez-Hurtado, *University Students' Digital Competence in Three Areas of the DigCom 2.1 Model: A Comparative Study at Three European Universities*, *Australasian Journal of Educational Technology*, MMXX

Maheswari, D, R Abi, B.Ed Student, and Sakthi Educational, 'The Interplay between Education and Communication', *Shanlax International Journal of Arts, Science and Humanities*, 2024, p., doi:10.34293/sijash.v11is5.7646

Mariyani, and Triyani, 'Lisensi Internasional Creative Commons Attribution-ShareAlike 4.0 Profil Literasi Digital Mahasiswa Di Era DigitalisasI', 10.1 (2023), pp. 50–57

Martínez-Cerdá, Juan-Francisco, Joan Torrent-Sellens, and Inés González-González, 'Promoting Collaborative Skills in Online University: Comparing Effects of Games, Mixed Reality, Social Media, and Other Tools for ICT-Supported Pedagogical Practices', *Behaviour & Information Technology*, 37.10–11 (2018), pp. 1055–71, doi:10.1080/0144929X.2018.1476919

Mendo-Lázaro, Santiago, Benito León-Del-Barco, María-Isabel Polo-Del-Río, and Víctor-María López-Ramos, 'The Impact of Cooperative Learning on University Students' Academic Goals', *Frontiers in Psychology*, 12 (2022), p., doi:10.3389/fpsyg.2021.787210

Mokhtari, Farida, 'International Journal of Linguistics, Literature and Translation Fostering Digital Literacy in Higher Education: Benefits,

Challenges and Implications', 2023, doi:10.32996/ijllt

Mookerjee, Ria, K. D.V. Prasad, Ridhi Rani, and Ved Srinivas, 'Student Stress and Its Association With Student Performance and Psychological Well-Being: An Empirical Study on Higher Academic Education Students In And Around Hyderabad Metro', *International Journal of Professional Business Review*, 7.5 (2022), doi:10.26668/businessreview/2022.v7i5.753

Morgan, Ashlee, Ruth Sibson, and Denise Jackson, 'Digital Demand and Digital Deficit: Conceptualising Digital Literacy and Gauging Proficiency among Higher Education Students', *Journal of Higher Education Policy and Management*, 44.3 (2022), pp. 258–75, doi:10.1080/1360080X.2022.2030275

Muliani, Anisah, Mahdiya Karimah[2], Malla April Liana, Sherena Anodhea, Eka Pramudita[4], Muhammad Khoirul Riza[5], and others, 'Pentingnya Peran Literasi Digital Bagi Mahasiswa Di Era Revolusi Industri 4.0 Untuk Kemajuan Indonesia', *Journal of Education and Technology*, 1.2 (2021), pp. 87–2 <http://jurnalilmiah.org/journal/index.php/jet>

Musarat, Muhammad Ali, Muhammad Irfan, Wesam Salah Alaloul, Ahsen Maqsoom, and Maria Ghufran, 'A Review on the Way Forward in Construction through Industrial Revolution 5.0', *Sustainability (Switzerland)* (Multidisciplinary Digital Publishing Institute (MDPI), 2023), doi:10.3390/su151813862

Naik, Gopal, Chetan Chitre, Manaswini Bhalla, and Jothsna Rajan, 'Impact of Use of Technology on Student Learning Outcomes: Evidence from a Large-Scale Experiment in India', *World Development*, 127 (2020), p. 104736, doi:https://doi.org/10.1016/j.worlddev.2019.104736

Nasionalita, Kharisma, and Catur Nugroho, 'Indeks Literasi Digital Generasi Milenial Di Kabupaten Bandung', *Jurnal Ilmu Komunikasi*, 18.1 (2020), pp. 32–47

Neolaka, Frengky, Erlin Fatima Halek, and Lusia Naimnule, 'Kemampuan Literasi Digital Mahasiswa Calon Guru Pendidikan Biologi FKIP Universitas Timor Sebagai Penunjang Praktek Pengalaman Lapangan', *INNOVATIVE: Journal of Social Science Research*, 4.5 (2024), pp. 8990–9002

Nugroho, Catur, and Kharisma Nasionalita, 'Digital Literacy Index of Teenagers in Indonesia', *Journal Pekommas*, 5.2 (2020), p. 215, doi:10.30818/jpkm.2020.2050210

Oetomo, Robertus Koesmaryanto, Petrus Dwi Ananto Pamungkas, and Nithania Septianingsih, 'Literasi Digital Mahasiswa Menggunakan Kerangka Pengukuran Digital Kominfo', *Jurnal Mentari: Manajemen Pendidikan Dan Teknologi Informasi*, 2.1 (2023), pp. 73–83 <https://journal.pandawan.id/mentari/article/view/356>

