

REFERENCES

- Agbedahin, A. V., & Agbedahin, K. (2019). Food Waste in University Spaces. *Peace Review*, 31(4), 532–538. <https://doi.org/10.1080/10402659.2019.1800944>
- Aggleton, J. (2019). Defining digital comics: a British Library perspective. *Journal of Graphic Novels and Comics*, 10(4), 393–409. <https://doi.org/10.1080/21504857.2018.1503189>
- Alfanda, N., Jamaludin, U., & Bahrudin, F. A. (2024). Development Of Digital Comic Learning Media Based on Local Wisdom in Pancasila And Citizenship Education Subjects. *Jurnal Pendidikan PKN (Pancasila Dan Kewarganegaraan)*, 5(1), 105. <https://doi.org/10.26418/jppkn.v5i1.77786>
- Anitah, S. (2009). *Educational technology*. Yuma Pustaka.
- Aprilia, T., Afriyanti, S., Wela, N., Fauza, A., & Apfani, S. (2025a). Penguatan Literasi Membaca di Sekolah Dasar melalui Model Project-Based Learning (PBL) sesuai Kurikulum Merdeka. *CARONG: Jurnal Pendidikan, Sosial, Dan Humaniora*, 2(1), 148–158.
- Aprilia, T., Afriyanti, S., Wela, N., Fauza, A., & Apfani, S. (2025b). Penguatan Literasi Membaca di Sekolah Dasar melalui Model Project-Based Learning (PBL) sesuai Kurikulum Merdeka. *CARONG: Jurnal Pendidikan, Sosial, Dan Humaniora*, 2(1), 148–158.
- Behera, D. K. (2023). Promoting Sustainable Development Through Environmental Policy, Green Technologies, and Effective Waste Management: A Comprehensive Review. *Journal of Multidisciplinary Science: MIKAILALSYS*, 1(2), 179–198. <https://doi.org/10.58578/mikailalsys.v1i2.1675>
- Benatti, F. (2024). Innovations in Digital Comics. In *Innovations in Digital Comics* (1st ed.). Cambridge University Press. <https://doi.org/10.1017/9781009319942>
- Bilad, M. R., Zubaidah, S., & Prayogi, S. (2024). Addressing The PISA 2022 Results: A Call for Reinvigorating Indonesia's Education System. *International Journal of Essential Competencies in Education*, 3(1), 1–12. <https://doi.org/10.36312/ijece.v3i1.1935>
- Bogers, M., Biermann, F., Kalfagianni, A., Kim, R. E., Treep, J., & de Vos, M. G. (2022). The Impact of The Sustainable Development Goals On A Network of 276 International Organizations. *Global Environmental Change*, 76(June), 102567. <https://doi.org/10.1016/j.gloenvcha.2022.102567>
- Butarbutar, R. (2022). Improving Reading and Writing Literacy in English Text-Based Technology. *National Seminar of Pendidikan Bahasa Inggris (NSPBI)*, (Nspbi), 215–222.
- Cernev, T., & Fenner, R. (2020). The Importance of Achieving Foundational Sustainable Development Goals In Reducing Global Risk. *Futures*, 115, 102492. <https://doi.org/10.1016/j.futures.2019.102492>
- Clarke, V., & Braun, V. (2017). Thematic analysis. *Journal of Positive Psychology*, 12(3), 297–298. <https://doi.org/10.1080/17439760.2016.1262613>

- Delgadova, E. (2015). Reading literacy as one of the most significant academic competencies for the university students. *Procedia - Social and Behavioral Sciences*, 178(November 2014), 48–53. <https://doi.org/10.1016/j.sbspro.2015.03.145>
- Erol Şahin, A. N., & Kara, H. (2022a). A Digital Educational Tool Experience In History Course: Creating Digital Comics Via Pixton Edu. *Journal of Educational Technology and Online Learning*, 5(1), 223–242. <https://doi.org/10.31681/jetol.983861>
- Erol Şahin, A. N., & Kara, H. (2022b). A Digital Educational Tool Experience In History Course: Creating Digital Comics Via Pixton Edu. *Journal of Educational Technology and Online Learning*, 5(1), 223–242. <https://doi.org/10.31681/jetol.983861>
- Fatimah, A. S., Santiana, & Saputra, Y. (2019). Digital comic: An innovation of using toondoo as media technology for teaching English short story. *English Review: Journal of English Education*, 7(2), 101–108. <https://doi.org/https://doi.org/10.25134/erjee.v7i2.1526>
- Fitria, Y., Malik, A., Mutiaramses, Halili, S. H., & Amelia, R. (2023). Digital Comic Teaching Materials: It's Role To Enhance Student's Literacy On Organism Characteristic Topic. *Eurasia Journal of Mathematics, Science and Technology Education*, 19(10), 1–11. <https://doi.org/10.29333/ejmste/13573>
- Fonseca, L. M., Domingues, J. P., & Dima, A. M. (2020). Mapping The Sustainable Development Goals Relationships. *Sustainability (Switzerland)*, 12(8), 1–15.
