

DAFTAR PUSTAKA

- Adiputra, D. K., Japar, J., & Muslim, S. (2024). *MODEL PEBELAJARAN PENDIDIKAN KARAKTER BERBASIS KEARIFAN LOKAL DENGAN VIRTUAL REALITY*. PT Penamuda Media.
- Akhmat, G., Zaman, K., Shukui, T., Javed, Y., & Khan, M. M. (2014). Relationship between educational indicators and research outcomes in a panel of top twenty nations: Windows of opportunity. *Journal of Informetrics*, 8(2), 349–361.
- Ali, A., Maniboey, L. C., Megawati, R., Djarwo, C. F., & Listiani, H. (2024). *Media Pembelajaran Interaktif: Teori Komprehensif dan Pengembangan Media Pembelajaran Interaktif di Sekolah Dasar*. PT. Sonpedia Publishing Indonesia.
- Allcoat, D., & von Mühlenen, A. (2018a). Learning in virtual reality: Effects on performance, emotion and engagement. *Research in Learning Technology*, 26.
- Allcoat, D., & von Mühlenen, A. (2018b). Learning in virtual reality: Effects on performance, emotion and engagement. *Research in Learning Technology*, 26. <https://doi.org/10.25304/RLT.V26.2140>
- Alshammari, S. H., & Alkhwalidi, A. F. (2025). An integrated approach using social support theory and technology acceptance model to investigate the sustainable use of digital learning technologies. *Scientific Reports*, 15(1), 342.
- Alvarez, J., & Djaouti, D. (2011). An introduction to Serious game Definitions and concepts. *Serious Games & Simulation for Risks Management*, 11(1), 11–15.
- Amelia, S., & Santoso, G. (2022). Pengaruh Pembelajaran Ilmu Teknologi Dalam Meningkatkan Pengetahuan Pendidikan Kewarganegaraan. *Jurnal Pendidikan Transformatif*, 1(2), 146–155.
- Amrullah, A. (2022, June 1). *Survei SMRC: Hanya 64,6 Persen Publik Tahu Semua Sila di Pancasila*. Republika.
- Anatasya, E., & Anggareni Dewi, D. (2021). MATA PELAJARAN PENDIDIKAN KEWARGANEGARAAN SEBAGAI PENDIDIKAN KARAKTER PESERTA DIDIK SEKOLAH DASAR. In *Jurnal Pendidikan Kewarganegaraan Undiksha* (Vol. 9, Issue 2). <https://ejournal.undiksha.ac.id/index.php/JJPP>
- Anbiya, B. F. (2020). Filsafat Progresivisme dan Implikasinya terhadap Pendidikan Kewarganegaraan Sebagai General Education di Indonesia. *Civic-Culture: Jurnal Ilmu Pendidikan PKN Dan Sosial Budaya*, 4(1), 301–311.
- Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives: complete edition*. Addison Wesley Longman, Inc.
- Andrew, J., Henry, S., Yudhisthira, A. N., Arifin, Y., & Permai, S. D. (2019). Analyzing the factors that influence learning experience through game based learning using visual novel game for learning pancasila. *Procedia Computer Science*, 157, 353–359.
- Anggraini, D. L., Yulianti, M., Nurfaizah, S., & Pandiangan, A. P. B. (2022). Peran guru dalam mengembangkan kurikulum merdeka. *Jurnal Ilmu Pendidikan Dan Sosial*, 1(3), 290–298.
- Anshori, S. (2016). Kontribusi ilmu pengetahuan sosial dalam pendidikan karakter. *Eduksos Jurnal Pendidikan Sosial & Ekonomi*, 3(2).

- Antika, R. R. (2014). Proses pembelajaran berbasis student centered learning (Studi deskriptif di sekolah menengah pertama Islam Baitul 'Izzah, Nganjuk). *Jurnal Biokultur*, 3(1), 251–265.
- Anzelina, D., Arafat Lubis, M., Azizan, N., Khairiyah Siregar, H., Agama Islam, P., Tarbiyah dan Ilmu Keguruan, F., Syekh Ali Hasan Ahmad Addary Padangsidempuan, U., Guru Sekolah Dasar, P., Guru Madrasah Ibtidaiyah, P., & Kunci, K. (2024). Implementation of the Make a Match Learning Model in Pancasila and Citizenship Education in Elementary Schools. *Journal of Elementary Educational Research*, 4(2), 115–126. <https://doi.org/10.30984/JEER.V4I2.1078>
- APPJII. (2024, February 4). *APJII Jumlah Pengguna Internet Indonesia Tembus 221 Juta Orang*. Asosiasi Penyelenggara Jasa Internet Indonesia. <https://apjii.or.id/berita/d/apjii-jumlah-pengguna-internet-indonesia-tembus-221-juta-orang>
- Araiza-Alba, P., Keane, T., Matthews, B., Simpson, K., Strugnell, G., Chen, W. S., & Kaufman, J. (2021). The potential of 360-degree virtual reality videos to teach water-safety skills to children. *Computers and Education*, 163. <https://doi.org/10.1016/j.compedu.2020.104096>
- Arifin, M., Umar, M., & Siregar, A. H. (2024). Model-Model Pembelajaran di Era 4.0 dan Disrupsi dalam Implementasi. *Journal on Education*, 06(02), 11110–11119.
- Arnab, S., De Freitas, S., Lamerias, P., Portuguese-Castro, M., & Santos Garduño, H. (2024). Beyond Traditional Classrooms: Comparing Virtual Reality Applications and Their Influence on Students' Motivation. *Education Sciences* 2024, Vol. 14, Page 963, 14(9), 963. <https://doi.org/10.3390/EDUCSCI14090963>
- Arzfi, B. P., & Maria Montessori, R. (2025). Development of Digital Game Based Learning Model Teaching Materials to Improve Learning Outcomes in Primary Schools. *Educational Process: International Journal*.
- Asti Khairiza, A., & Putra, A. (2019). Jurnal of Basic Penggunaan Model Pembelajaran Visualization, Auditory, Kinestetik (VAK) Terhadap Peningkatan Hasil Belajar di Kelas IVSD Negeri 3 Langsa. *Jurnal of Basic Education Studies*, 2(1).
- Ausubel, D. P. (1968). A Cognitive view. *Educational Psychology*.
- Awad, Y. R. (2022). Voluntary non-formal teacher professional learning for democratic peacebuilding citizenship education: A participatory approach. *Citizenship Teaching and Learning*, 17(1), 85–107. https://doi.org/10.1386/ctl_00083_1
- Bamodu, O., & Ye, X. M. (2013). Virtual reality and virtual reality system components. *Advanced Materials Research*, 765, 1169–1172.
- Benson, L., Harkavy, I. R., & Puckett, J. L. (2007). *Dewey's dream: Universities and democracies in an age of education reform: Civil society, public schools, and democratic citizenship*. Temple University Press.
- Bexson, C., Oldham, G., & Wray, J. (2024). Safety of virtual reality use in children: a systematic review. *European Journal of Pediatrics* 2024 183:5, 183(5), 2071–2090. <https://doi.org/10.1007/S00431-024-05488-5>