Pala, Şenol Mail, and Adem Başıbüyük, 'The Predictive Effect of Digital Literacy, Self-Control and Motivation on the Academic Achievement in the Science, Technology and Society Learning Area', *Technology, Knowledge and Learning*, 2021, doi:10.1007/s10758-021-09538-x

Panggabean, Sarma, Renita Br Saragih, Male Onedy, Marulitua Sitorus, and Debora Uli Lubis, *Student Digital Literacy Competence Study Language and Literature Education Program Indonesia*, *Edumaspul-Journal of Education*, 2023, VII

Pratiwi, Dhelia Endah, Tri Mega Utami, Bena Korneliya, Muhammad Zahwan Rafiadzkay, and Shibghoh Qurrota Aini, 'Tingkat Literasi Digital Mahasiswa Jurusan Matematika Universitas Negeri Semarang Pada Pembelajaran Daring', *Journal of Education and Technology*, 1.1 (2021), pp. 30–36 <http://jurnalilmiah.org/journal/index.php/jet>

Price, Fiona, 'Exploring the Implications of University Campuses as Intercultural Spaces through the Lens of Social Justice', *London Review of Education*, 2024, p., doi:10.14324/lre.22.1.01

Purnama, Sigit, Maulidya Ulfah, Imam Machali, Agus Wibowo, and Bagus Shandy Narmaditya, 'Does Digital Literacy Influence Students' Online Risk? Evidence from Covid-19', *Heliyon*, 7.6 (2021), doi:10.1016/j.heliyon.2021.e07406

Rahmawati, Rahmah Dianti Putri, Nurdin, Aprilia Triaristina, Valensy Rachmedita, and Alsyabri Wira, 'Efektifitas Implementasi Video Conference Sebagai Media Pembelajaran Dimasa Pandemi Covid-19', *Jurnal Vocational Teknik Elektronika Dan Informatika*, 10.3 (2022), pp. 33–38 <http://ejournal.unp.ac.id/index.php/voteknika/index>

Reddy, Pritika, Bibhya Sharma, and Kaylash Chaudhary, 'Digital Literacy: A Review in the South Pacific', *Journal of Computing in Higher Education*, 34.1 (2022), pp. 83–108, doi:10.1007/s12528-021-09280-4

Richards, Bedelia Nicola, 'Help-Seeking Behaviors as Cultural Capital: Cultural Guides and the Transition from High School to College among

Low-Income First Generation Students', *Social Problems*, 69.1 (2022), pp. 241–60, doi:10.1093/socpro/spaa023

Rini, Riswanti, Nurain Suryadinata, and Ujang Efendi, 'Literasi Digital Mahasiswa Dan Faktor-Faktor Yang Berpengaruh', *Jurnal Akuntabilitas Manajemen Pendidikan*, 10.2 (2022), pp. 171–79, doi:10.21831/jamp.v10i2.48774

Ririen, Deci, and Febblina Daryanes, 'Analisis Literasi Digital Mahasiswa', *Research and Development Journal of Education*, 8.1 (2022), p. 210, doi:10.30998/rdje.v8i1.11738

Ristiyana Puspita Sari, Anggi, Suandi Sidauruk, Ruli Meiliawati, and Maya Erliza Anggraeni, 'Development Of Digital Literacy Assessment Scale To Measure Student's Digital Literacy', *Jurnal Ilmiah Kanderang Tingang*, 12.02 (2021), pp. 137–43, doi:10.37304/jikt.v12i02.128

Rivas, Silvia F., Carlos Saiz, and Leandro S. Almeida, 'The Role of Critical Thinking in Predicting and Improving Academic Performance', *Sustainability (Switzerland)* , 15.2 (2023), doi:10.3390/su15021527

Rizkiyatun Fadillah Lubis, Abdul Karim Batubara, and Indira Fatra Deni P, 'Literasi Media Dalam Menanggulangi Berita Hoax Di Media Sosial Mahasiswa Ilmu Perpustakaan', *Jurnal Sadewa : Publikasi Ilmu Pendidikan, Pembelajaran Dan Ilmu Sosial*, 1.3 (2023), pp. 334–51, doi:10.61132/sadewa.v1i3.110

Rudyanto, Hendra Erik, Lingga Nico Pradana, Hani Atun Mumtahana, and Ridho Pamungkas, 'Digital Environment Learning (DEL): Creativity in Framework of Digital Literacy', *Profesi Pendidikan Dasar*, 2023, pp. 15–23, doi:10.23917/ppd.v10i1.21821

Sánchez-Caballé, Anna, Mercè Gisbert-Cervera, and Francesc M Esteve-Mon, 'The Digital Competence of University Students: A Systematic Literature Review', 2020 <https://api.semanticscholar.org/CorpusID:219463448>

Saputra, Wiwin, 'Digital Literacy Unveiled: An Evaluation of English Department Students in the EFL Context', in *Prosiding Seminar Nasional Pemanfaatan Sains Dan Teknologi Informasi*, 2023, I, 165–70