- Gabriel, M., & Luque, M. L. D. (2020). *Sustainable Development Goal 12 and Its Relationship with the Textile Industry*. 21–46. https://doi.org/10.1007/978-981-13-8787-6_2
- Gregory, R. J. (2015). Psychological testing: History, principles, and applications Boston, MA: Pearson. In *Global Edition*.
- Halkos, G., & Gkampoura, E. C. (2021). Where Do We Stand On The 17 Sustainable Development Goals? An Overview On Progress. *Economic Analysis and Policy*, 70, 94–122. <https://doi.org/10.1016/j.eap.2021.02.001>
- Handayani, W. T. (2024). Use Of Interactive Learning Technology In Improving Literacy Skills In Elementary Students. *International Journal of Students Education*, 2(2), 258–260.
- Hasibuan, M. S., Lubis, M. J., & Hutagalung, S. M. (2025). *Utilization of Technological Literacy to Improve Students ' Critical Thinking Skills in Writing Text*. 3(01), 50–58.
- Herrera Cano, N. J., Díaz Téllez, Á. S., & Mejía Ríos, J. (2023). Exploring The Benefits of Information And Communication Technologies (ICT) And Gamification In Strengthening Reading Skills: A Systematic Review. *Multidisciplinary Reviews*, 6(1). <https://doi.org/10.31893/multirev.2023003>
- Ho, Y. Y., & Lim, L. (2021a). Targeting student learning needs: the development and preliminary validation of the Learning Needs Questionnaire for a diverse university student population. *Higher Education Research and*

- Development*, 40(7), 1452–1465.
<https://doi.org/10.1080/07294360.2020.1818062>
- Ho, Y. Y., & Lim, L. (2021b). Targeting student learning needs: the development and preliminary validation of the Learning Needs Questionnaire for a diverse university student population. *Higher Education Research and Development*, 40(7), 1452–1465.
<https://doi.org/10.1080/07294360.2020.1818062>
- İlhan, G. O., Kaba, G., & Sin, M. (2021). Usage of Digital Comics in Distance Learning During COVID-19. *International Journal on Social and Education Sciences*, 3(1), 161–179. <https://doi.org/10.46328/ijonses.106>
- Indriasih, A. (2023). Digital Comic Development to Improve Life Skills in Early Children. *Buana Pendidikan Jurnal Fakultas Keguruan Dan Ilmu Pendidikan*, 19(1), 152–160. <https://doi.org/10.36456/bp.vol19.no1.a6589>
- Jamissen, G., Hardy, P., Nordkvelle, Y., & Pleasants, H. (2017). Digital Storytelling in Higher Education: International Perspective. In *Digital Education and Learning*.
- Janzen, J. (2008). Teaching english language learners in the content areas. *Review of Educational Research*, 78(4), 1010–1038.
<https://doi.org/10.3102/0034654308325580>
- Jastrzębska, E. (2022). Implementation of Sustainable Development Goal 12 in Cities: Best Practices. *Studia Ecologiae et Bioethicae*, 20(3), 13–24.