- Blank, R. K. (1993). Developing a system of education indicators: Selecting, implementing, and reporting indicators. *Educational Evaluation and Policy Analysis*, 15(1), 65–80.
- Branson, M. S., & Quigley, C. N. (1998). *The role of civic education*.
- Bruce, B. C., & Levin, J. A. (2003). *Roles for new technologies in language arts: Inquiry, communication, construction, and expression*.
- Bruner, J. S. (1997). The culture of education. In *The culture of education*. Harvard university press.
- BSKAP KEMENDIKBUD. (2022). *Capaian Pembelajaran Mata Pelajaran Pendidikan Pancasila Fase A-Fase F*.
- Chang, C.-C., Liang, C., Chou, P.-N., & Lin, G.-Y. (2017). Is game-based learning better in flow experience and various types of cognitive load than non-game-based learning? Perspective from multimedia and media richness. *Computers in Human Behavior*, 71, 218–227.
- Chen, C. H., Hung, H. T., & Yeh, H. C. (2021). Virtual reality in problem-based learning contexts: Effects on the problem-solving performance, vocabulary acquisition and motivation of English language learners. *Journal of Computer Assisted Learning*, 37(3), 851–860. <https://doi.org/10.1111/jcal.12528>
- Chen, C.-M., & Tsai, Y.-N. (2012). Interactive augmented reality system for enhancing library instruction in elementary schools. *Computers & Education*, 59(2), 638–652.
- Cheng, K. H., & Tsai, C. C. (2019). A case study of immersive virtual field trips in an elementary classroom: Students' learning experience and teacher-student interaction behaviors. *Computers and Education*, 140. <https://doi.org/10.1016/j.compedu.2019.103600>
- Cheng, K., & Tsai, C. (2016). The interaction of child–parent shared reading with an augmented reality (AR) picture book and parents' conceptions of AR learning. *British Journal of Educational Technology*, 47(1), 203–222.
- Christopoulos, A., Conrad, M., & Shukla, M. (2018). Increasing student engagement through virtual interactions: How? *Virtual Reality*, 22(4), 353–369.
- Clark, R. C., & Mayer, R. E. (2023). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*. John Wiley & sons.
- Coffey, H. (2009). Digital game-based learning. *Learn NC*, 1–3.
- Cogan, J., & Derricott, R. (2014). *Citizenship for the 21st century: An international perspective on education*. Routledge.
- Cohen, A. (2010). A Theoretical Model of Four Conceptions of Civic Education. *Canadian Social Studies*, 44(1), 17–28.
- Crafts, N. F. R. (1977). Industrial Revolution in England and France: some thoughts on the question, "Why was England first?". *The Economic History Review*, 30(3), 429–441.
- Craig, A. B., Sherman, W. R., & Will, J. D. (2009). *Developing virtual reality applications: Foundations of effective design*. Morgan Kaufmann.
- Darmiyati Zuchdi, E. D. (2023). *Humanisasi pendidikan: menemukan kembali pendidikan yang manusiawi*. Bumi Aksara.