Saputri, Vike Aprilianin, and Rina Manggalani, 'Pengaruh Literasi Digital Terhadap Perilaku Pencarian Informasi Di Kalangan Mahasiswa', *Paedagogy : Jurnal Ilmu Pendidikan Dan Psikologi*, 3.4 (2023), pp. 229–36

Sbaffi, L, and Chen Zhao, 'Modeling the Online Health Information Seeking Process: Information Channel Selection among University Students', *Journal of the Association for Information Science and Technology*, 71 (2019), p., doi:10.1002/asi.24230

Selegi, Susanti Faipri, and Kiki Aryaningrum, 'Literasi Digital Untuk Meningkatkan Kreativitas Mahasiswa Melalui Pembuatan Video Tutorial Alat Peraga Edukasi', *Jurnal Sinestesia*, 12.1 (2022), pp. 77–89 <https://sinestesia.pustaka.my.id/journal/article/view/144>

Selfa-Sastre, Moisés, Manoli Pifarré, Andreea Cujba, Laia Cutillas, and Enric Falguera, 'The Role of Digital Technologies to Promote Collaborative Creativity in Language Education', *Frontiers in Psychology*, 13 (2022), doi:10.3389/fpsyg.2022.828981

Setiani, Adris, *Efektivitas Proses Belajar Aplikasi Zoom Di Masa Pandemi Dan Setelah Pandemi Covid-19. Prosiding Seminar Nasional Pascasarjana UNNES*, 2020

Suhardiman, Adam, and Muhammad Kamaluddin, *Literasi Digital Mahasiswa Pengguna Tiktok Di Universitas Muhammadiyah Cirebon*, *Jurnal Komunikasi Pemberdayaan*, 2022, I

Sumadi, Sri Wahyuni, Sri Wahyuni, Sumadi / Program, Pascasarjana / Program, Studi Pendidikan Doktoral, Universitas Negeri Makassar, and others, *Inovasi Sains Dan Pembelajarannya: Tantangan Dan Peluang Makassar*, XXIII

Tavares, Maria C., Graça Azevedo, and Rui P. Marques, 'The Challenges and Opportunities of Era 5.0 for a More Humanistic and Sustainable Society—A Literature Review', *Societies* (MDPI, 2022), doi:10.3390/soc12060149

Thi Nam Chi, Nguyen, Trinh Thi Thuy, and Nguyễn Thị Thanh Hương, 'Student Perception towards the Importance of Cultural Knowledge in Intercultural Communication', *International Journal Of Social Science And Education Research Studies*, 03.11 (2023), doi:10.55677/ijssers/V03I11Y2023-09

Umut Zan, Burcu, Huriye Çolaklar, Ahmet Altay, and Nuri Taşkın, 'A Study on Digital Literacy Skills of Faculty of Letters Students: Use of University Library', *International Journal of Emerging Technologies in Learning*, 16.1 (2020), pp. 152–71, doi:10.3991/IJET.V16I01.16567

Vaughan, Tevin, 'Cultural Capital, Habitus and Academic Achievement', doi:10.25777/swf9-c951

Vázquez-Cano, Esteban, Ma Elena Parra-González, Adrián Segura-Robles, and Eloy López-Meneses, 'The Negative Effects of Technology on

Education: A Bibliometric and Topic Modeling Mapping Analysis (2008-2019)', *International Journal of Instruction*, 15.2 (2022), pp. 37–60, doi:10.29333/iji.2022.1523a

Vodă, Ana Iolanda, Cristina Cautisanu, Camelia Grădinaru, Chris Tănăsescu, and Gustavo Herminio Salati Marcondes de Moraes, 'Exploring Digital Literacy Skills in Economics and Social Sciences and Humanities Students', *Sustainability (Switzerland)*, 14.5 (2022), doi:10.3390/su14052483

Xu, Ting, Kyung Hee Park, and Xiaoxia Tian, 'Structural Relationship on Factors Influencing Digital Literacy of College Students', *Int. J. Emerg. Technol. Learn.*, 18 (2023), pp. 147–59, doi:10.3991/ijet.v18i19.38319

Yanti, Salma Nofri, and M Yemmardotillah, *Efektifitas Penggunaan Aplikasi Daring Dan Video Conference Materi System Design And Analisys Method (Sdam) Masa Pandemi*, 2021

Yoleri, Sibel, and Zeynep Nur Anadolu, 'Examination Of Digital Literacy Skills Of Undergraduate Students According To Various VariableS', *Advanced Education*, 2022, pp. 121–34, doi:10.20535/2410-8286.262190

Yustika, Gaung Perwira, and Sri Iswati, 'Digital Literacy in Formal Online Education: A Short Review', *Dinamika Pendidikan*, 15.1 (2020), pp. 66–76, doi:10.15294/dp.v15i1.23779