<https://doi.org/10.21697/seb.2022.17>
- Jones, P., Wynn, M., Hillier, D., & Comfort, D. (2017). The Sustainable Development Goals and Information and Communication Technologies. *Indonesian Journal of Sustainability Accounting and Management*, 1(1), 1.
<https://doi.org/10.28992/ijsam.v1i1.22>
- Jumyati, Yuhana, Y., & Islami, R. A. Z. El. (2025). Pengembangan Media Komik Legenda Gunung Pinang untuk Meningkatkan Kemampuan Literasi Budaya Peserta Didik Fase B. *Ideguru: Jurnal Karya Ilmiah Guru*, 10(1), 37–42.
- Karlimah, K., Hamdu, G., Pratiwi, V., Herdiansah, H., & Kurniawan, D. (2021). The Development of Motion Comic Storyboard Based On Digital Literacy And Elementary School Mathematics Ability In The New Normal Era During Covid-19 Pandemic. *Journal of Physics: Conference Series*, 1987(1). <https://doi.org/10.1088/1742-6596/1987/1/012026>
- Kartika Sari, P., Arofatinajah, S., & Fajarianto, O. (2022). Development of Digital Comic on Thematic Learning to Improve Literature Skills of 5th Grade Students in Elementary School. *JTP - Jurnal Teknologi Pendidikan*, 24(1), 38–49. <https://doi.org/10.21009/jtp.v24i1.23700>
- Khofifah, S., & Ramadan, Z. H. (2021). Literacy Conditions of Reading, Writing and Calculating for Elementary School Students. *Journal of Educational Research and Evaluation*, 5(3), 342–349.
<https://doi.org/10.23887/jere.v5i3.37429>
- Kostenko, A., & Kuzmenko, O. (2023). Integration of Sustainable Development Goals and Media Literacy in Education. *Studia Warminskie*, 60, 83–92.
<https://doi.org/10.31648/sw.9565>

- Küfeoğlu, S. (2022). SDG-12: Responsible Consumption and Production. *Emerging Technologies*, 409–428. https://doi.org/10.1007/978-3-031-07127-0_14
- Lahnwong, C. (2019). The Framework Development for Interpretation of Students Reading Literacy in Teaching and Learning Through Open Approach. *Journal of Physics: Conference Series*, 1340(1). <https://doi.org/10.1088/1742-6596/1340/1/012040>
- Madu, F. J., & Jediut, M. (2023). The role of teacher in the development of reading literacy. *Jurnal Cakrawala Pendas*, 9(4), 655–663.
- Mahayanti, N. W. S., Asril, N. M., Suwastini, N. K. A., Arnyana, I. B. P., Dantes, G. R., & Pratiwi, N. P. A. (2025a). The Trends of Peace Education Research in Indonesia: a Bibliometric Analysis Aligned With Quality of Education. *Journal of Lifestyle and SDG'S Review*, 5(2), 1–23. <https://doi.org/10.47172/2965-730X.SDGsReview.v5.n02.pe02571>
- Mahayanti, N. W. S., Asril, N. M., Suwastini, N. K. A., Arnyana, I. B. P., Dantes, G. R., & Pratiwi, N. P. A. (2025b). The Trends of Peace Education Research in Indonesia: a Bibliometric Analysis Aligned With Quality of Education. *Journal of Lifestyle and SDG'S Review*, 5(2), 1–23. <https://doi.org/10.47172/2965-730X.SDGsReview.v5.n02.pe02571>
- Mhlanga, D. (2023). *A Historical Perspective on Sustainable Development and The Sustainable Development Goals In: FinTech and Artificial Intelligence for Sustainable Development. Sustainable Development Goals Series* (1st ed.). Palgrave Macmillan.
- Nadifa, M., & Zulvani, N. V. (2024). Literacy Policy As An Effort To Strengthen 21st-Century Skills. *Indonesian Journal of Education Development (IJED)*, 5(1), 16–29.
- Nasrullah, R., Laksono, K., Prayogi, A., Parmin, & Inayatillah, F. (2024). Establishing Literacy Foundations: Policies and Interventions for Indonesia's Future Excellence. *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, 10(3), 1219–1230.