- Davis, J. R., & Davis, J. R. (2025). Planning for Teaching Success. In *Planning for Teaching Success*. Rowman & Littlefield Publishers. <https://doi.org/10.5771/9781475849684>
- Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268.
- DeVries, D. L., & Edwards, K. J. (1973). Learning games and student teams: Their effects on classroom process. *American Educational Research Journal*, 10(4), 307–318.
- Dewey, J. (1933). *How we think: A restatement of the relation of reflective thinking to the educative process*.
- Dewey, J. (1986). Experience and education. *The Educational Forum*, 50(3), 241–252.
- Diah Aulia Azizatur Rohmah, Sri Untari, & Ade Eka Anggraini. (2024). "SIMLA" Educational Game-Based Learning Media for the Inculcation of Pancasila Symbols and Principles, Augmenting Independent Character. *Jurnal Penelitian Dan Pengembangan Pendidikan*, 8(1), 179–186. <https://doi.org/10.23887/jppp.v8i1.68601>
- Dick, W., Carey, L., & Carey, J. O. (2005). *The systematic design of instruction*.
- Dick, W., Carey, L., & Carey, J. O. (2015). The Systematic Design of Instruction Eight Edition. *The United States of America: Pearson*.
- Diputera, A. M., Zulpan, E. G., & Eza, G. N. (2024). Memahami Konsep Pendekatan Deep Learning dalam Pembelajaran Anak Usia Dini Yang Meaningful, Mindful dan Joyful: Kajian Melalui Filsafat Pendidikan. *Bunga Rampai Usia Emas*, 4(2), 108–120.
- Djahiri, A. K. (1985). Strategi pengajaran afektif-nilai-moral VCT dan games dalam VCT. (No Title).
- Embretson, S. E. (2007). Construct validity: A universal validity system or just another test evaluation procedure? *Educational Researcher*, 36(8), 449–455.
- Eva, R. P. V. B., Sumantri, M. S., & Winarsih, M. (2020). Media pembelajaran abad 21: Komik digital untuk siswa sekolah dasar. *Prosiding Seminar Dan Diskusi Pendidikan Dasar*.
- Fadil, K., Amran, A., & Alfaien, N. I. (2023). Peningkatan Kualitas Pendidikan Dasar Melalui Implementasi Kurikulum Merdeka Belajar Dalam Mewujudkan Sustainable Developments Goal's. *Attadib: Journal of Elementary Education*, 7(1).
- Fakhri Ramadhan, M., Siroj, R. A., Win Afgani, M., Raden Fatah Palembang, U., H Zainal Abidin Fikri, J. K., Kemuning, K., Palembang, K., & Selatan, S. (2024). Validitas and Reliabilitas. *Journal on Education*, 06(02), 10967–10975.
- Fatma, M., Piliati, I., Budiarti, B., Putra, I., Wahyuni, M., & Masrul, M. (2022). Pengaruh Media Game Edukasi sebagai Inovasi Pembelajaran Muatan PPKN terhadap Minat Belajar Siswa Kelas V SD. *Sekolah Dasar: Kajian Teori Dan Praktik Pendidikan*, 31(1), 68–77.
- Fauziyah, S., Sudatha, I. G. W., & Sudarma, I. K. (2024). Interactive Learning Multimedia Using Contextual Approach for Students in Fifth Grade of Elementary School. *Jurnal Pedagogi Dan Pembelajaran*, 7(2), 369–380. <https://doi.org/10.23887/JP2.V7I2.82398>

- Flavell, J. H. (1979). Metacognition and cognitive monitoring: A new area of cognitive–developmental inquiry. *American Psychologist*, 34(10), 906.
- Fosnot, C. T. (2013). *Constructivism: Theory, perspectives, and practice*. Teachers College Press.
- Foster, A., & Shah, M. (2020). Principles for advancing game-based learning in teacher education. *Journal of Digital Learning in Teacher Education*, 36(2), 84–95.
- Fuller, B. (1986). *Raising School Quality in Developing Countries: What Investments Boost Learning? World Bank Discussion Papers 2*. ERIC.
- Gadh, R. (1998). Virtual reality—a new technology for the mechanical engineer. *The Mechanical Engineers Handbook*.
- Gall, M. D., Gall, J. P., & Borg, W. R. (2003). *Educational Research, An Introduction. Seven Edition*. Boston: Pearson Education, Inc.
- Gar Chi, P., Zaffwan Idris, M., & Nugrahani, R. (2021). *Virtual Reality (VR) in 21 st. Century Education: The Opportunities and Challenges of Digital Learning in Classroom. 1(2)*, 105–110. <https://doi.org/10.53797/aspen.v1i2.15.2021>
- Gawise, G., Nurmaya, G, A. L., Jamin, M. V., & Azizah, F. N. (2022). Peranan Media Pembelajaran dalam Penguatan Pembelajaran Pendidikan Kewarganegaraan di Sekolah Dasar. *EDUKATIF: JURNAL ILMU PENDIDIKAN*, 4(3), 3575–3581. <https://doi.org/10.31004/edukatif.v4i3.2669>
- Gay, L. R. (1985). *Educational evaluation and measurement*. London: A Bell & Howell.
- Gessner, S. (2017). Teaching civic education in a migrating global community: How can students with a migration background contribute to didactics and civic education theory? *Journal of Social Science Education*, 16(2), 41–51. <https://doi.org/10.2390/jsse-v16-i2-1603>
- Glaserfeld, E. von. (1995). *Radical constructivism: A way of knowing and learning. (No Title)*.
- Gobbetti, E., & Scateni, R. (1998). Virtual reality: Past, present, and future. *Virtual Environments in Clinical Psychology and Neuroscience: Methods and Techniques in Advanced Patient-Therapist Interaction*.
- Göbel, S., Hugo, O., Kickmeier-Rust, M., & Egenfeldt-Nielsen, S. (2016). Serious games—economic and legal issues. *Serious Games: Foundations, Concepts and Practice*, 303–318.
- Gong, Y. (2021). Application of virtual reality teaching method and artificial intelligence technology in digital media art creation. *Ecological Informatics*, 63, 101304.
- Gordon, F. (2020). Citizenship Education in the Conflict-Affected Societies of Northern Ireland and Syria: Learning Lessons from the Past to Inform the Future. *The Palgrave Handbook of Citizenship and Education*, 449–464. https://doi.org/10.1007/978-3-319-67828-3_60
- Gungor, A., Avraamidou, L., Kool, D., Lee, M., Eisink, N., Albada, B., van der Kolk, K., Tromp, M., & Bitter, J. H. (2022). The Use of Virtual Reality in A Chemistry Lab and Its Impact on Students' Self-Efficacy, Interest, Self-Concept and Laboratory Anxiety. *EURASIA Journal of Mathematics, Science and Technology Education*, 18(3), em2090.
- Gustaman, R. F., & Nurholis, E. (2022). Pembumian Nilai Pancasila: Upaya Pembentukan Good Citizen Bagi Generasi Muda Sebagai Instrumentasi