- Ningrum, T. M., & Putro, N. (2024). *Technological Interventions in English Pedagogy : A Comprehensive Analysis of Their Influence on Teaching and Learning of the English Language*. 16, 4690–4700. <https://doi.org/10.35445/alishlah.v16i4.4716>
- Novela, G. T., Asrowi, A., & Widyastono, H. (2022a). Student's Reading Literacy: Opportunities and Characteristic for Instructional Media Development. *Journal of Education Technology*, 6(1), 140–148. <https://doi.org/10.23887/jet.v6i1.42843>
- Novela, G. T., Asrowi, A., & Widyastono, H. (2022b). Student's Reading Literacy: Opportunities and Characteristic for Instructional Media Development. *Journal of Education Technology*, 6(1), 140–148. <https://doi.org/10.23887/jet.v6i1.42843>
- Nurkancana, W., & Sunartana. (1992). *Evaluasi Hasil Belajar*. Usaha Nasional.
- Oxley, E., & de Cat, C. (2021). A Systematic Review of Language And Literacy Interventions In Children And Adolescents With English As An Additional

- Language (EAL). *Language Learning Journal*, 49(3), 265–287. <https://doi.org/10.1080/09571736.2019.1597146>
- Panjaitan, T. R., Samodra, J., & Sutrisno, A. (2022). Mastri: Komik Digital untuk Memotivasi Remaja dalam Optimalisasi Manajemen Waktu. *JoLLA: Journal of Language, Literature, and Arts*, 2(12), 1780–1796. <https://doi.org/10.17977/um064v2i122022p1780-1796>
- Peets, K. F., Yim, O., & Bialystok, E. (2022). Language Proficiency, Reading Comprehension And Home Literacy In Bilingual Children: The Impact of Context. *International Journal of Bilingual Education and Bilingualism*, 25(1), 226–240. <https://doi.org/10.1080/13670050.2019.1677551>
- Pitri, R., & Sofia, A. (2022). Factor Analysis for Increasing Reading Literacy in Indonesia. *Parameter: Journal of Statistics*, 2(2), 18–25. <https://doi.org/10.22487/27765660.2022.v2.i2.15898>
- Prawira, N. N. P., Artini, L. P., Marsakawati, N. P. E., Padmadewi, N. N., Ratminingsih, N. M., & Utami, I. G. A. L. P. (2023). The Implementation of Literacy Activities in Primary School. *Jurnal Imiah Pendidikan Dan Pembelajaran*, 7(1), 150–156. <https://doi.org/10.23887/jipp.v7i1.56108>
- Rachman, R. S., Zaelani, P. I., Sidik, A. P., & Irma, N. (2024). Enhancing Information Literacy Skills Rough the Implementation of the Empowering 8 Model for the Achievement of Sustainable Development Goals. *Toplama*, 2(1), 69–77. <https://doi.org/10.61397/tla.v2i1.222>
- Ramos, G., & Schleicher, A. (2018a). The OECD PISA Global Competence Framework: Preparing our Youth for an Inclusive and Sustainable World. *Oecd*, 43.
- Ramos, G., & Schleicher, A. (2018b). The OECD PISA Global Competence Framework: Preparing our Youth for an Inclusive and Sustainable World. *Oecd*, 43.
- Ratama, I. P., Padmadewi, N. N., & Artini, L. P. (2021). Teaching the 21st Century Skills (4Cs) in English Literacy Activities. *Journal of Education Research and Evaluation*, 5(2), 223. <https://doi.org/10.23887/jere.v5i2.30849>
- Ratminingsih, N. M., Budasi, I. G., & Kurnia, W. D. A. (2020). Local culture-based storybook and its effect on reading competence. *International Journal of Instruction*, 13(2), 253–268. <https://doi.org/10.29333/iji.2020.13218a>
- Richey, R. C., & Klein, J. D. (2010). Design and Development Research. In *Routledge; Taylor & Francis*. Routledge; Taylor & Francis.