- Pendidikan Karakter. *Administrasi Pendidikan: Jurnal Ilmiah Mahasiswa Pascasarjana*, 10(4), 1–8.
- Gutierrez, S. M. (2016). *Digital game-based learning in accounting and business education*.
- Hailikari, T., Virtanen, V., Vesalainen, M., & Postareff, L. (2022). Student perspectives on how different elements of constructive alignment support active learning. *Active Learning in Higher Education*, 23(3), 217–231. <https://doi.org/10.1177/1469787421989160>
- Hamilton, D. (2021). Immersive virtual reality as a pedagogical tool in education: a systematic literature review of quantitative learning outcomes and experimental design. *Journal of Computers in Education*, 8(1), 1–32. <https://doi.org/10.1007/s40692-020-00169-2>
- Harris, J., Mishra, P., & Koehler, M. (2009). Teachers' technological pedagogical content knowledge and learning activity types: Curriculum-based technology integration reframed. *Journal of Research on Technology in Education*, 41(4), 393–416.
- Hasnan, S. M., Marini, A., Zakiah, L., & Riswandi. (2024). Improving Understanding of Pancasila Values on Bruce and Weil Model in Science Learning in Elementary School. *Jurnal Penelitian Pendidikan IPA*, 10(12), 10321–10328. <https://doi.org/10.29303/JPPIPA.V10I12.9628>
- Hazzan, O., Ragonis, N., & Lapidot, T. (2020). Guide to Teaching Computer Science: An Activity-Based Approach, Third Edition. *Guide to Teaching Computer Science: An Activity-Based Approach, Third Edition*, 1–407. <https://doi.org/10.1007/978-3-030-39360-1/COVER>
- Helsel, S. (1992). Virtual Reality and Education. In *Technology* (Vol. 32, Issue 5).
- Hendrowati, T. Y. (2015). Pembentukan pengetahuan lingkaran melalui pembelajaran asimilasi dan akomodasi teori konstruktivisme Piaget. *JURNAL E-DuMath*, 1(1).
- Hendryko Purba, G., & Bety, C. F. (2022). Menyongsong Generasi Indonesia Emas 2045 Melalui Pendidikan Karakter Berbasis ISEQ. *Jurnal Kewarganegaraan*, 6(2).
- Hidayah, Y., Simatupang, E., & Belladonna, A. P. (2022). Pembudayaan Nilai-nilai Pancasila dalam Konsep Etika Ruang Digital di Era Post-Pandemi. *Pancasila: Jurnal Keindonesiaan*, 2(2), 208–215.
- Hmelo-Silver, C. E., Duncan, R. G., & Chinn, C. A. (2007). Scaffolding and achievement in problem-based and inquiry learning: a response to Kirschner, Sweller, and. *Educational Psychologist*, 42(2), 99–107.
- Holili, M., MF, S., Widat, F., Listrianti, F., & Walid, A. (2024). Improving The Quality of Student Learning Through Time Management Training: An Experimental Research. *Educazione: Journal of Education and Learning*, 1(2), 91–101. <https://doi.org/10.61987/EDUCAZIONE.V1I2.501>
- Howell, J. (2012). *Teaching with ICT: Digital pedagogies for collaboration and creativity*. Oxford University Press.
- Hung, C.-M., Hwang, G.-J., & Huang, I. (2012). A project-based digital storytelling approach for improving students' learning motivation, problem-solving competence and learning achievement. *Journal of Educational Technology & Society*, 15(4), 368–379.

- Hwang, G. J., & Zhang, D. (2024). Effects of an adaptive computer agent-based digital game on EFL students' English learning outcomes. *Educational Technology Research and Development*, 72(6), 3271–3294. <https://doi.org/10.1007/S11423-024-10396-4/METRICS>
- Hwang, G.-J., & Chang, H.-F. (2011). A formative assessment-based mobile learning approach to improving the learning attitudes and achievements of students. *Computers & Education*, 56(4), 1023–1031.
- Hwang, G.-J., Yang, L.-H., & Wang, S.-Y. (2013). A concept map-embedded educational computer game for improving students' learning performance in natural science courses. *Computers & Education*, 69, 121–130.
- Iasha, V., Japar, M., Maksum, A., & Setiawan, B. (2023). Fieldtrip model for cultural literacy of elementary school students through virtual reality. *INCOSHA*, 1, 227–232.
- Ihsan, H. (2015). Validitas Isi Alat Uukur Penelitian: Konsep Dan Panduan Penilaiannya. *Pedagogia*, 13(3), 173–179.
- Ismail, I. (2022). Effects of Virtual Reality (VR) Video as Asynchronous e-Learning Supplement on Student Learning Outcomes. *Prisma Sains : Jurnal Pengkajian Ilmu Dan Pembelajaran Matematika Dan IPA IKIP Mataram*, 10(3), 409. <https://doi.org/10.33394/j-ps.v10i3.5214>
- Istianah, A., Mazid, S., Hakim, S., & Susanti, R. (2021). Integrasi nilai-nilai pancasila untuk membangun karakter pelajar pancasila di lingkungan kampus. *Jurnal Gatranusantara*, 19(1), 62–70.
- Japar, M., Fadhillah, D. N., & Hp, G. L. (2019). *Media dan teknologi pembelajaran ppkn*. Jakad Media Publishing.
- Jonassen, D. H. (2010). *Learning to solve problems: A handbook for designing problem-solving learning environments*. Routledge.
- Joyce, B., & Calhoun, E. (2024). *Models of teaching*. Taylor & Francis.
- Juraschka, R. (2019). How digital game-based learning improves student success. *Вилучено Из <https://www.prodigygame.com/in-en/blog/digital-game-based-learning>*.
- Kaelan. (2016). *Pendidikan Pancasila*. Paradigma.
- KAVAK, Ş. (2022). DIGITAL GAME-BASED LEARNING MODEL AS AN EDUCATIONAL APPROACH. *PRIZREN SOCIAL SCIENCE JOURNAL*, 6(2), 62–70. <https://doi.org/10.32936/pssj.v6i2.311>
- Kelly, K. (2016). *The inevitable: Understanding the 12 technological forces that will shape our future*. Penguin.
- Kemp, J. E., & Dayton, D. K. (1985). *Planning and producing instructional media*.
- Kersna, L., Laak, K. J., Lepp, L., & Pedaste, M. (2025). Supporting Self-Regulated Learning in Primary Education: Using Written Learning Guides in the Lessons. *Education Sciences 2025, Vol. 15, Page 60*, 15(1), 60. <https://doi.org/10.3390/EDUCSCI15010060>
- Kiili, K. (2005a). Digital game-based learning: Towards an experiential gaming model. *The Internet and Higher Education*, 8(1), 13–24.
- Kiili, K. (2005b). Digital game-based learning: Towards an experiential gaming model. *The Internet and Higher Education*, 8(1), 13–24.
- Kivunja, C. (2014). Theoretical Perspectives of How Digital Natives Learn. *International Journal of Higher Education*, 3(1). <https://doi.org/10.5430/ijhe.v3n1p94>

- Kleiman, G. M. (2004). Myths and realities about technology in K-12 schools: Five years later. *Contemporary Issues in Technology and Teacher Education*, 4(2), 248–253.
- Kolb, D. A. (2014). *Experiential learning: Experience as the source of learning and development*. FT press.
- Koumi, J. (2006). *Designing video and multimedia for open and flexible learning*. Routledge.
- Koutropoulos, A. (2011). Digital natives: Ten years after. *MERLOT Journal of Online Learning and Teaching*, 7(4), 525–538.
- Kukulska-Hulme, A., Beirne, E., Conole, G., Costello, E., Coughlan, T., Ferguson, R., FitzGerald, E., Gaved, M., Herodotou, C., & Holmes, W. (2020). *Innovating pedagogy 2020: Open university innovation report 8*.
- Kyaw, B. M. (2019). Virtual reality for health professions education: Systematic review and meta-analysis by the digital health education collaboration. *Journal of Medical Internet Research*, 21(1). <https://doi.org/10.2196/12959>
- Lase, D. (2019). Pendidikan di era revolusi industri 4.0. *SUNDERMANN: Jurnal Ilmiah Teologi, Pendidikan, Sains, Humaniora Dan Kebudayaan*, 12(2), 28–43.
- Lickona, T. (1992). *Educating for character: How our schools can teach respect and responsibility*. Bantam.
- Liew, T. W., Siradj, Y., Tan, S. M., Roedavan, R., Khan, M. T. I., & Pudjoatmodjo, B. (2025). Game-Changer NPCs: Leveling-Up Technology Acceptance and Flow in a Digital Learning Quest. *International Journal of Human-Computer Interaction*, 41(7), 3994–4014. <https://doi.org/10.1080/10447318.2024.2344917>
- Liu, R., Wang, L., Lei, J., Wang, Q., & Ren, Y. (2020). Effects of an immersive virtual reality-based classroom on students' learning performance in science lessons. *British Journal of Educational Technology*, 51(6), 2034–2049.
- López, M. S. (2023). Geographic Education and Spatial Citizenship: Collaborative Mapping for Learning the Local Environment in a Global Context. *Key Challenges in Geography*, 177–191. https://doi.org/10.1007/978-3-031-40747-5_10
- Lui, A. L. C., Not, C., & Wong, G. K. W. (2023). Theory-Based Learning Design with Immersive Virtual Reality in Science Education: a Systematic Review. *Journal of Science Education and Technology*, 32(3), 390–432. <https://doi.org/10.1007/S10956-023-10035-2/METRICS>
- Makransky, G. (2019a). Adding immersive virtual reality to a science lab simulation causes more presence but less learning. *Learning and Instruction*, 60, 225–236. <https://doi.org/10.1016/j.learninstruc.2017.12.007>
- Makransky, G. (2019b). Motivational and cognitive benefits of training in immersive virtual reality based on multiple assessments. *Journal of Computer Assisted Learning*, 35(6), 691–707. <https://doi.org/10.1111/jcal.12375>
- Mallek, F., Mazhar, T., Shah, S. F. A., Ghadi, Y. Y., & Hamam, H. (2024). A review on cultivating effective learning: synthesizing educational theories and virtual reality for enhanced educational experiences. *PeerJ Computer Science*, 10, e2000. <https://doi.org/10.7717/PEERJ-CS.2000>

- Malone, T. W., & Lepper, M. R. (2021). Making learning fun: A taxonomy of intrinsic motivations for learning. In *Aptitude, learning, and instruction* (pp. 223–254). Routledge.
- Maula, N. K. (2020). Analisis peningkatan keterampilan problem solving siswa smp dalam pembelajaran matematika dengan ideal problem-solving berbasis game-based learning. *Jurnal PETIK*, 6(2), 71–80.
- Mayer, R. E. (2005a). Cognitive theory of multimedia learning. *The Cambridge Handbook of Multimedia Learning*, 41(1), 31–48.
- Mayer, R. E. (2005b). *The Cambridge handbook of multimedia learning*. Cambridge university press.
- McGuire, S., McGuire, S. Y., & Angelo, T. (2015). *Teach students how to learn: Strategies you can incorporate into any course to improve student metacognition, study skills, and motivation*. Routledge.
- McLellan, H. (1998). Cognitive issues in virtual reality. *Journal of Visual Literacy*, 18(2), 175–199.
- Mickovska-Raleva, A. (2019). Civic Education for Democratic Citizens: To What Extent Do Civic Education Curricula and Textbooks Establish Foundations for Developing Active Citizens in the Republic of Macedonia?. *Journal of Social Science Education*, 18(3), 108–126.
- Muliastri, N. K. E. (2020). New Literacy sebagai upaya peningkatan mutu pendidikan sekolah dasar di abad 21. *Jurnal Pendidikan Dasar Indonesia*, 4(1), 115–125.
- Mulyoto, G. P., Miftahusyair, M., Sos, M., & Hanifah, N. H. (2020). *Konsep dasar dan pengembangan pembelajaran PPKN untuk MI/SD*. Publica Institute Jakarta.
- Nastiti, F. E., Ni'mal 'abdu, A. R., & Kajian, J. (n.d.). *Kesiapan Pendidikan Indonesia Menghadapi era society 5.0*.
- Navas, C. (2025). User-Friendly Digital Tools: Boosting Student Engagement and Creativity in Higher Education. *European Public & Social Innovation Review*, 10, 1–17.
- Nielsen, J. (1994). *Usability engineering*. Morgan Kaufmann.
- Nisbett, R. E., Aronson, J., Blair, C., Dickens, W., Flynn, J., Halpern, D. F., & Turkheimer, E. (2012). Intelligence: new findings and theoretical developments. *American Psychologist*, 67(2), 130.
- Notonagoro. (1983). *Pancasila Dasar Falsafah Negara (Kumpulan tiga uraian pokok-pokok persoalan tentang Pancasila)*. PT. Bina Aksara.
- Nuraini, F. (2018). *PENGARUH GAME BASED LEARNING TERHADAP MINAT DAN HASIL BELAJAR PADA MATA PELAJARAN EKONOMI SISWA KELAS XI IPS*.
- Oktavianing, N., Abdulkarim, A., & Sopianingsih, P. (2025). Penerapan Model Game-Based Learning Media Wordwall untuk Meningkatkan Hasil Belajar Peserta Didik (Penelitian Tindakan Kelas di Kelas VII-A SMP Negeri 12 Bandung): Penelitian. *Jurnal Pengabdian Masyarakat Dan Riset Pendidikan*, 4(1), 4644–4651.
- Orr, R. B., Csikari, M. M., Freeman, S., & Rodriguez, M. C. (2022). Writing and Using Learning Objectives. <https://doi.org/10.1187/Cbe.22-04-0073>, 21(3). <https://doi.org/10.1187/CBE.22-04-0073>