- Rizqiani, D. A., & Novitri, S. (2023). Developing Needs Analysis of Critical Literacy Models for Teaching EFL Reading Class. *J-SHMIC : Journal of English for Academic*, 10(2), 94–107.
- Rohde, L. (2015). The comprehensive emergent literacy model: Early literacy in context. *SAGE Open*, 5(1). <https://doi.org/10.1177/2158244015577664>
- Rosadi, N., & Megayanti, W. (2022). Kontribusi Kurikulum Merdeka dalam Upaya Peningkatan Kemampuan Literasi di Indonesia. *NITISARA: Jurnal Ilmu Bahasa*, 3(1), 7–11.
- Rosyada, T. N., & Asmarani, R. (2023a). The Development of Digital Comics Learning Media Based on Scientific Approach as Character Strengthening

- for Grade 2 Elementary School. *IJPSE Indonesian Journal of Primary Science Education*, 4(1), 58–65. <https://doi.org/10.33752/ijpse.v4i1.2858>
- Rosyada, T. N., & Asmarani, R. (2023b). The Development of Digital Comics Learning Media Based on Scientific Approach as Character Strengthening for Grade 2 Elementary School. *IJPSE Indonesian Journal of Primary Science Education*, 4(1), 58–65. <https://doi.org/10.33752/ijpse.v4i1.2858>
- Sample, A. (2020). Historical Development of Definitions of Information Literacy: A literature Review of Selected Resources. *Journal of Academic Librarianship*, 46(2). <https://doi.org/10.1016/j.acalib.2020.102116>
- Sanjaya, P. P., & Aminatun, D. (2024a). Digital Comics: Integrating CALL in Enhancing Students' Reading Skill at the High School Level. *JiIP - Jurnal Ilmiah Ilmu Pendidikan*, 7(7), 6357–6363. <https://doi.org/10.54371/jiip.v7i7.4651>
- Sanjaya, P. P., & Aminatun, D. (2024b). Digital Comics: Integrating CALL in Enhancing Students' Reading Skill at the High School Level. *JiIP - Jurnal Ilmiah Ilmu Pendidikan*, 7(7), 6357–6363. <https://doi.org/10.54371/jiip.v7i7.4651>
- Saputri, A. D., Sunardi, S., & Musadad, A. A. (2021). Digital Comics as A Media in EFL Reading Classrooms. *AL-ISHLAH: Jurnal Pendidikan*, 13(2), 1097–1102. <https://doi.org/10.35445/alishlah.v13i2.758>
- Sari, S. M., & Manurung, F. (2023). Factors Causing the Low Literacy Capability of Class 5a Students in Primary School Negeri 22 Banda Aceh. *International Conference on Education, Science, Technology and Health (ICONESTH)*, (6), 462–470.
- Sari, Y., Sari, R. P., Sumantri, M. S., & Marini, A. (2021a). Development of Digital Comic For Science Learning In Elementary School. *IOP Conference Series: Materials Science and Engineering*, 1098(3), 032060. <https://doi.org/10.1088/1757-899x/1098/3/032060>
- Sari, Y., Sari, R. P., Sumantri, M. S., & Marini, A. (2021b). Development of Digital Comic For Science Learning In Elementary School. *IOP Conference Series: Materials Science and Engineering*, 1098(3), 032060. <https://doi.org/10.1088/1757-899x/1098/3/032060>
- Schröder, P., Antonarakis, A. S., Brauer, J., Conteh, A., Kohsaka, R., Uchiyama, Y., & Pacheco, P. (2019). SDG 12: Responsible Consumption And Production-Potential Benefits And Impacts On Forests And Livelihoods. In *Sustainable Development Goals: Their Impacts on Forests and People*. <https://doi.org/10.1017/9781108765015.014>
- Shafira, V. S., Ramadhani, G., & Rachman, I. F. (2024). How Digital Literacy Can Drive Inclusive Progress Towards the 2030 SDGs. *Advances in Economics & Financial Studies*, 2(2), 40–41. <https://doi.org/10.60079/aefts.v2i2.260>
- Sito Resmi, W. S., Nuryatin, A., & Latiana, L. (2022). Development of Digital-Based Comic Media to Improve Literature, Reading Understanding and Learning Outcomes in Class III Students Primary School. *International Journal of Research and Review*, 9(6), 456–463. <https://doi.org/10.52403/ijrr.20220648>

- Solihati, N., & Zulaiha, S. (2024a). *Digital Comics Based on Local Wisdom : An Innovative Approach to Enhancing Elementary School Students ' Reading Comprehension*. 7(3), 504–510.
- Solihati, N., & Zulaiha, S. (2024b). *Digital Comics Based on Local Wisdom : An Innovative Approach to Enhancing Elementary School Students ' Reading Comprehension*. 7(3), 504–510.
- Solihin, R. R., Susanto, T. T. D., Fauziyah, E. P., Yanti, N. V. I., & Ramadhania, A. P. (2024). The Efforts of Indonesian Government In Increasing Teacher Quality Based On PISA Result In 2022: A Literature Review. *Perspektif Ilmu Pendidikan*, 38(1), 57–65. <https://doi.org/10.21009/pip.381.6>
- Utomo, D. T. P., & Ahsanah, F. (2020). Utilizing Digital Comics in College Students ' Grammar Class. *Journal of English Language Teaching and Linguistics*, 5(3), 393–403.
- Weiland, S., Hickmann, T., Lederer, M., Marquardt, J., & Schwindenhammer, S. (2021). The 2030 Agenda For Sustainable Development: Transformative Change Through The Sustainable Development Goals? *Politics and Governance*, 9(1), 90–95. <https://doi.org/10.17645/PAG.V9I1.4191>
- Widiyanti, D., Fadila, D., Pratiwi, N., & Rachman, I. F. (2024). Peran Literasi Digital Pada Siswa Sekolah Dasar Untuk Pencapaian Sustainable Development Goals (SDGs) 2030. *Morfologi: Jurnal Ilmu Pendidikan, Bahasa, Sastra Dan Budaya*, 2(3), 142–155. <https://doi.org/10.61132/morfologi.v2i3.626>
- Wijayanti, S. (2020). *Indonesian Students' Reading Literacy*. 390(Icracos 2019), 61–65. <https://doi.org/10.2991/icracos-19.2020.13>
- Wildová, R. (2014). Initial Reading Literacy Development in Current Primary School Practice. *Procedia - Social and Behavioral Sciences*, 159, 334–339. <https://doi.org/10.1016/j.sbspro.2014.12.383>
- Wira Utama, I. P. (2023). Policy Paper Kebijakan Pengelolaan Sampah Di Provinsi Bali: Problematika Dan Solusi. *Jurnal Penelitian Multidisiplin*, 2(1), 175–182. <https://doi.org/10.58705/jpm.v2i1.121>
- Zaim, M., Refnaldi, Zainil, Y., Tiarina, Y., & Zakiyah, M. (2023). The Implementation of the PISA Model of English Reading Literacy Assessment for Senior High School. *Advances in Social Science, Education and Humanities Research*, (Icla), 19–26. https://doi.org/10.2991/978-2-38476-124-1_4
- Zaim, M., & Zakiyah, M. (2024a). Can the Merdeka Belajar curriculum really improve students ' reading literacy? *JOALL: Journal of Applied Linguistics and Literature*, 9(1), 147–167.
- Zaim, M., & Zakiyah, M. (2024b). Can the Merdeka Belajar curriculum really improve students ' reading literacy? *JOALL: Journal of Applied Linguistics and Literature*, 9(1), 147–167.
- Zaim, M., & Zakiyah, M. (2024c). Can the Merdeka Belajar curriculum really improve students ' reading literacy? *JOALL: Journal of Applied Linguistics and Literature*, 9(1), 147–167.
- Zain, Moh. I., Suastra, I. W., Dantes, I. N., & Padmadewi, N. N. (2024). The Effectiveness of Digital Comics Based on Sasak Folklore on the Reading

Literacy and Independent Character of Grade IV Elementary School Students. *International Journal of Religion*, 5(11), 2379–2390. <https://doi.org/10.61707/w7y60g61>