- Pantelidis, V. S. (n.d.). *Reasons to Use Virtual Reality in Education and Training Courses and a Model to Determine When to Use Virtual Reality*.
- Perkins, D. N., & Salomon, G. (1992). Transfer of learning. *International Encyclopedia of Education*, 2(2), 6452–6457.
- Phoon, G. C., Idris, M. Z., & Nugrahani, R. (2021). Virtual reality (VR) in 21st-century education: The opportunities and challenges of digital learning in classroom. *Asian Pendidikan*, 1(2), 105–110.
- Piaget, J. (1976). *Jean Piaget*. Seghers.
- Piaget, J., & Cook, M. (1952). *The origins of intelligence in children* (Vol. 8, Issue 5). International universities press New York.
- Plass, J. L., Homer, B. D., & Kinzer, C. K. (2015). Foundations of Game-Based Learning. *Educational Psychologist*, 50(4), 258–283. <https://doi.org/10.1080/00461520.2015.1122533>
- PMK, K. (2023, October 6). *Hanya 28,6 Persen Siswa Pahami Pancasila di Ruang Kelas, Lainnya Lewat media Sosial*. Kementerian Koordinator Bidang Pembangunan Manusia Dan Kebudayaan Republik Indonesia.
- Prasetya, D. D., GI, W. S., & Patmanthara, S. (2014). Digital game-based learning untuk anak usia dini. *Tekno*, 20(2).
- Prensky, M. (2001). Digital natives, digital immigrants part 2: Do they really think differently? *On the Horizon*, 9(6), 1–6.
- Prensky, M. (2003). Digital game-based learning. *Computers in Entertainment (CIE)*, 1(1), 21.
- Prensky, M. (2005). Computer games and learning: Digital game-based learning. *Handbook of Computer Game Studies*, 18(2005), 97–122.
- Pujiono, A. (2021). Media Sosial Sebagai Media Pembelajaran Bagi Generasi Z. *Didache: Journal of Christian Education*, 2(1), 1. <https://doi.org/10.46445/djce.v2i1.396>
- Qian, M., & Clark, K. R. (2016). Game-based Learning and 21st century skills: A review of recent research. *Computers in Human Behavior*, 63, 50–58. <https://doi.org/10.1016/j.chb.2016.05.023>
- Qowim, A. N., Afif, N., Mukhtarom, A., & Fauziah, E. (2024). Pendidikan karakter dalam era digital: Pengintegrasian nilai-nilai moral dalam kurikulum berbasis teknologi. *Tadarus Tarbawy: Jurnal Kajian Islam Dan Pendidikan*, 6(1).
- Rachmadtullah, R., Ms, Z., & Sumantri, M. S. (2018a). *Interactive Multimedia Development Based on Scientific Approach to Civic Education Subjects in Elementary School* (Issue 7).
- Rachmadtullah, R., Ms, Z., & Sumantri, M. S. (2018b). *Interactive Multimedia Development Based on Scientific Approach to Civic Education Subjects in Elementary School* (Issue 7).
- Radianti, J. (2020). A systematic review of immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda. *Computers and Education*, 147. <https://doi.org/10.1016/j.compedu.2019.103778>
- Radianti, J., Majchrzak, T. A., Fromm, J., & Wohlgenannt, I. (2020a). A systematic review of immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda. *Computers and Education*, 147. <https://doi.org/10.1016/j.compedu.2019.103778>

- Radianti, J., Majchrzak, T. A., Fromm, J., & Wohlgenannt, I. (2020b). A systematic review of immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda. *Computers and Education, 147*. <https://doi.org/10.1016/j.compedu.2019.103778>
- Radianti, J., Majchrzak, T. A., Fromm, J., & Wohlgenannt, I. (2020c). A systematic review of immersive virtual reality applications for higher education: Design elements, lessons learned, and research agenda. *Computers & Education, 147*, 103778.
- Rahayu, A. S. (2017a). *Pendidikan Pancasila dan Kewarganegaraan (PPKn)*. Bumi Aksara.
- Rahayu, A. S. (2017b). *Pendidikan Pancasila dan Kewarganegaraan (PPKn)*. Bumi Aksara.
- Rahmawati, M., & Harmanto, H. (2020). Pembentukan nilai karakter toleransi dalam pembelajaran pendidikan pancasila dan kewapembentukan nilai karakter toleransi dalam pembelajaran pendidikan pancasila dan kewarganegaraan bagi siswa tunagrahita. *Journal of Civics and Moral Studies, 5*(1), 59–72.
- Rasyad, H. A. (1999). *Teori belajar dan pembelajaran*. Uhamka Press.
- Rheingold, H. (1991). *Virtual Reality*. Summit Books.
- Richey, R. C., Klein, J. D., & Tracey, M. W. (2011). The instructional design knowledge base. *Theory, Research, and Practice*.
- Ridha, A. R., Bahij, M. A., Nurachman, A., & Setiawan, R. (2025). Integrasi pendidikan karakter dalam kurikulum berbasis nilai afektif dan psikomotorik: Tantangan dan peluang. *Risoma: Jurnal Riset Sosial Humaniora Dan Pendidikan, 3*(1), 245–254.
- Rohani, R. (2020). *Media pembelajaran*.
- Rohmah, D. A. A., Untari, S., & Anggraini, A. E. (2024). 'SIMLA' Educational Game-Based Learning Media for the Inculcation of Pancasila Symbols and Principles, Augmenting Independent Character. *Jurnal Penelitian Dan Pengembangan Pendidikan, 8*(1), 179–186.
- Rutherford, S., Pritchard, C., & Francis, N. (2025). Assessment IS learning: developing a student-centred approach for assessment in Higher Education. *FEBS Open Bio, 15*(1), 21–34. <https://doi.org/10.1002/2211-5463.13921>
- s Sadiman, A., & Sadiman, A. S. (2019). *Media Pendidikan; Pengertian, Pengembangan dan Pemanfaatannya*.
- Sadik, A. (2008). Digital storytelling: A meaningful technology-integrated approach for engaged student learning. *Educational Technology Research and Development, 56*, 487–506.
- Sanjaya, H. W. (2016). *Media komunikasi pembelajaran*. Prenada Media.
- Scholnik, M., Kol, S., & Abarbanel, J. (2006). Constructivism in theory and in practice. *English Teaching Forum, 44*(4), 12–20.
- Schön, D. A. (2017). *The reflective practitioner: How professionals think in action*. Routledge.
- Schramm, W. (1977). *Big media, little media: tools and technologies for instruction*.
- Schwab, K. (2017). *The fourth industrial revolution*. Currency.

- Setiawan, A. (2023). Pendidikan Anti Korupsi Sebagai Pembentukan Karakter, Perilaku Individu Melalui Potensi Mahasiswa Diperguruan Tinggi. *Sanskara Pendidikan Dan Pengajaran*, 1(01), 1–9.
- Setiawan, B., & Winarno, A. (n.d.). *Immersive Virtual Reality: Unlocking Students' Elementary School Science Literacy*. www.openscience.uz
- Sexton, R. (2017). *The perverse effects of civic education: Evidence from a field experiment in Peru*. Working Paper.
- Shi, Y.-R., & Shih, J.-L. (2015). Game factors and game-based learning design model. *International Journal of Computer Games Technology*, 2015, 11.
- Shih, J.-L., Chuang, C.-W., & Hwang, G.-J. (2010). An inquiry-based mobile learning approach to enhancing social science learning effectiveness. *Journal of Educational Technology & Society*, 13(4), 50–62.
- Sigit, S., & Sigit, K. A. (2023). *Liberalisasi Pendidikan Sekolah Swasta*. Kepustakaan Populer Gramedia.
- Siswanto, J. (2020). *Politik kebangsaan*. IRDH Book Publisher.
- Smaldino, S. E., Lowther, D. L., Mims, C., & Russell, J. D. (2019). *Instructional technology and media for learning*. Pearson Education, Incorporated.
- Steuer, J., Biocca, F., & Levy, M. R. (1995). Defining virtual reality: Dimensions determining telepresence. *Communication in the Age of Virtual Reality*, 33, 37–39.
- Sugiyono, P. (2011). Metodologi penelitian kuantitatif kualitatif dan R&D. *Alfabeta, Bandung*, 62–70.
- Sukmawati, F., Santosa, E. B., & Rejekiingsih, T. (2022). *Pembelajaran menyenangkan dengan virtual reality*. Pradina Pustaka.
- Sun, H., & Yin, B. (2020). Multimedia Input and Bilingual Children's Language Learning. *Frontiers in Psychology*, 11, 570505. <https://doi.org/10.3389/FPSYG.2020.02023/BIBTEX>
- Swan, K., Barton, K. C., Buckles, S., Burke, F., Charkins, J., Grant, S. G., Hardwick, S. W., Lee, J., Levine, P., Levinson, M., Marri, A., Monte-Sano, C., Morrill, R., Thomas-Brown, K., Tyson, C., VanSledright, B., & Wiesner-Hanks, M. (2013). The College, Career, and Civic Life (C3) Framework for Social Studies State Standards: Guidance for Enhancing the Rigor of K-12 Civics, Economics, Geography, and History. *Curriculum and Instruction Reports*. https://uknowledge.uky.edu/edc_reports/1
- Swanson, D. M. (2021). Global Citizenship Education / Learning for Sustainability: tensions, 'flaws', and contradictions as critical moments of possibility and radical hope in educating for alternative futures. *Globalisation, Societies and Education*, 19(4), 456–469. <https://doi.org/10.1080/14767724.2021.1904211>
- Taba, H. (1966). *Teaching Strategies and Cognitive Functioning in Elementary School Children*.
- Tang, Y. M., Au, K. M., Lau, H. C. W., Ho, G. T. S., & Wu, C. H. (2020). Evaluating the effectiveness of learning design with mixed reality (MR) in higher education. *Virtual Reality*, 24(4), 797–807. <https://doi.org/10.1007/S10055-020-00427-9/METRICS>
- Tejada-Simon, M. V. (2024). Exploring the Impact of Game-Based Learning and Creative Active-Learning Activities on Student Engagement and Academic Performance: A Case Study in the basic sciences for Pharmacy Education.

- <https://doi.org/10.1152/Physiol.2024.39.S1.935>, 39(S1).
<https://doi.org/10.1152/PHYSIOL.2024.39.S1.935>
- Tessmer, M. (2013). *Planning and conducting formative evaluations*. Routledge.
- Tirtoni, F. (2016). *Pembelajaran pkn di sekolah dasar*.
- Tomporowski, P. D., Davis, C. L., Miller, P. H., & Naglieri, J. A. (2008). Exercise and children's intelligence, cognition, and academic achievement. *Educational Psychology Review*, 20, 111–131.
- Tran, Y. (2019). Computational thinking equity in elementary classrooms: What third-grade students know and can do. *Journal of Educational Computing Research*, 57(1), 3–31.
- Tychsen, L., & Foeller, P. (2020). Effects of Immersive Virtual Reality Headset Viewing on Young Children: Visuomotor Function, Postural Stability, and Motion Sickness. *American Journal of Ophthalmology*, 209, 151–159. <https://doi.org/10.1016/j.ajo.2019.07.020>
- Van den Akker, J., Gravemeijer, K., & McKenney, S. (2006). Introducing educational design research. In *Educational design research* (pp. 15–19). Routledge.
- Velani, F. Y., & Retnawati, H. (2020). Application of contextual teaching and learning approaches in improving mathematics interest and learning achievement of elementary school students. *Journal of Physics: Conference Series*, 1511(1), 012032. <https://doi.org/10.1088/1742-6596/1511/1/012032>
- Vincent-Lancrin, S., & Van der Vlies, R. (2020). *Trustworthy artificial intelligence (AI) in education: Promises and challenges*.
- Vygotsky, L. S., & Cole, M. (1978a). *Mind in society: Development of higher psychological processes*. Harvard university press.
- Vygotsky, L. S., & Cole, M. (1978b). *Mind in society: Development of higher psychological processes*. Harvard university press.
- Wardani, S., Rahmawati, S., Rianto, R., Witanti, A., & Riasti, B. K. (2025). Integrating Digital Technology into Traditional Game-Based Learning to Cultivate Local Wisdom Values among Elementary School Students in Bantul, Indonesia. *International Journal of Information and Education Technology*, 15(10), 2128–2139. <https://doi.org/10.18178/ijiet.2025.15.10.2411>
- Widiyatmoko, A., Nugrahani, R., Yanitama, A., & Darmawan, M. S. (2023). THE EFFECT OF VIRTUAL REALITY GAME-BASED LEARNING TO ENHANCE STEM LITERACY IN ENERGY CONCEPTS. *Jurnal Pendidikan IPA Indonesia*, 12(4), 648–657. <https://doi.org/10.15294/jpii.v12i4.48265>
- Wiradarma, K., Ketut Gading, & I Gusti Ayu Tri Agustiana. (2023). Ludo Word Game Assisted Visualization Auditory Kinesthetic (VAK) Learning Model on Student Science Learning Outcomes in Elementary Schools. *MIMBAR PGSD Undiksha*, 11(2), 241–247. <https://doi.org/10.23887/jjpsd.v11i2.62408>
- Wolters, C. A., & Brady, A. C. (2021). College Students' Time Management: a Self-Regulated Learning Perspective. *Educational Psychology Review*, 33(4), 1319–1351. <https://doi.org/10.1007/S10648-020-09519-Z/METRICS>
- Wulansari, N., & Hardianto, D. (2025). Enhancing Elementary Students' Language Development Through Speaking Skills and Interactive Teaching: A Systematic Literature Review. *Jurnal Obsesi : Jurnal Pendidikan Anak Usia Dini*, 9(1), 336–349. <https://doi.org/10.31004/obsesi.v9i1.6779>

- Yasin, M., Kelrey, F., Ghony, M. A., Syaiful, M., Karuru, P., Pertiwi, A., Abadi, A., Ardiansyah, W., & Aryanti, N. (2023). *Media Pembelajaran Inovatif: Menerapkan Media Pembelajaran Kreatif untuk Menyongsong Pendidikan di Era Society 5.0*. PT. Sonpedia Publishing Indonesia.
- Yean, L. S. (2019). Promoting active learning and independent learning among primary school students using flipped classroom. *International Journal of Education*, 4(30), 324–341.
- Yehya, F. M. (2021). Promising Digital Schools: An Essential Need for an Educational Revolution. *Pedagogical Research*, 6(3).
- YILDIRIM, G., ELBAN, M., & YILDIRIM, S. (2018). Analysis of Use of Virtual Reality Technologies in History Education: A Case Study. *Asian Journal of Education and Training*, 4(2), 62–69. <https://doi.org/10.20448/journal.522.2018.42.62.69>
- Yu, Z., Gao, M., & Wang, L. (2021). The Effect of Educational Games on Learning Outcomes, Student Motivation, Engagement and Satisfaction. *Journal of Educational Computing Research*, 59(3), 522–546. <https://doi.org/10.1177/0735633120969214>
- Ziden, V. (2023). Development and Implementation of Educational Games as Science Learning Media. *BIOEDUSCIENCE*, 7(3), 333–338. <https://doi.org/10.22236/jbes/12424>
- Zin, N. A. M., Jaafar, A., & Yue, W. S. (2009a). Digital game-based learning (DGBL) model and development methodology for teaching history. *WSEAS Transactions on Computers*, 8(2), 322–333.
- Zin, N. A. M., Jaafar, A., & Yue, W. S. (2009b). Digital game-based learning (DGBL) model and development methodology for teaching history. *WSEAS Transactions on Computers*, 8(2), 322–333.